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THE CONSOLE

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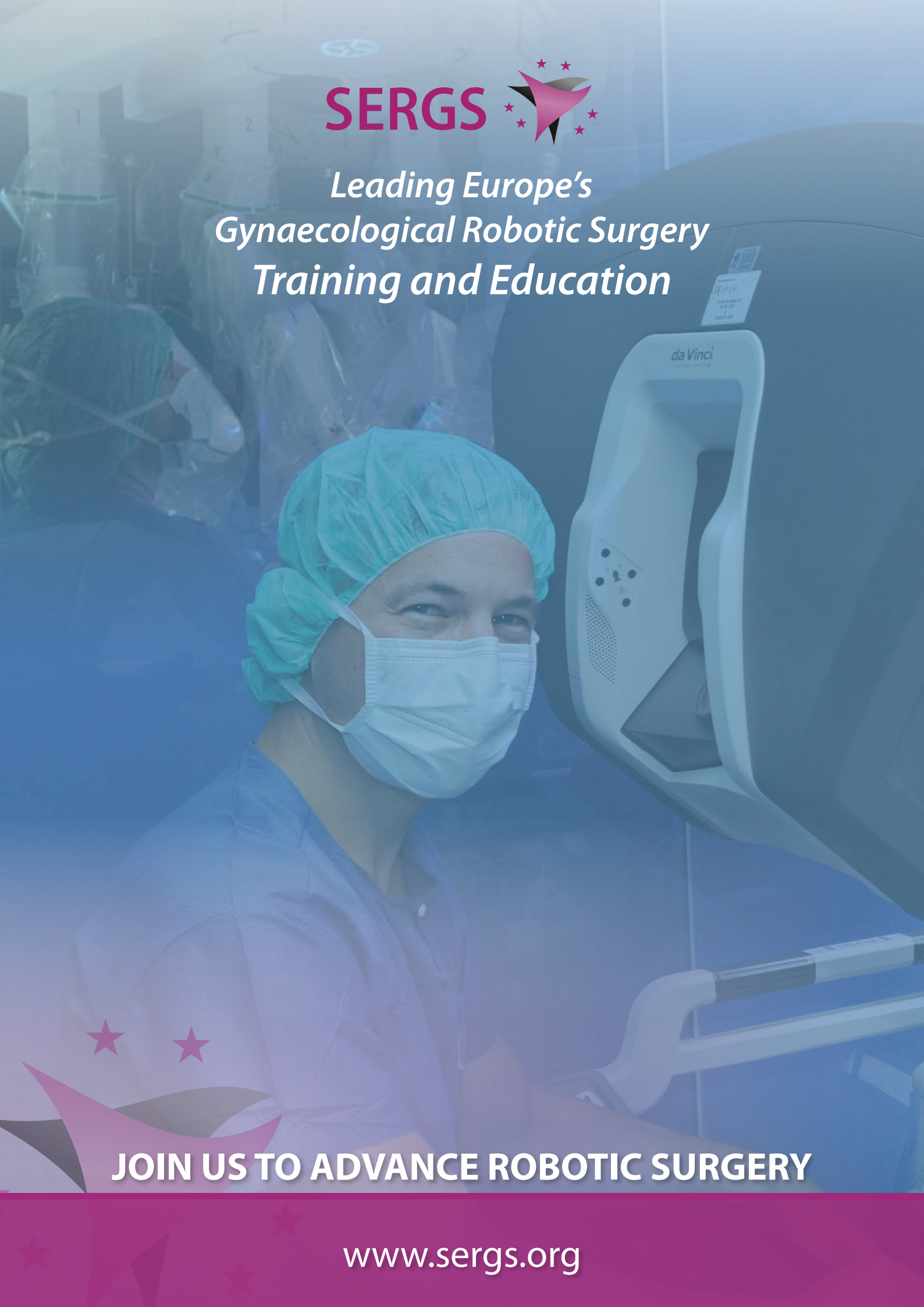
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Message from the Editor-in-Chief

Greetings Colleagues,

I am delighted to announce the publication of the third issue of 'The Console', the official journal of the Society of European Robotic Gynaecological Surgery (SERGS). We would like to thank you for embracing our efforts. Published biannually, **'The Console' aims to inform SERGS members about our activities, share ideas in the new era of robotic gynaecology and support collaboration, friendship and fellowship in robotic gynaecological surgery.**

We thank all of you for joining us in June in Madrid, Spain, for the 16th Annual SERGS Meeting. Congratulations to SERGS 2024 Conference Chair Pluvio Coronado and the local organising committee for such a memorable experience. During the meeting, Javier Magrina, a SERGS leader and mentor, offered an amazing lecture on the continuous process of and the mental practice involved in improving our surgical skills. We would like to thank Javier Magrina for allowing us to feature his lecture in this issue of 'The Console'. Sharing with us such a time travel of engagement in our subspecialty is a valuable gift for both the current and future generations of robotic gynaecological surgeons. As Javier Magrina advises, "Never stop learning. Surgery is not an end, it is a continuous process. Don't keep for yourself what you have mastered; pass it forward. It is an obligation we all have."

We would also like to thank SERGS's Secretary/Treasurer Thomas Hebert and Vice President Martin Heubner for their interview, in which they discuss the role of SERGS in education and training, particularly in providing our members with access to our webinars and video portal to help enrich their knowledge. They also present the levels 1 and 2 SERGS certifications to assess proper training and safe procedural performance.

The SERGS Training the Trainers e-learning course consists of 12 video modules, each followed by a SurveyMonkey questionnaire. Past President Thomas Ind, who created the course, describes the important principle as a trainer who has to bring him/herself back from a position of unconscious competence to conscious competence while teaching surgery. We encourage you to start today and become a SERGS Certified Trainer.

Also in this issue, Mohamed Mabrouk, the newly elected European Endometriosis League President, presents the Endometriosis Learning Pathway with EndoCare by offering a comprehensive, hands-on advanced training with the support of Medtronic.

I would also like to thank Sergi Fernandez, Simone Bruni, Andrea Giannini, Tommaso Simoncini and Manuel Sánchez Prieto, all of whom we worked with to assess the latest evidence regarding robotic precision in obese women with endometrial cancer. Key findings from the review suggest that robotic surgery presents favourable perioperative outcomes for obese patients with endometrial cancer, including reduced blood loss, shorter hospital stays, lower conversion rates, and fewer postoperative complications. These findings underscore the potential of robotic surgery to optimise surgical outcomes and improve care in such a challenging group of patients.

In the YEARS Corner, Christina Uwins and Anumithra Amirthanayagam discuss the current reality of robotic training in the United Kingdom, presenting their projects and training/fellowship opportunities in their home country. This section of 'The Console' is a dedicated space for young and emerging surgeons and researchers in robotic surgery, and we encourage YEARS members to participate, present the current training reality in their home countries and collaborate with experts to exchange ideas.

Last but not least, we are pleased to include an article about the MIRGS Programme, which aims to provide a link between experienced SERGS surgeons and YEARS members for mentoring and support. For this reason, we asked YEARS Mentorship lead Dina El-Hamamsy to describe how to bring forward such a training opportunity for future generations.

We also ask you to save the date for our next annual Congress. **The 17th Annual SERGS Meeting will be held June from 5-7, 2025, in Pisa, Italy. SERGS 2025 Chair Vito Cela and the local organising committee are working hard on this remarkable new event.** You can expect to hear from and meet with world leaders in robotic gynaecological surgery, watch top surgeons perform live surgery, learn from the best in the field and network with other specialists. Let's also share ideas with professionals from other specialties with different perspectives and enrich our practice by learning more about topics related to our field. Register as soon as possible to secure your place.

I would also like to thank Lucie Lamlova for her valuable help in dedicating her time to us from a secretariat point of view.

I hope you will enjoy reading the third issue of 'The Console'.

Christos Iavazzo
Editor-in-Chief, The Console

Contents

Mental Practice to Improve your Surgical Skills

Interview with Javier Magrina, Mayo Clinic Arizona, USA

Surgery is a combination of thoughts (mental) and muscle movement (manual). The brain is the centre, where all your thoughts and muscle movements start.

Mind (mental)

Thoughts can be conscious or unconscious, but everything you do in life starts with a thought. The fact that you decided to become a gynaecological surgeon started with a thought, or a series of thoughts.

To decide a patient needs a specific operation originates as a thought. You will need more thoughts to decide your surgical approach and a suitable technique, calculate risks, prevent complications, etc.

Muscles (manual)

To perform the operation, you will need to move the muscles of your hands and feet (whether you use robotics or a foot pedal in laparoscopy) following specific steps that we address as a surgical technique. Every movement of your muscles starts in your brain as an electrical impulse, which most times is unconscious once you have acquired experience. Electrical impulses are detected in a specific muscle simply by just thinking about moving the muscle.[1]

Therefore, thinking about the movement of your instruments, which are directed by the muscles of your hands, will facilitate learning and executing the steps of an operation.

Mental training

Training your mind will improve your surgical technique. Mental training increases confidence, reduces the stress of manual practice, and facilitates the acquisition of new techniques.[2] Manual practice without mental training is much less effective than both combined.

How do your train your mind?

First, you must have a strong desire, meaning you will not stop at anything to prevent you from achieving your goal.

Second, you must understand clearly the surgical technique or specific step you want to learn, no grey areas allowed, all clear in your mind, including the anatomy.

Third, you must write down in great detail, and rewrite, as you acquire more knowledge and experience, the position and movement of your hands, which direct your instruments.

As Roman emperor Caius Titus said centuries ago,

"Verba volant, scripta manent"

(spoken words fly away, written words remain).

Fourth, read and re-read your written technique of an operation until it becomes a movie in your head without any interruptions or doubts. Repeat, and repeat, in your mind until it flows easily.

To be effective, do this in solitary, with no distractions and full concentration.[3] Visualise mentally before each operation until you have a collection of videos in your mind that you can access anytime, at any place. Review your and other surgeons' videos until all is clear in your head.

Never stop learning. Surgery is not an end, but a continuous process. Don't keep for yourself what you have mastered; pass it forward. It is an obligation we all have.

I wish you great success in your professional career and in your personal life. Feel free to reach out if I can help you to become a master.

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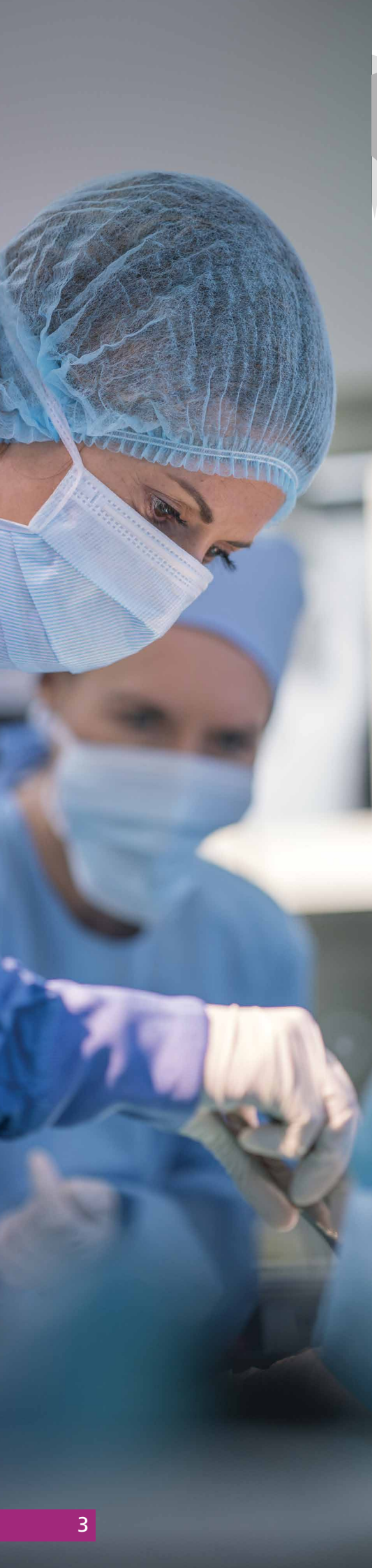


TRAINING THE TRAINERS

in Robotic Gynaecological Surgery

Thomas Ind, UK, SERGS Past President

Unconscious Incompetence

The term "unconscious incompetence" refers to when you don't know what you don't know. It is an important principle as a trainer, who has to evolve from a position of unconscious competence to conscious competence while teaching surgery.

Unconscious incompetence can occur as a trainee who might blunderbuss into an operation feeling invulnerable and unaware of his or her lack of skills.

However, it is much more prevalent in trainers who do not know how to teach, have never been taught how to teach and still participate in the practice that they are wholly inept at delivering.

Just because a surgeon has the skills to perform a task does not mean that he or she can teach another person how to perform the same task. Why is it that a university graduate spends two years learning how to teach primary school children about dinosaurs before being considered competent to instruct a seven-year-old, yet a surgeon is expected to be able to go straight into a high-stakes situation and inculcate it? The days of surgical trainers not being taught how to teach have to change.

Enlightenment

I developed many new insights when the British Society of

Gynaecological Endoscopy **(BSGE)** sent me to a Training the Trainers **(TTT)** course in 2018 at **the Pelican Centre in Basingstoke, England,** organised by Lapco International **(www.lapco-international.com)**.

I would encourage as many people as possible to attend such a course. I learnt about "cognitive overload" and "performance-enhancing instructions".

I absorbed information about the principles of "set", "dialogue" and "closure" and learned about the SIX STEPS (Stop, Inquire, eXplain, Structured Training, Evaluate understanding, and Proceed if Safe).

Furthermore, I was taught about the principles of formative and summative assessments, and how to deal with difficult trainees.

The practical-based course included role-play exercises and real trainees.

The second day involved going to the theatre and putting the communication skills learnt into practice. Hierarchy was eliminated

at the beginning, resulting in a productive two days with new techniques of teaching that could be taken home and put into practice.

I was so impressed by the course that I organised one at **the Royal Marsden Hospital in London** in 2019, which was attended by the then-president of SERGS, **Dr. Rainer Kimmig**. This year, the British and Irish Association of Robotic Gynaecological Surgery **(BIARGS)** funded a TTT course at the Iceni Centre in Colchester, England, where I participated as faculty. Another course is planned for next year.

e-Learning

SERGS provides a short, 12-module e-learning course that covers some of the principles of how to teach surgery. We encourage as many educators as possible to take this course.

Otherwise, you are teaching as an unconsciously incompetent trainer. Hopefully, once you complete this e-learning exercise, you will at least be consciously incompetent and then take the steps to become a competent trainer. SERGS will only certify you as a trainer if you have completed the e-learning. Please provide feedback once you have finished the course and let us know your thoughts.

The team at the Training the Trainers course held in May 2019 at the Royal Marsden Hospital, London, UK

Top row (from left to right)

Samson Tou (observer, colorectal surgeon, Derby, UK)

Desmond Barton (observer, gynaecological oncology surgeon, Royal Marsden Hospital)

Mark Whittaker (faculty, gynaecologist, past secretary of BSGE, Gloucester, UK)

Mark Coleman (faculty, Lapco International, professor of colorectal surgery, Plymouth, UK)

Tom Cecil (faculty, Lapco International, colorectal surgeon, Baskingstoke, UK)

Manou Kaur (then-trainee, now gynaecologist, Chelsea & Westminster Hospital, London)

Thomas Ind (course facilitator, past president of SERGS and BIARGS, Royal Marsden Hospital, London)

Paul Stanciu (then-trainee, now gynaecological oncology surgeon, Watford Hospital, UK)

Bottom row (from left to right)

Nima Rai (then-trainee, now gynaecological oncology surgeon)

Rainer Kimmig (delegate, past president of SERGS, professor and department head, gynaecological surgeon, Essen, Germany)

Nick Elkington (delegate, past president of BIARGS, gynaecologist, Frimley, UK)

Simon Butler-Manuel (delegate, president-elect of BIARGS, gynaecological oncology surgeon, Guildford, UK)

Nahid Gul (delegate, president of BIARGS, gynaecologist, Wirral, UK)

Marielle Nobbenhuis (delegate, past-president of BIARGS, gynaecological oncology surgeon, Royal Marsden Hospital)

Ellie Brockbank (delegate, gynaecological oncology surgeon, Barts Hospital, London)

Update on Education, Webinars and Certification

Interview with SERGS's Secretary/Treasurer Thomas Hebert and Vice President Martin Heubner

Thomas Hebert, France

Martin Heubner, Switzerland

CI: Can you tell me about the role of SERGS in education and training?

Thomas Hebert/Martin Heubner: SERGS is very active. In addition to annual congresses and international networking, educational activities are extremely important to us. In recent years, for example, we have put a lot more effort into planning and holding regular webinars.

We have categorised them according to skill level, as it is clear to us that the needs are very different, ranging from basic introductions and propaedeutics to the exchange and presentation of highly complex interventions. Our success proves us right: 50-70 participants registered for the last series of webinars - a sign for us to continue on this path.

CI: Is your target audience made up of experienced surgeons or newcomers?

TH/MH: We try to cover the needs of both. We added levels in terms of a hierarchical structure to the webinars, starting from basic skills and moving to advanced and specialist procedures.

For newcomers and young colleagues, YEARS (Young Early Advocates in Robotic Surgery) is the ideal platform for exchange. Two webinars in 2023 were organised by YEARS, and we are very happy to have so many upcoming/early robotic surgeons involved.

CI: Does SERGS issue certificates?

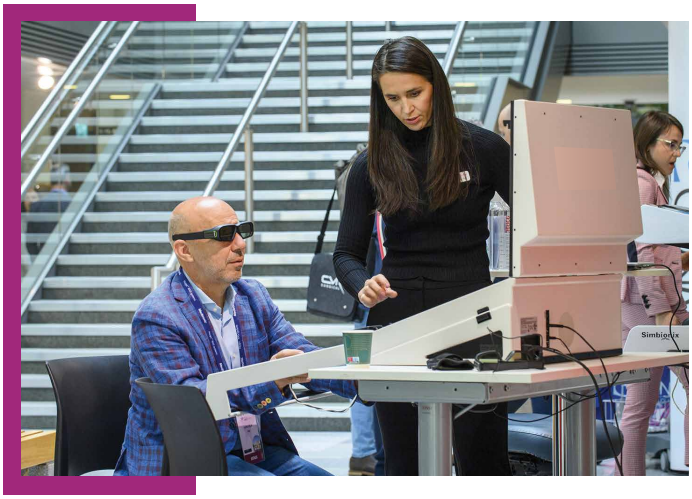
TH/MH: *So far, we do not offer certificates for webinar participation. However, we have the SERGS training curriculum, which enables participants to become SERGS-certified robotic surgeons. We consider this certification to be an important achievement.*

Many years ago, the SERGS Council gave some thought to education and training. It was agreed that these topics are extremely important and should not be left to medtech companies, but should be taken care of by a medical society. This is how the ideas of the curriculum and the SERGS Educational Network (SEN) were born.

CI: What's the latest news, and what are your plans for the future?

TH/MH: *The recently established SERGS video portal is certainly an attractive feature on the SERGS homepage, especially for experienced surgeons. In the future, we are planning to continue our successful webinar series.*

We are also in negotiations with national and international societies for collaborations on training and certification. In the past decade, many medical societies focused on minimally invasive surgery underestimated the evolvement of robotic surgery. Now, more and more societies are getting involved in robotics, but none have as much experience in robotic training as SERGS. We are pleased to be able to offer our help and share our experience.



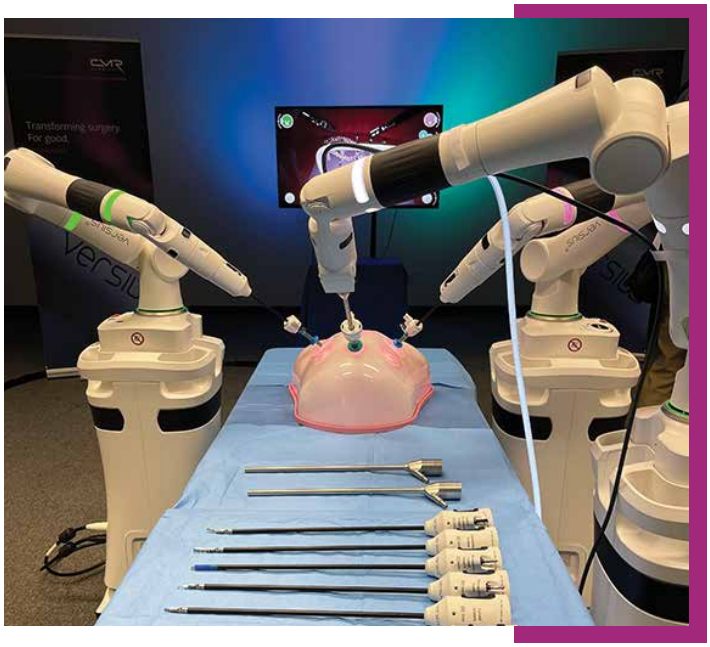
CI: What's the future of SERGS level 1 certification?

TH/MH: As already mentioned, SERGS has been working for almost a decade on robotic training, and since 2017 on a specific simulation pathway for newcomers in robotic surgery, called SERGS certification level 1. This introductory certification is aimed at young surgeons, before their actual clinical training in robotic surgery, and is agnostic of any specific robotic platform.

For the last three years, SERGS has been collaborating with GESEA/ESGE to come to a mature introduction to robotic skills certification, aligned with the other minimal invasive assessment in terms of expectation. SERGS has been delivering this certificate ever since. As soon as the final refinement of the GESEA robotic level 1 is complete, SERGS will be offering it during meetings and over various other events.

CI: What is the level 2 SERGS certification, or SERGS robotic surgeon certificate?

TH/MH: : It is basically an assessment of proper training and safe procedural performance, with a specific robotic platform. The certification is based on technical training



(industry-provided), an introductory course on clinical practice of robotic surgery and a mentored/proctored early learning curve of 20 cases. A video of a robotic hysterectomy is then peer-reviewed according to the SERGS OSATS criteria.

This certification is not a diploma, and credentialing is to be renewed every three years based on an audit and attendance at a robotic surgery meeting.

Robotic Precision in Obese Women with Endometrial Cancer:

Assessing the Latest Evidence

Sergi Fernandez, Simone Bruni, Andrea Giannini, Tommaso Simoncini, Manuel Sánchez Prieto, and Christos Iavazzo

INTRODUCTION

Endometrial cancer represents a prevalent gynaecological malignancy, with escalating incidence worldwide. One of its prominent risk factors is obesity, with approximately 65% of diagnosed women exhibiting overweight or obesity. This association between obesity and endometrial cancer poses significant challenges in clinical management, particularly concerning available surgical options for these patients.

Historically, traditional surgical techniques such as laparotomy and laparoscopy have been employed in endometrial cancer treatment. However, in obese patients, these techniques may encounter substantial limitations due to challenges in achieving adequate surgical exposure and heightened risks of perioperative complications.

Addressing these limitations and looking to improve surgical outcomes in obese patients with endometrial cancer has spurred the emergence of innovative alternatives in the field of gynaecological surgery. Among these alternatives, robotic surgery has emerged as a promising option for the surgical management of endometrial cancer in obese patients.

Robotic surgery offers potential advantages such as enhanced surgical precision and manoeuvrability, as well as improved anatomical visualisation, which could overcome some of the limitations associated with conventional surgical techniques in this patient cohort.

All these advantages are provided with less physical demand for both the surgeon and the assistant.

However, evidence regarding the efficacy of robotic surgery in obese patients with endometrial cancer remains limited and contentious.

SURGICAL APPROACHES

Endometrial cancer has witnessed an evolution in surgical approaches over time. Traditional techniques such as laparotomy and laparoscopy have historically been the mainstays of surgical management. Laparotomy, involving a large abdominal incision, allows for direct access to the pelvic organs but is associated with significant morbidity, prolonged recovery times and increased risk of postoperative complications.

Laparoscopy, on the other hand, offers a minimally invasive approach, with smaller incisions and reduced morbidity compared to laparotomy. Both techniques pose challenges in obese patients due to limitations in achieving adequate exposure and manoeuvrability in the operative field.

In obese patients, the technical demands of traditional surgical techniques are exacerbated, leading to increased operative difficulties and higher rates of perioperative complications. Factors such as excess adipose tissue, limited visualisation of anatomical structures and compromised access to the surgical site contribute to the challenges encountered during laparotomy and laparoscopy in this patient population.

The limitations of traditional surgical techniques in obese patients underscore the need for alternative approaches tailored to the unique anatomical and physiological characteristics of this population. The emergence of robotic-assisted surgery represents a promising advancement in addressing these challenges, offering enhanced precision, manoeuvrability and visualisation compared to conventional techniques.

Robotic surgery has the potential to overcome the limitations of laparotomy and laparoscopy in obese patients, thereby improving surgical outcomes and patient care in this high-risk group.

ROBOTIC SURGERY

Robotic surgery has emerged as a transformative innovation in gynaecological oncology, offering a paradigm shift in surgical precision.

The evolution of robotic surgical technology in gynaecology dates back to 2005, when the FDA approved the introduction of the da Vinci Surgical System. The adoption of robotic surgery in gynaecology has been facilitated by advancements in surgical instrumentation, including high-definition, three-dimensional imaging, articulating instruments and wristed motion capabilities. These technological enhancements enable surgeons to navigate intricate pelvic anatomy with enhanced precision and dexterity, facilitating complex surgical tasks with greater ease and efficiency.

These advantages might be particularly beneficial in obese patients, where excess adipose tissue poses challenges for surgical exposure and manoeuvrability. Additionally, the enhanced visualisation provided by the three-dimensional imaging system allows for better identification of anatomical structures, thereby reducing the risk of inadvertent injury and improving surgical accuracy. Moreover, the ergonomic design of the robotic console allows surgeons to operate in a comfortable, seated position, mitigating the physical strain associated with prolonged surgeries.

According to Iavazzo, et al.[1] , robotic surgery in obese patients offers improved surgical outcomes, reduced morbidity and enhanced patient recovery. Their study of 2,769 patients undergoing robotic-assisted hysterectomy, primarily for endometrial carcinoma (66.2%), revealed low conversion rates to laparotomy (4.1%) and infrequent complications, emphasizing the value of robotic surgery in managing endometrial cancer in this population.

COMPARISON OF SURGICAL OPTIONS IN OBESE PATIENTS

The latest evidence regarding the efficacy of robotic surgery compared to traditional approaches in obese patients with endometrial cancer demonstrated reduced blood loss. A comparable operative time to laparoscopy was also observed. Further, robotic surgery resulted in shorter hospital stays compared to open surgery. A cohort study revealed that robotic-assisted surgery significantly decreased the conversion rate in patients with body mass index (BMI) ≥30 as compared to standard laparoscopy[2].

Additionally, the incidence of postoperative complications, including those classified as Clavien-Dindo >2, was lower among patients undergoing robotic surgery compared to open surgery, with a relative risk ratio of complication grades II-V of 0.54 (95% CI 0.31-0.93) for the robotic group compared to the open group (Table 1).

Key findings from the review suggest that robotic surgery presents favourable perioperative outcomes for obese patients with endometrial cancer, including reduced blood loss, shorter hospital stays, lower conversion rates and fewer postoperative complications (Table 1). These findings underscore the potential of robotic surgery to optimise surgical outcomes and improve patient care in this challenging patient population.

The observed operative times of robotic surgery compared to non-robotic approaches align with previous research, suggesting that robotic-assisted procedures can achieve similar surgical efficiency without compromising operative duration. The significant reduction in blood loss and shorter hospital stays associated with robotic surgery is consistent with previous studies, indicating potential benefits in terms of reduced morbidity and enhanced patient recovery[3,4].

The lower conversion rate to laparotomy observed with robotic surgery in high-BMI patients corroborates findings from previous research[5], underscoring the technical advantages of robotic-assisted procedures in managing complex cases with greater precision and control.

Moreover, the decreased incidence of postoperative complications compared to open surgery, including Clavien-Dindo > 2 complications, further supports the clinical utility of robotic surgery in optimising surgical outcomes and reducing patient morbidity in this challenging patient population.

In a recent study published by Kosa, et al.[6], there was no difference in overall costs between laparotomy,

non-robotic laparoscopy, and robot-assisted laparoscopy in patients with a BMI ≥ 40 and endometrial cancer. Although there were higher costs associated with the operating room in the robotic and laparoscopy groups, there were higher inpatient costs associated with laparotomy. Therefore, the promotion of minimally invasive surgery in this population is supported by the similarity in overall costs among surgical modalities.

Robotic surgery emerges as a valuable alternative to traditional surgical approaches, offering enhanced precision, reduced blood loss, shorter hospital stays and lower complication rates.

These advantages translate into improved patient outcomes and may contribute to a more favourable recovery experience for obese patients undergoing surgical treatment for endometrial cancer.

Multidisciplinary teams should collaborate to ensure appropriate patient selection and optimise surgical techniques to maximise the benefits of robotic-assisted procedures.

In summary, the findings of this review highlight the significant potential of robotic surgery to revolutionise the surgical management of endometrial cancer in obese patients. By integrating robotic technology into clinical practice and advancing research efforts, clinicians can optimize patient outcomes and improve overall quality of care for this challenging patient population.

Conclusion

Robotic surgery shows promise in optimizing endometrial cancer management in obese patients. It demonstrates favourable outcomes, with reduced blood loss and shorter hospital stays compared to alternative approaches. Robotic surgery also exhibited a lower conversion rate in high-BMI patients. Additionally, robotic surgery exhibited a reduced incidence of postoperative complications compared to open surgery.

Future research should focus on robust studies to further validate the efficacy of robotic surgery and refine techniques, ultimately improving care for this high-risk population.

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Table 1 CHARACTERISTICS OF INCLUDED STUDIES TO EVALUATE ROBOTIC-ASSISTED SURGERY FOR ENDOMETRIAL CANCER IN OBESE PATIENTS SINCE 2019

Studies	Sample Size, Study Aims	Results
Author: Dinoi G **Journal:** Int J Gynecol Cancer, 2024[13] **Location:** Italy **Period of study:** ongoing	Patient recruitment will be completed by 2026, and follow-up will be completed by 2029, with presentation of data shortly thereafter. **Study design:** Prospective, randomised.	Two interim analyses are planned: one after the first 188 and the second after 376 randomized patients.
Author: Drymiotou S **Journal:** Int J Med Robot, 2023[7] **Location:** UK **Period of study:** 2016 to 2019	**Sample size:** 281 **Aim:** To assess the surgical outcomes in obese women with endometrial cancer following robotic surgery introduction in a London tertiary gynaecological cancer unit. **Study design:** Prospective cohort study BMI > 30 kg/m^2	There was no difference in the length of stay or in the frequency and severity of complication rates between obese, morbidly obese and non-obese populations undergoing MIS.
Author: El-Achi V **Journal:** J Robot Surg, 2021[8] **Location:** Australia **Period of study:** 2015 to 2019	**Sample size:** 33 (51.6%) underwent. laparoscopic hysterectomy (LH); 31 (48.4%) had robotic hysterectomy (RH). **Aim:** To compare the surgical outcomes of morbidly obese patients undergoing LH or RH for endometrial cancer or complex atypical hyperplasia. **Study design:** Retrospective chart review BMI > 40 kg/m^2	The median length of hospital stay did not significantly differ between women undergoing LH and RH (1 day each, p=0.054). The mean duration of time spent in the operating theatre was comparable (195.5 vs. 215.3 min, p=0.07). The mean operation duration showed no significant difference (148.4 vs. 153.4 min, p=0.61). The non-operative theatre time was notably longer for RH compared to LH (61.9 min for RH vs. 45.7 min for LH, p=0.009). The estimated blood loss was more for LH compared to RH (98 mL vs. 44 mL, p=0.0005).
Author: Gracia M **Journal:** Int J Gynaecol Obstet, 2020[2] **Location:** Spain **Period of study:** January 2012 to December 2016	**Sample size:** 133 patients operated on with robotically assisted laparoscopy (RAL); 101 with standard laparoscopy (SLP). **Aim:** To compare perioperative outcomes and complications in RAL and SLP approaches in the treatment of endometrial cancer by body mass ndex (BMI, calculated as weight in kilograms divided by the square of height in meters). **Study design:** Cohort study BMI ≥ 30	Estimated blood loss was significantly lower in the group with BMI ≥30 (87.5 mL RAL vs. 180 SLP, p=0.003) operated with RAL. RAL significantly reduced the conversion rate in patients with BMI ≥30 (2 [3.4%] patients RAL vs. 6 [27.3%] patients SLP, p=0.004).
Author: Lindfors A **Journal:** , Gynecol Oncol, 2020[9] **Location:** Sweden **Period of study:** 2006 and 2014	**Sample size:** 131 robotic and 86 open surgical procedures. **Aim:** To evaluate surgical outcomes and survival after primary robotic or open surgery in obese women with endometrial cancer (EC). **Study design:** Retrospective chart review BMI ≥ 30 kg/m^2	Significantly lower estimated blood loss, surgical time and hospital stay were found in the robotic group, and the relative risk ratio of complication grades II-V, using the Clavien-Dindo classification, was 0.54 (95% CI 0.31-0.93) for the robotic compared to the open group. A significant difference in OS (p=0.029) and RS (p=0.024) in favour of robotics was shown in the univariable survival curves, using log rank tests. No difference was seen for DFS. The five-year RS was 96.2% (95% CI 89.7-103.3) for the robotic and 81.6% (95% CI 72.1-92.3) for the open group.
Author: Nezhat FR **Journal:** J Gynecol Surg, 2019 (1)[10] **Location:** USA **Period of study:** 2009 to 2014	**Sample size:** (BMI 30-35) robotic-assisted laparoscopic surgery (RALS), n=9; conventional laparoscopic surgery (CLS), n=7. **Aim:** To compare perioperative outcomes of RALS versus CLS in endometrial cancer. **Study design:** Retrospective analysis of a prospectively maintained database BMI ≥ 30	There was no apparent difference in operative room time (ORT). Among patients with endometrioid adenocarcinoma histology, ORT was longer in the RALS group [273 (135–660) vs. 222 (120–420) minutes; p=0.0018]. There was no difference in EBL or LOS between the two surgical approaches.
Author: Nezhat FR **Journal:** J Gynecol Surg, 2019 (2)[10] **Location:** USA **Period of study:** 2009 to 2014	**Sample size:** (BMI >35) RALS, n=12; CLS, n=32). **Aim:** To compare perioperative outcomes of RALS versus CLS in endometrial cancer. **Study design:** Retrospective analysis of a prospectively maintained database BMI ≥ 35	ORT appeared near significance. Among patients with endometrioid adenocarcinoma histology, ORT was longer in the RALS group [273 (135–660) vs. 222 (120–420) minutes; p=0.0018]. There was no difference in EBL or LOS between the two surgical approaches.
Author: Sofer A **Journal:** Isr J Health Policy Res, 2020[11] **Location:** Israel **Period of study:** 2013 to 2016	**Sample size:** Open surgery, n=61; robotic surgery, n=77. **Aim:** To compare perioperative measures, costs, quality of life and survival after open versus robotic surgery among obese women diagnosed with low-grade endometrial cancer. **Study design:** Retrospective chart review BMI ≥ 30	Robotic surgery was associated with shorter hospital stays (mean 1.7 vs. 4.8 days, p<.0001) and fewer postoperative complications (Clavien-Dindo >2, 5.2% vs. 19.7%; p=.0008), but longer operating theatre time (3.8 vs. 2.8 h, p<.001). Costs are equivalent when at least 350 robotic surgeries are performed annually, not including the initial system costs. Quality of life measures were better after robotic surgery. After robotic surgery, patients tended to recover more quickly when compared to open surgery. Five-year survival was 89.8% for the open surgery group vs. 94% for the robotic surgery group (log rank, p=0.330).
Author: Yoshida K **Journal:** Anticancer Res, 2021[12] **Location:** Japan **Period of study:** April 2014 and April 2020	**Sample size:** robotic hysterectomy (RH), n=22; laparoscopic hysterectomy (LH), n=20. **Aim:** To compare the surgical outcomes of RH and LH with or without pelvic lymphadenectomy among obese patients [body mass index (BMI) >30 kg/m2] with early-stage endometrial cancer. **Study design:** Retrospective chart review BMI ≥30 kg/m^2	The operation time, harvested lymph nodes and BMI did not differ between the groups. In the subset of patients who underwent pelvic lymphadenectomy, those in the RH group had shorter hospital stays (p=0.001) and less intraoperative bleeding (p=0.006).

YEARS CORNER

YEARS
Young European Advocates of Robotic Surgery

Training Reality in Robotic Gynaecological Surgery in the UK

by Christina Uwins and Anumithra Amirthanayagam

In the United Kingdom, training in obstetrics and gynaecology is provided through a national training scheme. Obstetrics and gynaecology trainees rotate between tertiary centres and general hospitals within training areas.

Commencing towards the end of 2024, the **Royal College of Obstetricians and Gynaecologists**, in collaboration with the **British and Irish Association of Robotic Gynaecological Surgeons (BIARGS)**, will introduce a special interest training module — **Robotic-Assisted Gynaecological Surgery (RAGS)** — available to senior trainees. Prior to the launch, certification is available through **BIARGS**.

The **BIARGS** training modules provide certification from second assistant through first assistant and then to console surgeon. Junior trainees aspiring to be robotic surgeons can get started by undertaking online e-learning modules related to the various robotic platforms provided by the manufacturers. This is often the first step required before training as a first assistant, in addition to simulation training.

BIARGS and **SERGS** offer basic robotic and advanced cadaveric courses. These courses provide excellent opportunities to gain experience and

confidence, regardless of whether a trainee has access to a robotic platform or not. Attending robotic conferences such as **BIARGS** and **SERGS** provides opportunities to network and make connections for future robotic fellowships and research.

Several robotic fellowships exist in the UK, primarily within the subspecialty of gynaecological oncology. Some advanced endometriosis surgeons have developed their skills whilst completing a gynaecological oncology fellowship. This has allowed them to gain high-volume exposure and training on the robotic platform.

There is a keen research interest in the benefits of robotic surgery in the UK. In Guildford, the **MIRRORS study** is investigating the role of robotic surgery in advanced ovarian cancer, while the **Leicester ISSUE study** is exploring the impact of this minimally invasive surgical platform on overall surgeon health and career longevity. Access to robotic platforms in the UK is increasing year over year in general hospitals and tertiary centres, with multi-speciality interest and increased training opportunities.

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Mentoring In Robotic Gynaecological Surgery

MIRGS Programme Update – September 2024

The Mentoring in Robotic Gynaecological Surgery (MIRGS) Programme was officially launched in December 2023. Emails of expression of interest to both potential mentors and mentees of SERGS/YEARS members were followed by emailing links for formal applications in March 2024.

A total of 21 mentors and 13 mentees were recruited from various countries across Europe and beyond.

Dina El-Hamamsy, UK

Anumithra Amirthanayagam, UK

Matching was successfully completed and candidates were informed of the results at the beginning of April 2024. We're happy to announce that all YEARS mentees were successfully matched to their first choice of robotic mentor. Many candidates expressed their happiness and pride in joining MIRGS on various social media platforms.

In June 2024, during the 16th Annual SERGS Meeting in Madrid, Spain, many mentees had the opportunity to meet up with their prospective mentors and discuss details of their planned robotic mentoring programme face to face.

We are also pleased to announce that interest in MIRGS is growing and that some YEARS members contacted us following the closure of the 2024 recruitment.

For such members, we advise attending our webinars and local courses, if possible, until the next round of applications opens.

We look forward to meeting all of our current and prospective candidates in Pisa, Italy, in 2025.

MIRGS
Mentoring in robotic gynaecological surgery

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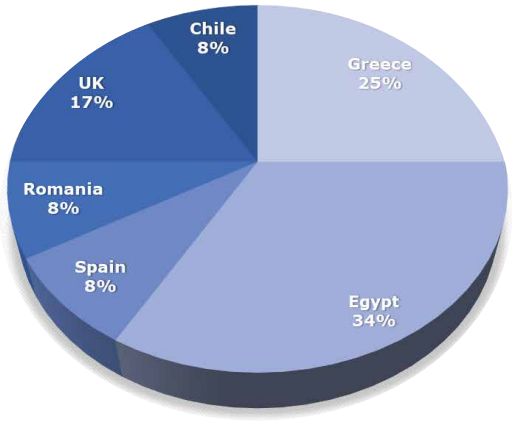

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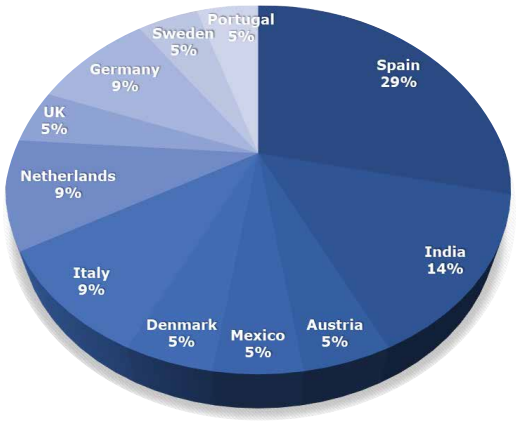

SERGS

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THE ENDOMETRIOSIS LEARNING PATHWAY

Interview with Mohamed Mabrouk, UK, EEL President

Congratulations on your new role as president of the European Endometriosis League (EEL). Was this a surprise or expected?

Thank you! It was an honour, though somewhat unexpected.

The role comes with great responsibility, and I am excited to contribute to the evolution of care for patients with endometriosis and awareness.

What are your plans for the EEL?

My primary focus is on advancing education for diagnosis and treatment for endometriosis as well as awareness in the society.

Particularly through initiatives like the Endometriosis Learning Pathway.

And this will receive further support from our partnership with Medtronic, which is providing seats for promising international gynaecological doctors outside of Europe, enabling wider access to advanced training.

How is EndoCare different from other endometriosis courses?

The Endometriosis Learning Pathway with EndoCare stands out by offering a comprehensive, hands-on approach over one academic year.

It includes practical skill development through detailed case studies and interactive digital modules, far beyond traditional theoretical learning.

How do you know that with EndoCare, surgeons are really able to improve their skill level?

EndoCare includes a structured proctorship with the Touch Surgery Enterprise platform, a system where surgeons upload their cases before and after completing the pathway, allowing us to measure tangible improvements in their skills.

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17th Annual SERGS Meeting

June 5-7, 2025 | Pisa, Italy

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SERGS EDUCATIONAL NETWORK (SEN)

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SERGS 2024

ABSTRACTS

SUPPLEMENT

SERGS 2024 ABSTRACTS SUPPLEMENT

ID 3

"DRAPED-NOT-DOCKED" IN ENDOMETRIAL HYPERPLASIA AND MALIGNANCY PLANNED FOR ROBOTIC SURGERY

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Background

Minimally invasive surgery (MIS) is the standard of care for management of endometrial hyperplasia and early endometrial cancer. Surgery for these conditions remains the most common gynae-oncological surgery done robotically. Draped-not-docked (DND) refers to the planned robotic cases that robotic instruments and arms were prepared and sterilised, but not used, therefore incurring unnecessary cost. In an attempt to explore ways to provide robotic surgical service more cost-efficiently, we performed an audit on the DND cases over 2017-2023 at a single institution.

Methods

We retrospectively reviewed all robotic cases that were planned for endometrial hyperplasia and endometrial cancer from 2017-2023. Anonymised data, including patient's age, BMI, presence of previous abdominal surgery, uterine size on pre-operative imaging, grade of tumour, time between imaging and surgery, reasons for decision not to proceed with robotic surgery and whether this decision was made at EUA (examination under anaesthesia) or laparoscopy, were collected on Microsoft Excel spreadsheet.

Results

There were a total of 35 cases of DND between 2017-2023. Overall DND rate was 13.8%. Rate of DND was 20.8% (10/48) and 26.3% (10/38) in 2018 and 2019 respectively, and fell to 4.4% (2/45) in 2020. DND rates increased over pandemic years 2021 and 2022 to 23.8% (5/21) and 10.8% (4/37) respectively, and decreased in 2023 to 7.4% (4/54). Out of 35 cases of DND, 7 were done via laparotomy due to more advanced disease which rendered them unsuitable for MIS surgery. 3 were of low-grade histology, and 4 were of high-grade histology. The mean time from pre-operative imaging to surgery was 67 days for those with low-grade histology, and 83 days for those with high-grade histology. Decision to perform surgery via laparotomy was made at examination under anaesthesia for 9/35 cases. 4 of those could have been anticipated pre-operatively.

Conclusions

DND rates decreased with increase in robotic surgical experience of the department. Updated pre-operative imaging and clinical assessment should be considered when surgery is scheduled more than 6 weeks from last assessment.

ID 5

ROBOT ASSISTED LAPAROSCOPIC SURGERY IN LOCO-REGIONALLY RECURRENT OVARIAN CANCER

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Recently, the robot-assisted laparoscopic surgery has been carefully implemented in gynaecological cancers. In ovarian cancer, robotic surgery is being attempted in staging surgery for early ovarian cancer, interval debulking surgery for ovarian cancer that is negative on imaging after neoadjuvant chemotherapy, and locally recurrent ovarian cancer that can be completely removed by surgery.

A 58-year-old woman was diagnosed with high-grade serous ovarian cancer, FIGO stage IIIC, after primary debulking surgery in 2013. After the surgery, she received 12 cycles of paclitaxel-carboplatin adjuvant chemotherapy. The patient underwent radiofrequency ablation for liver metastasis and craniotomy for brain metastasis in 2016. Since then, the patient has been without evidence of recurrence. However, in 2023, a recurrent ovarian tumour in the left common iliac lymph node was proven by biopsy. The tumour surrounded the left ureter, resulting in left hydronephrosis and hydroureter. There were no other metastases according to abdominal CT, chest CT and PET-CT.

Robot assisted laparoscopic surgery was done for tumour resection. After the left ureteral stent insertion, adhesiolysis, dissection of ureter and en bloc left common iliac lymphadenectomy were carried out. The follow-up CT showed that the recurrent tumour was successfully removed. Robot assisted laparoscopic surgery is safe and practicable in loco-regionally recurrent ovarian cancer.

It provides steady three-dimensional vision and highly precise maneuver from articulated instruments without tremor, and a shorter learning curve. Prospective randomised clinical trials are necessitated to value the clinical benefits of robot-assisted surgery.

ID 6

SINGLE DOCKING TECHNIQUE FOR HYSTERECTOMY, BILATERAL PELVIC AND RETROPERITONEAL NODE DISSECTION

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This is a case of high grade - serous subtype of endometrial cancer in which we have done a robotic surgery using X system with a single docking technique to do hysterectomy, sentinel lymph node dissection followed by complete bilateral pelvic node dissection and retroperitoneal lymph node dissection till the level of renal vein.

High grade endometrial cancers mandate complete lymph node dissection. It is a time consuming surgery and using this technique of single docking method in the X robot helps save us 45 minutes of intraoperative time and prevents putting in extra ports also.

This is a great, novel method in which complete retroperitoneal lymphadenectomy is done by the same docking.
This helps in adequate management of high grade endometrial cancers in a time consuming and ergonomic manner.

ID 8

COMPARISON OF PERIOPERATIVE OUTCOMES OF ROBOTIC, LAPAROSCOPIC AND ABDOMINAL MYOMECTOMY

Seung-Hyuk Shim[1]; A Jin Lee[1]; Eun Bi Jang[1]; Kyeong A So[1]; Sun Joo Lee[1]; Tae Jin Kim[1]
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Objective
To compare surgical outcomes for robotic myomectomy (RM) to laparoscopic myomectomy (LM), and abdominal myomectomy (AM).

Methods
We retrospectively reviewed the data of all patients who underwent robotic, laparoscopic, or abdominal myomectomy for benign uterine fibroids between December 2017 and December 2022 at a single tertiary hospital. Age, body mass index (BMI), parity, weight of myoma, number of myoma, total operation time, estimated blood loss (EBL), peri-operative hemoglobin change, . length of hospital stay, and complications were collected from electronic medical records and were compared between robotic, laparoscopic, and abdominal myomectomy groups

Results
A total of 863 patients were included: 124(14.4%) in LM, 323(37.4%) in RM, and 416(48.2%) in AM. There were no differences in BMI and parity between the three groups, but age was significantly less in the AM (P = 0.015). The median weight of myoma after surgery was significantly greater in the AM group (352.6g, range, 3.5 to 6000g) than in the LM group (116.6g, range, 0.5 to 583g) and RM group (151.9g, range, 2 to 815g) (P<0.001). The median operation time was 183 minutes, which was significantly longer in the RM group compared to 141 minutes in the LM group and 130 minutes in the AM group (P<0.001). EBL and peri-operative hemoglobin changes were similar in the three groups, but postoperative transfusions were less frequent in the RM group (P=0.003). RM patients had a shorter length of hospital stay than LM and AM patients (P<0.001). The perioperative complication rates were similar in the two groups (5.6% in the LM group and 2.5% in the RM group), but the complication rate (13.9%) was significantly higher in the AM group (P<0.001).

Conclusions
Although RM had a longer operation time, it showed advantageous surgical outcomes with shorter length of hospital stay, less postoperative transfusions, and fewer perioperative complications than LM and AM.

ID 9

A RETROSPECTIVE SINGLE-CENTER ANALYSIS OF THE 1000 GYNAECOLOGICAL ROBOTIC-ASSISTED LAPAROSCOPIC SURGERY CASES

Seung-Hyuk Shim[1]; A Jin Lee[1]; Yoon Jung Min[1]; Kyeong A So[1]; Sun Joo Lee[1]; Tae Jin Kim[1]
[1] Department of Obstetrics and Gynecology, Konkuk University School of Medicine, Seoul, Korea

Objective
This study reports the 1000 cases of gynaecological robotic surgery using Da Vinci Xi System performed at a single center, including hysterectomy, adnexectomy, ovarian cystectomy, and myomectomy.

Methods
This study evaluates patients undergoing robotic-assisted laparoscopic gynaecological surgeries (Da Vinci Xi Surgical System) done from December 2017 to February 2022 at Konkuk university medical centre. We retrospectively analyzed clinical characteristics and surgical outcome including estimated blood loss (EBL), operative time, postoperative complications.

Results
A total of 1014 patients (single site, n=613; multiport, n=401) with a variety of gynaecological disease underwent robotic-assisted

laparoscopic surgery. Among them, 340 cases of hysterectomy, 402 cases of adnexectomy including ovarian cystectomy, 267 cases of myomectomy, 2 cases of sacrocolpopexy, and 3 case of other surgery were included. The median age of patients with a mean BMI of 24 (range: 15-46) was 41 years old (range: 11–71). The median EBL was 127ml (range: 50–1500) and the median change in hemoglobin level was 1.9 g/dL (range: 0-4.9). The median total operation time was 160 minutes (range: 25-520). There were postoperative complications in 14 (4.1%), 10 (2.5%) and 3 (1.1%) patients in the hysterectomy group, adnexectomy group and myomectomy group, respectively. There were 9 cases only, conversion to laparotomy.

Conclusions

Robot-assisted laparoscopic surgery is an effective gynaecological surgical procedure with minimal bleeding and few postoperative complications. The outcome of many of these cases might help in choosing robotic surgery in gynaecological surgery.

ID 10

REDUCED-PORT (1+1) AND SINGLE PORT ROBOTIC SURGERY FOR MYOMECTOMY AND HYSTERECTOMY

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Aim

To compare the surgical outcomes between single port robotic surgery using da Vinci SP system and Reduced-port (1+1) robotic surgery using the da Vinci Si/Xi system for myomectomy and hysterectomy, and to provide surgical tips.

Method of study

We retrospectively analysed the medical records of total 298 patients who underwent single-port robotic myomectomy (SP-RM, n=154), reduced-port robotic myomectomy (RP-RM, n=57), single- port robotic hysterectomy (SP-H, n=55) or reduced-port robotic hysterectomy (RP-H, n=32) for benign gynaecological diseases from October 2020 to July 2023. A total of two skin incisions were made for RP (1 + 1) robotic surgery. A 2.5 cm intraumbilical incision was made and multichannel single port was inserted for the camera, robotic trocar and assistant port. Another 8 mm skin incision was made on the right side of the umbilical incision, 8-10 cm away from the umbilical incision for robotic trocar. Demographic characteristics and surgical outcomes were compared between SP robotic and RP (1 + 1) robotic surgery group.

Results

Of the total 298 patients, 278 (93.28%) underwent surgery for leiomyoma, followed by adenomyosis (n=16, 5.37%). None of the cases were converted to open surgery or add additional port during surgery. In comparison of myomectomy, demographic characteristics, the maximal diameter and weight of removed leiomyomas were not different between two groups. However, the number of removed leiomyomas were higher in the RP-RM group than SP-RM group [median 3 (range 1-2) vs median 1 (range 1-11), p=0.002]. And there were no intra- or postoperative complications in both surgeries. In comparison of robotic hysterectomy, demographic characteristics, the maximal diameter of uterus and weight of removed uterus were not different between two groups. However, total operating time were longer in SP-H group than RP-H group (120.31 ± 27.42 min vs 149.07 ± 51.49 min, p=0.004).

Conclusions

Both SP and RP (1 + 1) robotic surgery are feasible and effective surgical options for myomectomy and hysterectomy with similar cosmetic benefit. Surgeons select SP-RM for patients with fewer myomas than RP-RM. Operation time can be reduced with use of RP-H instead of SP-H.

ID 11

MYOMETRIAL ERGOMETRIN INJECTION AND SURGICAL OUTCOMES IN ROBOT-ASSISTED MYOMECTOMY

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[2] Department of Obstetrics and Gynaecology, King Fahad Military Medical Complex, Dhahran, Kingdom of Saudi Arabia
[3] Department of Obstetrics & Gynaecology, Samsung Medical Centre, Sungkyunkwan University School of Medicine, Seoul, Republic of Korea

Aim

To compare the surgical outcomes between patients with and without myometrial eruvin injection during robotic myomectomy. The primary outcome was estimated blood loss and secondary outcomes were transfusion rate, hemoglobin change, total operation time, hospital stays, and intra- and post-operative complications.

Methods

We retrospectively analysed the medical records of 356 patients who underwent robotic myomectomy using da Vinci Xi and SP flatform performed by single surgeon (SR Lee) from March 2019 to March 2023. Ergometrine (Eruvin® 0.2 mg, Daewon, Seoul, Korea) was injected intravenously over 1 minute right before the first incision of myomectomy. EBL was recorded at the end of surgery after suctioning intraperitoneal bleeding with endo-suction. A total of 146 patients with LMP records were included in the analysis.

Demographic characteristics and surgical outcomes including total operating time, estimated blood loss (EBL), hospital stays and surgical complications were compared between patients with (n=29) or without (n=117) myometrial eruvin injection. Student's t-test or

Mann–Whitney U test / Chi-square test or Fisher's exact test using SPSS for windows version 21 (SPSS Inc., Chicago, IL, USA) were performed.

Results

The mean age (37.21 vs 37.41 years), BMI (23.25±4.69 vs 22.24±3.32 kg/m2), maximal diameter of myoma (9.11±3.38 vs 9.28±2.45 cm), number (3.76±3.03 vs 4.76±3.74) and weight (304.48±272.49 vs 321.0±227.21 g) of removed myomas were not different between no-eruvin and eruvin group. EBL was significantly lower in eruvin group (313.573±250.77 vs 183.79 ±129.79 mL, p<0.001) while there was no difference in Hb change, transfusion rate, transfusion packs, intra-and postoperative complications, and hospital stays. Subgroup analysis for 51 patients with 5 and more removed myomas between no eruvin (n=39) and eruvin group (n=12), EBL was not different between the two groups (361.31±296.28 vs 250.00±146.16 mL, p=0.088).

Conclusions

Myometrial eruvin injection during robotic myomectomy is an effective and safe method for decrease of EBL.

ID 12

TRANSVAGINAL MESH RECONSTRUCTION AND ROBOTIC SACROCOLPOPEXY FOR VAULT PROLAPSE WITH PARTIALLY ABSORBABLE MESH

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Aim

To compare the surgical outcomes of two surgical options which use synthetic mesh for pelvic organ prolapse (POP) including vault prolapse, robotic sacrocolpopexy (R-SCP) and transvaginal mesh reconstruction (TVM) with partially absorbable mesh (PAM).

Methods

This retrospective study was performed for patients who underwent R-SCP or TVM for symptomatic POP from 2019 to 2023. The da Vinci SP® and da Vinci Xi® systems were used. A Y-shaped, partially absorbable macroporous polypropylene light-weight mesh (Seratex® PA B2 type; Serag-Wiessner KG, Naila, Germany) was used in all R-SCP cases. PAM (Seratom® PA) with 4 arms was used in all TVM cases with conventional transobturator approach. Subgroup analysis was conducted on vault prolapse.

The follow-up period were 3 weeks, 3 months, 6 months, and 12 months after operation and defined recurrence as progressing to POP-Q stage 2 or higher.

Results

A total of 288 POP cases (R-SCP group, n=205 and TVM group, n=83) were included. Age and parity were higher in TVM group, however there were no differences in BMI, POP-Q stage between two groups (Table 1-1). TVM group showed less estimated blood loss (EBL), shorter operative time and hospital stay (Table 2-1). Regarding recurrence, only one case in the robotic SCP group had a recurrence at postoperative 3 months, while in the TVM group, 4 cases had a recurrence (Table 3-1). In terms of complications, there were no serious complications such as blood transfusion. However, minor complications such as stress urinary incontinence, constipation, pelvic pain, mesh erosion, vaginal discharge had been reported in both groups.

Subgroup analysis was conducted on 52 patients with vault prolapse (R-SCP group, n=20 and TVM group, n=32). There were no differences in patient's baseline characteristics between two groups (Table 1-2). TVM group also showed superior outcomes in terms of perioperative parameters (Table 2-2). One case of recurrence in the R-SCP group and no case in the TVM group (Table 3-2) was noted. Regarding complications, serious cases were not reported in both groups. Minor complications had been reported in the R-SCP group and the TVM group, and there was no difference in complication rate between two groups.

Conclusions

TVM shows less operative time, hospital stay, EBL, and lower surgical costs compared with the R-SCP. TVM for vault prolapse is not inferior in recurrence rate and complication rate, making it a viable alternative surgical option.

ID 13

ROBOTIC ASSISTED COLPECTOMY FOR GENDER AFFIRMING SURGERY IN TRANS-MEN: DESCRIPTION OF A NOVEL SURGICAL TECHNIQUE USING A UTEROVAGINAL MANIPULATOR DEVICE

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[2] Innovation Focus on Gender Variance, University Hospital of Basel, Switzerland

Background / Aim

Colpectomy for gender affirming surgery, with or without salpingo-oophorectomy, is a challenging procedure. It requires extensive knowledge of the pelvic anatomy and presents technical difficulties due to the necessity of reaching deep into the pelvis to complete the dissection.

Advantages of robotic surgery could help overcome this challenge and optimize outcome, while retaining a minimally invasive approach. However evidence and instructional videos are extremely sparse. Aim of this video is to demonstrate our novel surgical method using a uterovaginal manipulator device.

Methods

During robotic assisted laparoscopy (Davinci Xi ®, Intuitive Surgical), concomittant salpingo-oophorectomy is performed in usual manner and the uterus with adnexa and vagina are removed en bloc. An assistant uses the Schär ® manipulator (Karl Storz, Germany) to assist during the procedure. After visualization of the ureters up to the ureterovesical junction and dissection of the bladder, the manipulator combined with reversion of the optical angle anteriorly allow an excellent view of the posterior vaginal wall, facilitating the dissection of the uterosacral ligament and the rectovaginal fascia. At this point, the lateral vaginal suspension is gradually disconnected using bipolar forceps and scissors. At the point of vaginal junction with the perineum dorsally and the urethra anteriorly, the laparoscopy is ended, and the complete excision and colpocleisis is completed vaginally, with the patient in lithotomy position.

Results

We present the first results from 14 trans-men. Median age 28 was years. Mean operative time, including docking time and colpocleisis, was 181 Minutes (SD 26.5), mean blood loss was 208 ml (SD 170) and median hospital stay was 3 days. In one case with concomitant phalloplasty, blood loss of over 300ml was reported (700ml) and the same case also suffered a bilateral compartement syndrome of the lower extremities, which required surgical intervention. Two cases of urinary retention were reported, both resolved within 2 weeks using intermittent self-catheterization.

Conclusions

Our approach for the colpectomy in trans-men with one surgeon and an assistant using the Schär ® device is safe and feasible while facilitating the dissection of the pelvic organs and retaining all the advantages of minimally invasive surgery.

ID 14

ROBOT INTERVAL CYTOREDUCTION AFTER NEOADJUVANT CHEMOTHERAPY FOR ADVANCED OVARIAN CANCER

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Background

Although ovarian cancer is among the 14 most common malignancies showing decreases in mortality, is still the 6th leading cancer related cause of death in women. Recently was established that in advanced stage disease, neoadjuvant chemotherapy followed by interval surgery shows no inferiority to primary cytoreduction. With the rise of minimally invasive interval debulking surgeries, prospective, randomised phase 3 trial is launched to evaluate its oncological efficacy.

However focus is put on laparoscopy as a method of surgery. Bearing in mind the advantages of robotic surgery that overcome some barriers of laparoscopy - three-dimensional (3-D) visualisation, enhanced dexterity, degree of freedom, and instrument motion, it could be expected to be the superior method of surgery for the confined space of the pelvic cavity. However randomised data is needed.

Methods

Primary Objective

The primary objective of this study is to assess feasibility and oncologic safety of robotic surgery for interval cytoreduction and to examine wether it is inferior to laparotomic interval debulking surgery.

Study Hypothesis

Our hypothesis is that in the population of advanced ovarian cancer patients treated with neoadjuvant chemotherapy robotic interval surgery is not inferior to laparotomy.

Trial Design

The study is designed to be national, prospective, and randomised, single-centre trial on oncologic safety of robotic surgery versus laparotomy for advanced ovarian cancer, showing complete or partial response to neoadjuvant chemotherapy. Diagnostic laparoscopy with scoring system is going to be used to assess amenability of the tumour to robotic surgery. Patients will be followed up for minimum of 3 years and overall survival (OS), progression free survival (PFS), recurrence rate (RR), length of hospitalisation, perioperative mortality and residual disease will be evaluated.

Inclusion/ Exclusion Criteria

Women with stage III C or IV epithelial ovarian, fallopian tube or primary peritoneal cancer after 3 or 4 cycles of neoadjuvant chemotherapy. Response to therapy is assessed by decline in CA 125 level and complete or partial response on preoperative imaging (RECIST score) - MRI, PET/CT or CT. Patients with other malignant tumours will be excluded.

Results

Primary endpoint:Equivalent or better PFS in robotic assisted interval debunking compared to laparotomy.

Conclusions

Present studies show that the robotic approach is safe and effective method for interval cytoreduction. However more randomised trials are needed. With our trial we hope to establish a protocol for triaging the most amenable patients to robotic surgery after neoadjuvant chemotherapy and prove non-inferiority to standard care.

ID 15

CONVERSION TO LAPAROTOMY IN ROBOT-ASSISTED STAGING SURGERY FOR ENDOMETRIAL CANCER: SINGLE CENTRE EXPERIENCE

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Background

Robot-assisted surgery is considered an appropriate staging method for early stages of endometrial cancer. Available data evaluating the frequency of conversion of robot-assisted surgery to open surgery are limited. Similarly, the spectrum of causes leading to conversion is not defined.

Methods

We present a cohort of 513 patients operated for early stage endometrial cancer between years 2009 and 2023 at our department.

Results

Patients with a mean age of 65 years (range from 29 to 90 years) and a mean BMI of 32.5 kg/m2 (range from 15.0 to 67.4 kg/m2) underwent a robot-assisted total laparoscopic hysterectomy, a bilateral adnexectomy and a lymph node staging procedure in accordance with current existing recommendations.

The average procedure time was 250 minutes with an average blood loss of 118 ml. There were 7 conversions of robot-assisted laparoscopy to an open surgery in the patient cohort which is 1.4% of all. The average age of these patients was 68 years with an average BMI of 42,3 kg/m2. The average procedure time of the converted surgeries was 242 minutes and the average blood loss was 914 ml with majority developing during the open surgery.

The most common cause of conversion was an iatrogenic injury: bleeding (from inferior vena cava, external iliac vein, abdominal wall) and a lesion of colon. Other causes were unexpected findings in the abdominal cavity (extensive tumour mass of the peritoneal cavity and intestine, massive adnextumour and severe adhesive process of the pelvis).

Conclusions

Robot-assisted laparoscopic surgery is the gold standard for surgical staging of endometrial cancer. In our cohort of 513 patients, the conversion rate to laparotomy was 1.4%.

The main causes were severe perioperative bleeding, unexpected perioperative findings, and lesions of the abdominal organs. The mean age of the patients in both groups was comparable, however the mean BMI was significantly different.

ID 16

IS DEXAMETHASONE A GAME CHANGER IN SURGICAL STRESS?

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Background and Aim

Minimally invasive surgery has revolutionised the field of surgical interventions with its numerous advantages such as reduced postoperative pain, faster recovery, and shorter hospital stays. The constant quest to optimise outcomes and enhance patient experiences necessitates research and testing of modifiers of stress response to establish clinical evidence. Dexamethasone's anti-inflammatory effects on allergic reactions, autoimmune disorders, and malignancies is well documented, which has prompted investigations into its potential benefits during and after surgical procedures. It mitigates tissue damage, decreases postoperative pain, and hastens the convalescence by attenuating an inflammatory reaction triggered by surgery.

Numerous studies have investigated the use of dexamethasone in the context of laparoscopic surgery exploring optimal dosage, timing of administration, and potential adverse effects associated with dexamethasone use. We performed the first ever double-blinded randomised study on dexamethasone in benign robotic hysterectomy (NCT04762381).

Methods

In May 2022- October 2023 women were randomised to receiving a single dose of either saline (n=38) or 24 mg dexamethasone (n=41) corresponding to 128 mg methyl prednisolone 15 minutes before insertion of the instruments. Blood tests were taken in the outpatient Dept. before the procedure, on the day of the procedure at 0h, 4h, 8h, 12h and 24h. Visual analog scale (VAS) for pain and medications during admittance were registered at similar intervals. The women filled in questionnaire on pain, medications, sexuality and incontinence before the procedure and every week until 4 weeks after the procedure. In total, 71 and 72 % answered the questionnaires at week 1 and 4, respectively.

Results

Seventy-nine women had complete blood sampling at all time points. Their average age was 48 years (range 23-75), parity 1.6 (0-2), BMI 29 kg/m2 (18-44), weight 82 kg (52-140). Their VAS score were 0.5 (0-5) at baseline and 2.3 (0-10) 24 h after operation, no significant difference in both groups. The c-reactive protein was significantly lower in the dexamethasone group at 12h 7.5 mg/L (95% CI; 5.7-9.2) vs 11.5 (95% CI;9.3-13.8) in controls. Similarly, at 24h 19.7 (12.7-26.6) vs 48.8 (39.2-58.5) in the dexamethasone group vs

controls. At present, no difference between the groups was found in the questionnaires.

Conclusions

The effect of dexamethasone on C - reactive protein indicating a reduction of the perceived surgical stress response. Further studies of the underlying response modulators will be presented in future.

ID 18

ROBOT-ASSISTED ANTERIOR PELVIC EXENTERATION AND RECONSTRUCTION FOR RECURRENT VAGINAL SARCOMA

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Background

Robot-assisted surgery has paved the way for safer, more effective and more interdisciplinary surgery. In particular, it expands the surgeon's skill set by allowing minimally invasive surgery to be performed where laparoscopy would not be easily feasible.

Case Report

We present the case of a 41-year-old obese woman (BMI 33) referred to our centre with a 4 cm exophytic recurrent myxoid leiomyosarcoma beneath the lower third anterior vaginal mucosa. Following a multidisciplinary evaluation, the patient underwent robotic-assisted anterior pelvic exenteration, urinary diversion with a Bricker ileal conduit via an ileo-ileal latero-lateral anastomosis and uretero-ileo-cutaneostomy, and pelvic floor reconstruction using our previously published technique involving a pedicled omental flap and human acellular dermal matrix placed circumferentially at the pelvic rim and sutured to the remaining pelvic structures with a barbed suture.

Results

The Da Vinci Xi™ Surgical System (Intuitive Surgical ®) was used to perform the planned surgery. The endoscope was positioned 2 cm above the umbilicus, while two trocars were placed on the right side, 2 cm above and below the transverse umbilical line respectively. In addition, a robotic trocar was placed on the left side, 2 cm above the umbilical transverse line, and finally two additional 12 mm trocars were placed in the left hypochondrium and flank for the assistants. The distance between each trocar was approximately 8 cm. The total operative time was 7 hours 59 minutes, with the demolition phase lasting 3 hours 44 minutes and the reconstruction phase lasting 4 hours 15 minutes. No blood transfusion was required. The intraoperative and postoperative periods were uneventful and the patient was discharged after 14 days. Final pathology confirmed myxoid leiomyosarcoma with severe cytological atypia and free margins.The patient is currently undergoing adjuvant chemotherapy with doxorubicin and dacarbazine.

Conclusions

Robotic surgery allows a novel and pioneering interdisciplinary approach to complex cases such as the one presented here. Robotic pelvic exenteration proves to be a safe and feasible technique in obese patients, reducing the intraoperative surgical risk of conversion, even in complicated cases. It is also effective in reducing perioperative complications and length of hospital stay. Simultaneous multilayer pelvic floor reconstruction using a pedicled omental flap and human acellular dermal matrix is proving to be a reliable procedure for supporting the abdominal viscera and reducing inter-organ adhesions and bowel prolapse.

ID 13

FEASIBILITY OF ROBOTIC LOWER PELVIC PORT PLACEMENT FOR UPPER PARAAORTIC LYMPH NODE DISSECTION IN HIGH-RISK ENDOMETRIAL CANCER

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Background and Aim

Upper paraaortic lymph node dissection (UPALD) to the infrarenal level is one of the most challenging robotic procedures. The aim of this study is to evaluate feasibility of robotic staging surgery using lower pelvic port placement (LP3), to perform optimally and simultaneously both UPALD and pelvic procedures in high-risk endometrial cancer.

Methods

From August 2019 to March 2024, 25 high-risk endometrial cancer patients who underwent robotic staging surgery, including UPALD, were analysed. High-risk was defined as patients who showed grade III, deep myometrial invasion, cervical involvement, lymph node involvement, and high-risk histology. For port placement, a line was drawn between both the anterior superior iliac spines. Four robotic ports were placed on this line. After PALD was completed, the boom of robotic system was rotated 180 degrees to retarget for the pelvic LD and hysterectomy. Patient status was estimated in terms of operative morbidity and surgical outcomes.

Results

The operation was completed robotically without any complication and conversion to laparotomy. Median patient age and body mass index were 52 years and 23.4 kg/m2, respectively. Median operative time was 242 minutes (range 225 to 305 minutes). Median estimated blood loss was 50 ml. Median number of lymph nodes

obtained was 48 (range 36 to 58). Median postoperative hospital stay was 3 days. There were no perioperative complications. There were no patients who needed blood transfusion.

Conclusions

The LP3 was feasible for performing simultaneously optimal PALD as well as procedures in pelvic cavity in high-risk endometrial cancer. The advantage of LP3 technique is the robotic port placement that affords for multi-quadrant surgery, abdominal and pelvic dissection. The LP3 will enable surgeons to extend the surgical indication of robotic surgical system in the gynaecological oncologic field.

ID 20

EMBRACING ROBOTIC INNOVATION IN GYNAECOLOGICAL SURGERY: 6-MONTH MULTI-PLATFORM REPORT AT A TERTIARY REFERRAL CENTRE

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Background

Since the Da Vinci® patent expiry, novel robotic platforms emerged to reduce costs and increase the availability of robotics. The HUGO$_{TM}$ Robotic-Assisted-Surgery (RAS) (Medtronic, CA) and the Versius (CMR Surgical, UK) are among these. Unlike the Da Vinci®, they share the open console and the multiport fashion. Since November 2022, they became available at our Institution already equipped with two Da Vinci® systems.

The aim of the study is to describe the implementation of these novelties evaluating the feasibility and safety across gynaecological procedures.

Methods

Data of patients who underwent gynaecological robotic procedures for benign indications (January-June 2023) were prospectively collected and retrospectively analysed. All procedures were performed at San Paolo University Hospital, Milan, Italy by two expert robotic surgeons who achieved the learning curve for all the platforms.

The enrolment was consecutive and the allocation to each platform was casual, based on local planning. Demographics, intraoperative settings, and perioperative outcomes were investigated.

Results

A total of 49 procedures were performed: 20 (40.8%) were carried out with the Da Vinci®, 14 (28.6%) with HUGO$_{TM}$ RAS, and 15 (30.6%) with Versius, respectively.

Of those, most patients 23 (46.9%) underwent adnexal surgery, followed by 14 (28.6%) hysterectomies, 11 (22.4%) pelvic floor reconstructive surgeries and 1 (2.1%) explorative procedure. The overall patients median age was 53 years (IQR 44-65.2), the overall median BMI was 26 kg/m2 (IQR 23.1-29.4), 38 (77.6%) patients had a previous abdominal surgery, with no statistically significant differences between the systems (all p>0.1). The median total operative time was 145 minutes (IQR 110-226.2), with 177 minutes for the HUGO$_{TM}$ RAS (IQR 105-260), 165 minutes for Da Vinci® (IQR 106-221.5) and 137.5 minutes for Versius (IQR 117.5-182.5), (p=0.7). The median pneumoperitoneum was 12 mmHg across all systems (p=0.2).

The overall median blood loss was 50 ml (IQR 0-100) with no statistical difference (p=0.8). No intraoperative complications occurred. Two conversions to laparoscopy, due to a system malfunction, were recorded with HUGO$_{TM}$ RAS, managed laparoscopically without any additional complications. Four patients (8.2%) experienced postoperative minor anaesthesiologic issues, solved within the first postoperative day.

Conclusions

We present a real-life report of gynaecological procedures from a centre equipped with three different robotic systems. Benign gynaecological procedures can be safely performed with either Da Vinci®, HUGO$_{TM}$ RAS, and Versius platforms, achieving adequate perioperative outcomes, regardless of the system used. Further investigations are needed to compare long-term results between the robotics and conventional laparoscopy.

ID 21

ADVANTAGES OF ROBOTIC-ASSISTED TOTAL HYSTERECTOMY IN DIFFICULT CASES (OBESITY CASES, GIANT FIBROIDS, ENDOMETRIOSIS)

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Introduction

In our Hospital, Da Vinci was started at November 2022 and 270 robot-assisted surgeries (RASH+RSC) have been performed by February 2024. From the 10th case, I felt the superiority of robotic surgery, and after that, about 90% of benign hysterectomy surgeries were indicated.

We report on the usefulness of robot-assisted surgery in difficult cases such as adhesions and giant fibroids, and the usefulness of 3D-CT analysis in response to these difficult cases.

Methods

BMI of 25 or more was considered obesity, 500 g or more was considered to be giant fibroids (500 g ~ 2530 g), cesarean section, endometriosis was considered as adhesion difficult cases, and laparoscopic total hysterectomy (TLH) performed by the same surgeon from 2021 was compared.

Results

Compared to TLH, there was no difference in the operative time of obese patients, but the amount of blood loss was 200 g (n = 20) in the TLH group and 67.9 g (n = 24 in the RASH group) And few. In the adhesion case, the surgical time of the TLH group was 183 minutes and the amount of blood loss was 147 g (n = 42), and the amount of bleeding was small in the RASH group was 176 minutes and 69 g (n = 27), and the peeling was easy and safe. In addition, in difficult cases, we were able to perform surgery without trouble in all difficult cases by confirming the running of blood vessels and ureters before surgery and using virtual reality goggles during surgery using the Holoeyes MD system (trademark) by 3D-CT analysis.

Conclusions

Giant fibroids are difficult to compare, but RASH is easier to perform because larger fibroids can be operated on in a smaller space. 2530 g of fibroids were performed with a console time of 1 hour and 54 minutes and a bleeding volume of 50 ml. Robotic surgery can be performed without stress in difficult laparoscopic cases such as obesity cases, giant fibroids, and adhesions with little surgery time and bleeding. In addition, by inserting preoperative 3D-CT analysis in difficult cases into the VR space with the Holoeyes MD system, it was possible to accurately grasp the running of ureters and blood vessels in difficult cases, and RASH was performed safely.

ID 22

ROBOTIC DAVYDOVS' PROCEDURE FOR NEOVAGINA CREATION IN A CASE OF MRKH SYNDROME

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Aim

Mayer Rokitansky Kutser Hauser (MRKH) Syndrome is characterised by utero-vaginal agenesis with normal functioning ovaries. It has an incidence of 1 in 4000 to 5000 live female births. Treatment is multidisciplinary with neovagina creation being one of the aspects.

Among the multiple procedures described for vaginoplasty, Davydovs' technique involving laparoscopic peritoneal pull through remains the easiest, with least complications and decent sexual satisfaction scores. Here we describe Davydovs' Technique via robotic modality.

Methods

A 23 yr old girl was referred with primary amenorrhea. On evaluation she was found to have age appropriate secondary sexual characters with a blind vagina. Ultrasound and MRI imaging showed uterine and vaginal agenisis, normal appearing ovaries with multiple follicles, right pelvic kidney and absent left kidney. It was decided to proceed with Robotic assisted Davydovs' vaginoplasty in view of anticipated reduced pelvic space due to the presence of pelvic kidney.

Results

DaVinci Xi surgical system was used for this procedure. A peritoneal incision was placed along a line connecting the round ligaments. The same incision was extended bilaterally along the lateral pelvic wall till the infundibulo pelvic ligaments to mobilise the pertinoneum thus raising anterior and posterior peritoneal flaps. The vaginal dimple was bulged by placing a hegars dilator. The space between the bladder and rectum was dissected till the tip of the dilator was visualized. The peritoneal edges were pulled through till the vestibular opening and sutured meticulously using vicryl to its edges to create the external opening and a purse string suture was taken on peritoneum to create an apex and the same was reinforced with round ligaments. The ovaries were repositioned in a location accessible for future fertility treatments. Cystoscopy was done and right sided ureteric reflex was noted. A mould was placed in the vagina.

Conclusions

Gynaecological management of MRKH syndrome has been predominantly surgical in view of better patient compliance. Davydovs procedure offers optimum surgical ease, reasonable risk profile with decent sexual satisfaction scores. Robotic surgery further accentuates this position of the procedure by offering precise surgical maneuverability, shorter hospital stay, better post operative pain scores and higher overall patient satisfaction scores.

ID 23

ROBOTIC PECTOPEXY FOR VAULT PROLAPSE WITH AN ELONGATED VAGINA

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Aim

The aim of this video is to demonstrate the technique of robot-assisted pectopexy for vault prolapse. This is the case report of a 58 years old patient with vault prolapse, (POP-Q) Stage 4 and apical vaginal length of 15cm.

In order to achieve an effective vaginal reconstruction and anatomical repositioning of the apex to the level S2-S3, the length of vagina had to be optimised prior to mesh placement.

Method
The da Vinci Xi system was used for the procedure. Assistant port (5mm) placed at palmers point and under vision the robotic trocars (8mm) were placed. Four robotic arms and one assistant port were used to perform the procedure.

Results
A Horizontal incision was made over the apex of vagina. Pubovesical and rectovaginal fascia were identified. Buckling sutures were applied using 1–0 V-Loc (barbed polyglyconate suture, Covidien), approximating pubovesical and rectovaginal fascia till an optimal vaginal length was obtained. First layer is undermined below the second layer. No incision or trimming of the vagina is done but at the same time a proper base for mesh placement is created , adhering to principles of mesh surgery.

Macroporous polypropylene soft mesh 15x15 was used and fashioned in such a way that anteriorly and posteriorly it rests on the vagina and the tails are anchored to the iliopectineal ligaments. 1–0 Ethibond (polyester suture, Ethicon) sutures were used to fix the mesh onto the vault. The vault was repositioned without causing tension on mesh.

The mesh ends were anchored to the bilateral pectineal ligaments with 1–0 Ethibond sutures. Peritonisation of the mesh was done to prevent future adhesions. Estimated blood loss during the procedure is less than 100 ml.

Conclusions
The robotic technique for pectopexy capitalises on the advantages of robotic surgery since it allows for anatomical preparation and simplification of applying sutures and mesh material, and minimising surgical trauma. The technique is safe and anatomical outcomes are excellent.

ID 24

COMPARISON OF LONG-TERM OUTCOMES IN EARLY STAGE ENDOMETRIAL CANCER: ROBOT SINGLE SITE VS MULTI-PORT LAPAROSCOPY

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Aim
This medical research article compares the perioperative and oncologic outcomes of robotic single-site (RSS) surgery and multi-port laparoscopic (MPL) surgery in patients with early-stage endometrial cancer.

Methods
The study was conducted retrospectively in a single centre and included 421 patients who underwent either RSS or MPL surgery between 2014 and 2022.

Results
The results showed significant differences in age and body mass index (BMI) between the two groups, with the RSS patients being younger and having a lower BMI. In terms of perioperative outcomes, the RSS group had a longer average operating time and less estimated blood loss compared to MPL, but there was no significant difference in postoperative hospital stay or perioperative complications. Regarding oncologic outcomes, there were no significant differences in the type of therapy, stage, grade, histopathologic type, or lymphovascular invasions between the groups. The overall survival and disease-free survival rates were similar between the two groups.

Conclusions
The study found that RSS and MPL surgery are both safe and effective options for staging operations in patients with early-stage endometrial cancer. The choice of surgical approach may depend on patient characteristics and surgeon preferences.

ID 26

YOUTUBE™ AS A SOURCE OF INFORMATION ON ROBOTIC HYSTERECTOMY: A QUALITY ANALYSIS

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Background
YouTube™ is the second most viewed website in the world, with five billion videos watched daily. Its contents cover a multitude of topics, including medical ones. However, no peer-review process exists for this platform. The aim of this study is to evaluate the quality of YouTube™ videos on robotic hysterectomy and whether they can be used as a reliable source of information.

Methods
A YouTube™ search was conducted on 10 March 2024 using the keyword "robotic hysterectomy". The first sixty-five videos displayed were selected. The following exclusion criteria were applied: non-English language videos (n= 1), mute videos (n= 3), and off-topic videos (n= 8). Patient Education Materials Assessment Tool for audio-visual content (PEMAT A/V), Global Quality Score (GQS), and DISCERN score were used to assess the quality content of the videos.

Results
Fifty-three (83%) videos were suitable for analysis. Of these, thirty-nine (74%) were uploaded by healthcare workers and fourteen (26%) by patients. A statistically significant difference was recorded

in the video target. Indeed, videos uploaded by patients were mostly targeted to the general public (86 vs 14%). Conversely, videos uploaded by healthcare workers were equally targeted to general public and healthcare workers (51 vs 49%).

According to the video author (healthcare workers vs patients), the median PEMAT A/V Understandability and Actionability scores were 60 vs 36% (p<0.001) and 0 vs 25% (p=0.013), respectively. Similarly, according to GQS, videos uploaded by healthcare workers more frequently harboured better quality scores (p=0.011). Conversely, no differences were recorded according to video authors in DISCERN score (p=0.6).

Conclusions

Although the videos uploaded by healthcare workers got higher scores according to PEMAT A/V tool and GQS score, the overall content of YouTubeTM regarding robotic hysterectomy is low. Societies should invest new resources in the production of higher quality videos to provide clinicians with a helpful tool for patient counselling.

ID 28

UTILITY OF FOUR-PORT ROBOT-ASSISTED SACROCOLPOPEXY IN PATIENTS WITH NARROW WAIST

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Background

To verify that eliminating the assistant's port provides sufficient distance between ports in robot-assisted sacrocolpopexy for patients with a narrow waist, and that the assistant's role can be supplemented by port hopping.

Methods

Patient background, operative technique, operative time, console time, and preparation time (from port creation to roll-in) for 97 patients who underwent 4-port robot-assisted sacrocolpopexy (4 ports RSC) for pelvic organ prolapse using the da Vinci Xi and X surgical systems between April 2020 and March 2024.

The results were compared with those of a conventional 5-port RSC (5-port RSC) in terms of patient background, operative time, console time, preparation time (from port creation to roll-in), closure time (from roll-out to closure), removal time and weight of the resection, blood loss, hospital stay, and complications.

Note that this is a retrospective case-control study.

Results

Four-port RSC was performed in 97 cases and five-port RSC in 35 cases. The surgical technique was not biased: in 4-port RSC, 48 cases were RSC with RA-TLH, 34 cases were RSC with RA-SCH, and 15 cases were RSC only, while in 5-port RSC, 17 cases were RSC with RA-TLH, 12 cases were RSC with RA-SCH, and 6 cases were RSC only. There were no significant differences in patient background, and no significant differences in operative time (290 vs. 286 min), console time (249 vs. 241 min), closure time (18 vs. 17 min), removal time (6.0 vs. 6.1min) and weight (85 vs. 125 g), blood loss (15 vs. 22 ml), and hospital days (6.5 vs. 6.7 days). Only preparation time (17 vs. 25 min) was significantly different (<0.001).

Complications were observed in 3 cases of exposed mesh and 1 case of cyst perforation (4.1 %) in the 4-port RSC, while in the 5-port RSC, 3 cases of mesh exposure and 1 case of fitted hernia (11.4 %).

Conclusions

The equal positioning of the four da Vinci ports avoided interference between the da Vinci arms, even in patients of small build with narrow waist width. The lack of an assistant port was adequately compensated for by the use of a 12 mm da Vinci port and by instrument hopping with respect to the surgical maneuver. 4 ports RSC is a very useful and safe surgical technique for petite patients with narrow waists.

ID 29

ROBOTIC UNILATERAL PECTINEAL SUSPENSION FOR VAULT PROLAPSE: INITIAL EXPERIENCE OF THE FIRST 10 CASES

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Aim

To evaluate the initial experience with robotic unilateral pectineal suspension as a mesh-free surgical alternative to correct post-hysterectomy vault prolapse.

Methods

Data was collected prospectively from patients with vault prolapse who desired surgical correction without mesh and underwent robotic iliopectineal suspension. The technique involves exposure of the right iliopectineal ligament and exposure of the vault by mobilising the bladder and dissecting the peritoneum. After preparation of the two sites, a non-absorbable suture is used to suspend the vault to the iliopectineal line after adjusting the tension. ICIQ questionnaires were completed and POPQ assessments were undertaken pre and postoperatively. All cases were discussed at the pelvic floor multidisciplinary team meeting prior to listing.

Results

10 patients underwent this procedure between Oct 2023 and February 2024. All patients stayed in hospital for less than 24 hours.

The average console time was 63 mins(range 33-98 mins). Average blood loss was 70 ml. There were no intraoperative or postoperative complications recorded. There were no readmissions within 1 month. 4 patients were seen for postoperative follow-up at 6 weeks. The vault was well supported at in all 4 patients.
ICIQ VS scores had improved with a median change of 18(range12-24).

Conclusions
Robotic iliopectineal suspension is a safe and feasible alternative to the use of mesh to correct vault prolapse and has quicker operating times, with lower rates of complications.

ID 30

THE AIM WAS TO INVESTIGATE WHETHER BODY MASS INDEX (BMI) INFLUENCES SURGICAL AND POSTOPERATIVE OUTCOMES IN UTERINE CANCER PATIENTS UNDERGOING ROBOTIC STAGING SURGERY, SIMILAR TO ITS IMPACT IN OPEN SURGERIES

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Study objective
The aim was to investigate whether body mass index (BMI) influences surgical and postoperative outcomes in uterine cancer patients undergoing robotic staging surgery, similar to its impact in open surgeries.

Design
A retrospective study

Setting
A Quaternary care institute

Patients
Nighty one patients who underwent robotic staging surgery for uterine cancer from January 2017 to January 2024.

Intervention
No patient intervention done for this study

Measurements and Results
Surgical parameters, including blood loss, duration of surgery, conversion to laparotomy, length of hospitalisation, perioperative complications, and anaesthesia care, were analysed across different BMI groups. Among the 91 patients, 22 were non-obese, 32 had Class I obesity (30-34.99), 24 had Class II obesity (35-39.99), and 13 had Class III obesity (≥40).

The study found that blood loss, duration of surgery, postoperative complications, and conversion to laparotomy were comparable across BMI groups. Intraoperative complications were similar, although one patient with BMI ≥40 experienced a serosal injury of the ileum, and another patient with Class I obesity developed intestinal obstruction requiring laparotomy. Despite slightly longer set-up times in women with BMI ≥40, overall set-up and postoperative times were similar across all BMI groups.

Conclusions
Body mass index did not significantly impact surgical and postoperative outcomes in endometrial cancer patients undergoing robotic staging surgery suggesting that robotic surgery may offer comparable outcomes across different BMI categories.

ID 31

VIDEO OF ROBOTIC PECTINEAL SUSPENSION TO TREAT VAULT PROLAPSE

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Aim
To demonstrate a newer robotic mesh-free technique to treat vault prolapse.

Methods
The video demonstrates the technique of robotic iliopectineal suspension in a case of post-hysterectomy vault prolapse.

The iliopectineal ligament is exposed after opening the space lateral to the right obliterated umbilical ligament and dissecting in the retropubic space up to the bone.

The vaginal vault is prepared by mobilising the bladder and the rectum to expose the vaginal tissue. The peritoneal openings are joined and further dissection is carried out. After preparation of the two sites, a non-absorbable suture (No 0-Ethibond) is used to suspend the vault to the iliopectineal ligament, after adjusting the tension. A second suture is used for reinforcement and to reduce failure rates. The peritoneum is then closed with a V-loc suture. The vault was well elevated after the procedure.

Conclusions
This technique allows for reduced morbidity due to avoidance of the use of mesh, quicker recovery, shorter operating times and better outcomes for the patient. It allows for day case procedures with cost benefits for the healthcare system.

ID 32

ROBOTIC SUBTOTAL GASTRECTOMY AT INTERVAL DEBULKING SURGERY FOR FIGO IVB OVARIAN CANCER: A VIDEO PRESENTATION

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Aim

This surgical video demonstrates a subtotal gastrectomy performed at the time of interval debulking surgery for stage IVB ovarian cancer, performed as a joint procedure with the upper Gastro-oesophageal team on the Da Vinci XI Robot.

Methods

The patient was a 76-year-old woman with stage 4b high grade serous ovarian cancer with a history of breast cancer and known BRCA2 gene mutation. The patient was referred by her oncologist at her specific request having heard about our research in robotic surgery for ovarian cancer. Cross sectional imaging confirmed widespread peritoneal malignancy as well as a 4 cm mass in the stomach wall.

This lesion was confirmed by gastroscopy and directed biopsy as an adenocarcinoma consistent with gynaecological origin from its immune profile. She underwent five cycles of chemotherapy pre-operatively followed by a Da Vinci robot assisted radical hysterectomy, laparoscopic bilateral salpingo-oophorectomy, excision of right pelvic node, appendicectomy, bilateral ureterolysis, pelvic peritoneal stripping, supracolic omentectomy, and subtotal gastrectomy with Roux-En-Y reconstruction. The specimen was removed trans-vaginally.

Results

Using the MIRRORS protocol, five robotic ports were placed. The pelvis was operated on initially and then the robot was re-targeted to perform the gastrectomy. The patient was resected to RO. Intraoperatively, the blood loss was 200mls. Predominantly due to the gastrectomy the patient was discharged on day 9 but had no intra-operative or post-operative complications. Post-operatively, histology confirmed high grade serous ovarian cancer within the antrum of the stomach and at other sites. The patient returned to chemotherapy on day 28 and completed a further 3 cycles before commencing Niraparib maintenance therapy. The patient remains alive and recurrence free at 2.5 years post treatment having finished maintenance therapy.

Conclusions

This case demonstrates the feasibility of performing complex upper abdominal surgery together with radical pelvic surgery for advanced stage ovarian cancer, achieving R0 resection. The dual console XI robot facilitates cross disciplinary team working. In our experience robotic surgery can offer enhanced recovery in highly selected cases of advanced gynaecological malignancy.

ID 33

VIDEO DEMONSTRATION OF ROBOTIC ASSISTED MESH SACROCOLPOPEXY FOR VAGINAL VAULT PROLAPSE

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Background

The gold standard for surgical treatment of vaginal vault prolapse is abdominal Sacro colpopexy. Advances in technology have allowed for more minimally invasive approaches like Laparoscopic or Robotic assisted Sacro colpopexy.

Description

A 75-year-old multiparous lady presented with apical vault prolapse after undergoing vaginal hysterectomy for uterine prolapse 20 years back. She presented with complaints of mass descending per vaginum with no bowel or bladder disturbances. On examination, a stage III POPQ vault prolapse was noted with leading point C at +2. Robotic Sacro colpopexy was performed using Prolene mesh fashioned into a Y shape with anterior and posterior limbs measuring ~6cm attached to a long stem of ~8cm
This video discusses our robotic Sacro colpopexy technique

- Patient position: Steep Trendelenburg at 30° in low lithotomy position
- Port placement: Standard 4 robotic ports on da Vinci® X system for pelvic surgery and an additional laparoscopic assistant port along a slightly curvilinear line above umbilicus
- Side docking is done to facilitate use of vaginal manipulator (McCartney's transvaginal tube ™)
- Bladder is dissected away from vaginal vault and anterior vaginal wall is exposed
- Peritoneum between Rectum and posterior vagina is incised and rectovaginal space is opened. Rectum is dissected away and posterior vaginal wall is exposed
- Peritoneum over sacral promontory is incised and retroperitoneal tunnel is created, running between sacral promontory upto vaginal vault apex
- Mesh is placed within this tunnel with anterior Y limb fixed onto anterior vaginal wall, posterior Y limb is fixed onto posterior vaginal wall and stem of Y anchored to the sacral promontory

Procedure time took 35 minutes for port placement and docking; 1 hour 45 minutes of console time and 20 minutes for undocking, removal of ports and closure. There was minimal blood loss, post operative course was uneventful and patient was discharged after 2 days. At 6-month follow up patient is doing well with no complaints and good vaginal support was noted with point C at -4

Conclusions

Robotic assisted Sacro colpopexy is a safe and effective technique in the treatment of vaginal vault prolapse. It provides excellent patient outcomes with the added advantages of robotic technology like magnification, tremor filtration, endo-wrist instruments that simplifies suturing, ergonomics and autonomy of camera control, shorter learning curve compared to laparoscopic approaches, shorter hospital stay, less estimated blood loss and less post-operative pain.

ID 34

ROBOTIC-ASSISTED SAPHENOUS SPARING VIDEO ENDOSCOPIC INGUINAL LYMPH NODE DISSECTION (R-VEIL) FOR CARCINOMA VULVA: HOW WE DO IT

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Introduction
Involvement of inguinal lymph nodes is an important predictor of survival in patients with vulvar cancer. Inguinal lymph node dissection (ILND) is a highly morbid procedure.
Video endoscopic inguinal lymphadenectomy (VEIL) using traditional laparoscopic instruments is an alternative to reduce the morbidity without compromising the oncologic outcomes.

Theoretically, with smaller incisions if the correct space is dissected, challenging wound complications that occur with open surgery can be avoided. Video endoscopic inguinal lymphadenectomy has continued to evolve into single site and robotic variants.

The improved flexibility provided by the robotic instruments and the improved magnification is useful when dissecting in this confined space and the ergonomic platform causes less surgeon fatigue compared to the laparoscopic procedure.

We will be describing our modified technique of R-VEIL and discussing the advantages of this technique.

Methods
In our technique we enter just superficial to fascia Lata rather than below Scarpa fascia. Superficial lymph node packet is lifted off the fascia Lata cleanly and is attached to roof and do not fall into field and there is direct access to deep nodes and can be safely dissected with minimal assistance.

Results
61 year old patient was diagnosed with a clitoral growth 3x2 cm and found to have squamous cell carcinoma on biopsy. Bilateral inguinal nodes were not palpable. After ruling out metastatic disease by PET-CT, the patient underwent Modified radical vulvectomy with B/L R-VEIL.

No intraoperative complication was observed. The operative time for R-VEIL (per groin) was 130 minutes. Mean blood loss was 80 ml. The duration of hospital stay was 5 days. Patient was discharged with suction drain which was removed on 20th day post-surgery.

On histopathology 11 lymph nodes were retrieved on right side and 13 lymph nodes on left side and all were free of disease. Patient did not develop any wound related complications in post-operative period was put on follow up.

Conclusions
Our technique identifies the anatomical landmarks of femoral triangle early, avoiding extensive lateral dissection. Moreover, the Scarpa fascia is identified and preserved though out, maintaining uniform flap thickness and therefore better flap outcomes.

ID 35

TO DEFINE THE SURGICAL AND PATIENT-REPORTED OUTCOMES OF ROBOTIC-ASSISTED SACROCOLPOPEXY USING AUTOLOGOUS RECTUS FASCIA GRAFT (SCARF)

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Study Objective
To define the surgical and patient-reported outcomes of robotic-assisted sacrocolpopexy using autologous rectus fascia graft (SCARF).

Design
Prospective observational study

Setting
15 degrees Trendelenburg with 5 degrees left lateral tilt to harvest rectus fascia. 25 degrees Trendelenburg for sacrocolpopexy

Patients
40 patients referred with advanced apical POP from April 2021 to April 2023. Median follow-up of 21 months (range 14-34 months).

Interventions
Robotic-assisted SCARF or supracervical hysterectomy with sacro-cervicopexy (SCCARF) using a posterior rectus sheath graft harvested and fashioned during the same procedure.

Measurement and main results: POP-Q scores were assessed pre-operatively and at 3 and 6 months post-operatively. Subjects' quality of life, bladder, bowel and sexual function were recorded using Pelvic Floor Disability Index (PFDI-20), Pelvic Organ Prolapse/Urinary Incontinence Sexual Questionnaire (PISQ-12), and Patient Global Impression of Improvement (PGI) survey. 52% of patients had SCARF and 48% had supracervical hysterectomy with SCCARF. 45% had previous prolapse surgery. The average operating time for SCARF was 101 mins (range 70 -180 mins) and for SCCARF was 105 mins (range 74- 140). The average time to harvest graft was 12 mins (range 7.5 – 19 mins).

There were no blood transfusions, re-operations, adverse surgical outcomes or prolapse recurrence. The average hospital stay was 1.15 days.

POP-Q stage improved from 3.225 to 0.1, $p<0.0005$.
PFDI-20 improved from 141.8 to 14.66, $p<0.0005$. PISQ12 showed

statistically significant improvement in all sexual function, urinary and faecal continence measures, and PISQ Total Score improved from 31.03 to 17.30, p<0.0005. PGI-I scores were high, showing high levels of satisfaction. No recurrent apical prolapse on follow-up. Two patients (5%) required vaginal repair and one patient required a Burch colpo-suspension for stress incontinence. One patient required a hernia repair robotically.

Conclusions

This is the first report of patients with apical POP managed with autologous rectus fascia for sacrocolpopexy/sacrocervicopexy performed robotically. This procedure produces acceptable anatomical and patient-reported outcomes whilst avoiding mesh-related complications. Continued study and long-term follow up are needed to establish rectus fascia as a standard graft material for sacrocolpopexy.

ID 36

STUDY ON EXTRACORPOREAL DELIVERY OF EXTRACTED MYOMA AFTER ROBOT-ASSISTED TOTAL LAPAROSCOPIC HYSTERECTOMY FOR GIANT UTERINE FIBROID

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Background

When robot-assisted total laparoscopic hysterectomy (RA-TLH) is performed for giant uterine fibroids, it is often time-consuming and difficult to remove the patient from the body. Therefore, we investigated the usefulness of using a small incision or Wound Retractor (WR) (Alexis ®) for vaginal use to facilitate quick and easy extrication.

Methods

We included 338 patients who underwent RA-TLH at our hospital between June 2020 and March 2024. The uterus was retrieved transvaginally in 188 patients (TV group), with a small incision in 50 patients (SI group), and with a wound retractor in 100 patients (WR group).

Patient background, operative time, console time, blood loss, preparation time, closure time, weight of the retrieved uterus, retrieval time, and complications in each group were compared.

Results

In the TV and WR groups, the average weight of the uterus removed in the WR group was 479 g (122-1279 g), which was significantly heavier than the TV group's 268 g (65-824 g), but there were no significant differences in the other parameters.

On the other hand, group SI showed significantly longer operation time (275 min), more blood loss (298 ml), and increased uterine weight (1079 g: 375-7141 g) compared to the other two groups. There was no significant difference in the number of days of hospitalisation among the three groups. Blood transfusions were observed in 2 patients in the SI group, but there were no other complications.

Conclusions.

RA-TLH for giant uterine fibroids can be adequately treated by combined small incision or Wound Retractor.

ID 38

PARA-AORTIC LYMPH NODE DISSECTION FOR HIGH RISK ENDOMETRIAL CANCER

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Aim

This video article aims to demonstrate the utility and safety, of robot assisted para-aortic node dissection in patients with endometrial cancer, emphasising its role in precise nodal staging and tailoring adjuvant therapy, especially in high risk endometrial cancer.

Methods

This video presents a case of 58 years old female of post menopausal bleeding with endometrial biopsy suggestive of serous endometrial carcinoma. She was a part of an ongoing prospective trial on Sentinel lymph node dissection in high risk endometrial cancer at our institute. The patient underwent type I hysterectomy with BSO and bilateral sentinel lymph node excision. Specimen was sent for frozen section which was reported as a 3.5 cm tumour, infiltrating >50% of the myometrial thickness. In view of frozen section report, decision of complete pelvic and para-aortic lymph node dissection was taken.

Results

The video illustrates the seamless execution of robot assisted para-aortic lymph node dissection, highlighting the meticulous dissection, endo wrist movement of robotic arms, ergonomic camera control and excellent use of third arm with enhanced surgical control. The patient had a smooth post-operative course and was discharge on 2nd post-operative day as per our institutional protocol.

Conclusions

As ESGO/NCCN guidelines do not fully endorse SLN dissection alone for high-risk endometrial cancer due to limited data from retrospective and non-randomized prospective studies, para-aortic node dissection should be considered for all high-risk patients until further validation. The video advocates for the integration of Robot assisted Para Aortic Node Dissection into the standard surgical algorithm for endometrial cancer, particularly in cases with high-risk features or suspected nodal involvement.

ID 39

ROBOTIC HYSTERECTOMY IN A CASE OF LARGE UTERUS AND MULTIPLE PRIOR CAESAREAN SECTION AND OBLITERATED ANTERIOR COMPARTMENT

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Introduction

Large leiomyoma can pose difficulty in performing hysterectomy irrespective of the route. Role of Minimally invasive surgery for uterus with large leiomyoma had always been controversial. In such cases, laparotomies require large incisions, while specimen delivery is difficult in minimally invasive surgery if morcellation is avoided.

The difficulty is more when there is are prior surgeries in the abdomen. The advantages of the well articulated endowrists of the Robotic surgical systems are well known and can be utilised when operating on patients with multiple abdominal surgeries.

We present a video of Robot assisted hysterectomy in a 43 year old P3L3 woman who has had three caesarean section before, presenting with complaints of frequent abdominal pain affecting her quality of life. Imaging showed a large uterine leiomyoma almost occupying the entire pelvis and extending into the abdomen. The large uterus was densely adhered to the anterior abdominal wall and was found to be in traction which might explain her symptoms.

Here we take make use of the technical advantages of the Robotic surgical system to perform the adhesiolysis with precision and the hysterectomy with relative ease. The specimen was delivered with a relatively smaller incision than that would have required to perform open hysterectomy. The post operative period was uneventful and comparable MIS hysterectomies in women with smaller uteri.

ID 40

TECHNIQUE OF APPROACHING LARGE ANTERIOR WALL FIBROID DURING RAH , WITHOUT NEED FOR MYOMECTOMY FIRST, AND WITH USE OF ONLY 2 ROBOTIC ARMS

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Background

Robotic surgery is proven to be superior to laparoscopic surgery in benign gynaecology. This video aims to demonstrate the technique of approaching large anterior wall fibroid with ease in robotic surgery. In laparoscopic surgery, we need to sometimes perform a myomectomy to remove the fibroid for better access to the lower uterine segment and the bladder fold. Large anterior wall fibroid also restricts the visibilty and dissection of uterine arteries on either side. The use of two robotic arms in Benign Gynaecology is a cost effective way of accomplishing this, one port less give better cosmesis, and avoids clashing of arms during surgery.

Methods

Robotic assisted hysterectomy performed on a 48 yr old lady with 8.2 x 9.8 cm anterior wall fibroid. Port placement 8 mm Camera port at umbilicus. Right port for MCS scissors. Left port for Bipolar forceps, and one 10 mm Laparoscopic assistant port. Mega needle driver for suturing of vault.

Technique

Lateral approach for the round ligaments and ovarian ligaments. Lateral approach from both sides for the uterovesical fold. Console time 43 minutes, blood loss minimal.

Results

She had minimal blood loss, better cosmesis, (one port less) more cost effective, painless recovery and discharged home the same evening .

Conclusions

It is safe and effective to perform RAH in large anterior wall fibroids without the need for myomectomy first and with the use of only 2 Robotic arms.

ID 41

CASE PRESENTATION: ROBOTIC HYSTERECTOMY FOR A PATIENT WITH A STUMP TUMOUR

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Background / Aim

Over the past few decades, robotic-assisted laparoscopy or robotics—and minimally invasive surgery (MIS) have gained ground, particularly in the area of difficult gynaecological surgery carried out in constricted settings. About 0.01% of patients undergoing myomectomy or hysterectomy are affected by smooth muscle tumour of undetermined malignant potential (STUMP), an uncommon subtype of mesenchymal tumour in the gynaecological tract. It's possible that these tumors are a "transition" tumour from leiomyoma to leiomyosarcoma.

We describe a 46-year-old woman who was diagnosed with a STUMP tumour.

Methods

A 42-year-old lady who had a prior myomectomy and had been diagnosed with a STUMP tumour was referred to our department for surgical uterine excision. Smooth muscle tumour with unknown

malignant potential was found in the pathology report following myomectomy. It also showed positive expression of p16 and p53, local atypia, and a 15-20% ki67%. The Multidisciplinary Team (MDT) concluded that she needed to have a bilateral complete hysterectomy. In order to stage the disease, chest and upper abdomen a lower abdominal CT and magnetic resonance imaging (MRI) scan were conducted, but no results were obtained. The patient had normal serum levels of cancer biomarkers prior to surgery. The patient had a robotic complete hysterectomy with bilateral salpingo-oophorectomy performed at our department.

Results

Following careful gross processing of the tissue, histopathological analysis found a uterine smooth muscle tumor with a diameter of more than 2.5 cm. Nuclear atypia and mitotic activity were not visible under the microscope. A small amount of focal immunopositivity was seen by immunohistochemistry. The multidisciplinary team decided to follow the patient closely.

Conclusions

The advantages of robotic surgery, as a MIS technique, are multiple. Its safe and associated with less blood loss and shorter hospital stay. Stump tumours are uncommon growths that typically have no known chance of becoming malignant. The distinction between benign leiomyoma and malignant sarcomas is quite challenging.

ID 43

SALVAGE ROBOTIC ANTERIOR PELVIC EXENTERATION FOR CERVICAL CANCER: TECHNIQUE AND FEASIBILITY

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Aim

The aim of our study was to explain the technique and evaluate the feasibility and safety of robotic anterior pelvic exenteration in cases of residual/recurrent cervical cancer as a salvage therapy.

Methods

The study was conducted as a retrospective review of all the cases of central residual/recurrent cervical cancer who underwent anterior pelvic exenteration by robotic approach with curative intent at our centre between January 2013 and December 2019. Information regarding various treatment related parameters like duration of surgery, estimated blood loss, length of hospital stay, early and late complications and recurrence and survival was collected and evaluated.

Results

14 patients underwent anterior pelvic exenteration by robotic approach in this period. The median age of patients at time of exenteration was 52.5 years. 13 out of 14 patients had received combined chemoradiation as a part of intial treatment. The median duration of surgery was 305 min with a median estimated blood loss of 135 ml and median length of hospital stay of 6.5 days.

Early complications like urosepsis, uretero-ileal anasto- motic leak and paralytic ileus occurred in 36% patients and late complications like ureteric stricture and bowel perforation occurred in 28.6% patients. Negative surgical margins could be achieved in all the patients. Over a median follow-up period of 17.5 months, five patients developed recurrence and five patients experienced mortality, with four out of five patients dying due to recurrent disease. The 12-month DFS was 68.2% and the 12-month OS was 77.1%.

Conclusions

Robotic anterior pelvic exenteration is a safe and feasible option in selected patients with recurrent/residual cervical cancer as a salvage procedure, with acceptable morbidity and mortality.

ID 44

ROBOTIC SECONDARY CYTOREDUCTION IN RECURRENT OVARIAN CANCER: A TAILORED APPROACH IN A KIDNEY-TRANSPLANT PATIENT

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Background

The rate of kidney and other abdominal organs transplantation is increasing worldwide and the survival rates are improving. Transplant recipients have a higher incidence of cancer compared with the general population and their oncological management may be challenging.

The treatment of ovarian cancer (OC) has been improved in recent years, with the introduction of maintenance therapy (bevacizumab and PARP inhibitors), opening novel management scenarios for recurrent OC.

Recently, two randomised controlled trials highlighted the role of surgery in the treatment of platinum-sensitive recurrent OC (ROC) and minimally invasive surgery has been successfully employed in selected ROC patients, presenting a lower incidence of morbidities, apparently without compromising their survival.

The minimally invasive approach has further advantages in frail and immune-suppressed patients, with fewer wound-related problems, shorter hospitalisation and earlier resumption of oral intake and oral immunosuppressants. Few data exist about minimally invasive oncological surgery in transplanted patients.

Methods

Here a case of isolated pelvic high grade serous ovarian cancer platinum-sensitive recurrence in a 55-year-old woman with kidney-transplant is presented. Preoperative ultrasound examination and emission tomography scans detected a solid tissue of 15 mm with increased uptake, infiltrating the rectum.

Results

A robot-assisted rectal resection with colo-rectal anastomosis was performed. In this video we showed a personalised surgical approach for a frail patient, with multiple comorbidities, doubly transplanted. We reached a residual tumour of zero with good operation times.

No intra or postoperative complications occurred and adjustment in immunosuppressive therapy was not necessary. Final histology confirmed the metastatic involvement of the muscular tunic of the rectum and, after a multidisciplinary board evaluation, the patient underwent chemotherapy. At one-year follow-up, the patient was disease-free and in good general conditions.

Conclusions

Minimally invasive surgery in selected patients with isolated recurrence may be a valid approach, especially in frail patients, in order to reduce open major surgery morbidities and convalescence.

ID 45

ROBOTIC RECTO-SIGMOID RESECTION WITH TOTAL INTRACORPOREAL COLORECTAL ANASTOMOSIS IN RECURRENT OVARIAN CANCER: A CASE SERIES

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Background

The role of secondary cytoreductive surgery (SCS) in recurrent ovarian cancer (ROC) has been increased in recent years. The complete gross resection of recurrent disease localised to rectum is possible using en-bloc robotic recto-sigmoid resection. Through a no-touch isolation technique it is possible to surround the lesion without manipulation, in order to reduce cancer cells flowing from the primary tumour site to the peritoneal cavity. The aim of this video is to describe the feasibility of the modified technique of en-bloc robotic recto-sigmoid resection with total intracorporeal colorectal anastomosis for SCS in ROC.

Methods

Five patients with pelvic ovarian cancer recurrences who underwent robotic rectosigmoid resection at Catholic University of the Sacred Hearth in Rome (Italy) were included. Surgery starts from a retroperitoneal approach in order to control the vascular structures. A pelvic resection through complete minimally invasive technique was performed. Then, the routine steps of en-bloc rectosigmoid resection were performed and followed by a totally intracorporeal colorectal anastomosis. In this video one of these cases is presented.

Results

The median age at recurrence was 56 years; the median BMI was 30; 80% had advanced-stage disease at initial diagnosis; 60% had serous histology. In all cases, complete cytoreduction was achieved. The median operation time and the median estimated blood loss were 320 min (range 205–430 min) and 100 ml (range 100-200), respectively. All patients underwent extensive adhesiolysis. No ileostomies were performed. The median hospital stay was 7 days (range 4–15 days). No intraoperative or postoperative complications. The median follow-up time was 19 months (range: 4–24 months). Only one patient experienced a recurrence (port site metastasis), treated by surgical resection. All patients then received adjuvant therapy.

Conclusions

Rectosigmoid resection can contribute significantly to a complete cytoreductive surgical effort for recurrent ovarian cancer. Despite technical differences, robotic recto-sigmoid resection with total intracorporeal colorectal anastomosis is comparable to the procedure performed by open approach and the associated clinical and survival outcomes appear favorable.

ID 46

ROBOTIC RADICAL TRACHELECTOMY IN EARLY-STAGE CERVICAL CANCER

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Background / Aim

Radical trachelectomy was originally developed as an alternative therapy in early-stage cervical cancer in women who wish to preserve fertility. This procedure can be performed by vaginal, open or minimal invasive approach (laparoscopic or robotic surgery). The robotic approach may offer some advantages over other surgical approaches, especially for the surgeon´s ergonomics. The first robotic radical trachelectomy was described in 2008. Due to the rarity of the procedure, larger cohorts with sufficient follow up and detailed reproductive and oncologic outcome are missing.

Our objective is to present a retrospective review of our experience with robotic radical trachelectomy.

Methods

Descriptive study carried out in University Hospital Clinico San Carlos, Madrid, Spain. All consecutive patient with early-stage cervical who

underwent radical robotic trachelectomy, from 2013 to 2022 were included. Generally used selection criteria for fertility-sparing surgery were applied (<2 cm cervical cancer with squamous or HPV associated adenocarcinoma histology in patients who desired to preserve fertility).

The first step of the procedure was bilateral pelvic lymphadenectomy, the second step was the radical trachelectomy after confirmation of absence of nodal metastasis by frozen section. The procedure also included a cervical cerclage and permitted preservation of the ascending branches of the uterine arteries to the uterus. Demographic data of the study population, perioperative outcomes and surgeon´s ergonomic aspects were analysed.

Results

A total of 7 patients who underwent radical robotic trachelectomy were studied. Median (range) patient age was 30 (23-35) years. Body mass index was 24 (19-28). 43% of the patient were operated with da Vinci standard robotic system and 57% with da Vinci Xi. Final International Federation of Gynecology and Obstetrics (FIGO) 2009 clinical stage was IA2 (1 patient), IB1 (5 patients) and IB2 (1 patient). Tumour histology was squamous cell carcinoma in 57% and adenocarcinoma in 43% of the patients. Median surgical time was 285 (247-315) min. The median of pelvic nodes obtained was 15 (12-40).

Two postoperative complications were observed. One patient tried to conceived and had preterm labor. During follow-up one patient died of the disease. The surgeon's ergonomics presented very favorable scores.

Conclusions

Robotic radical trachelectomy is a feasible technique that permits radical removal of the cervix in early-stage cervical cancer preserving fertility and offers several benefits that facilitate this surgical procedure.

ID 47

COMPARISON OF USAGE OF BIPOLAR DEVICE AND VESSEL SEALER IN COMPLETED PELVIC LYMPHADENECTOMY ASSISTED BY THE DA VINCI X ROBOT

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Background / Aim

In high-risk endometrial cancer, lymph node staging should be performed. The recommended method is minimally invasive surgery. Nowadays, the number of surgical procedures assisted by a robot is growing rapidly all over the world. Robotic instruments are more precise and new ones continually become available, such as the new bipolar instrument called the Vessel Sealer. The aim of the study was to compare instruments using in radical hysterectomy with systemic pelvic lymphadenectomy assisted with the da Vinci X system.

Methods

The analysis was based on 25 patients with high-risk endometrial cancer after completed pelvic lymphadenectomy with mean age of 60.07±10.67 (range 34.69–83.23) years divided into two groups: one consisted of 14 patients after radical hysterectomy with completed pelvic lymphadenectomy using the Vessel Sealer with mean age of 57 (34.7–71.8) years and mean BMI 27.8 (18–36.5) kg/m2; the second one consisted of 11 patients who underwent the procedure without using the Vessel Sealer with mean age of 63.9 (44.4–83.2) years and mean BMI 29.2 (19.2–41.5) kg/m2. Statistical analysis was performed using R programming language version 4.1.2 (R Core Team, Vienna, Austria). A p-value <0.05 was considered statistically significant.

Results

The mean number of pelvic lymph nodes was 24.8 (range 11–50). The correlation between BMI and number of pelvic lymph nodes was not significant (p=0.0852). There was no significant correlation between use of the Vessel Sealer and BMI (p>0.05). Operation time was statistically significantly longer in patients who had undergone previous surgery (p<0.05). Nevertheless, use of the Vessel Sealer shortened the operation time to 216 (range 200–225) minutes in patients after previous surgery and 184 (range 135–210) minutes in those with no history of laparotomy.

In comparison, the operation time without the Vessel Sealer was 233 (range 170–295) minutes and 179 (range 110–250) minutes, respectively. Previous surgery and BMI were not statistically significantly associated (p>0.05).

Conclusions

Robotic surgery is associated with reduced blood loss and faster recovery due to the precise instruments. The Vessel Sealer reduces blood loss during surgery and operation time, especially in the case of previous surgery.

ID 48

ROBOTIC SURGICAL STAGING FOR EARLY-STAGE OVARIAN CANCER: A TEN-YEAR FOLLOW UP

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Background

One-third of the patients with ovarian cancer (OC) is diagnosed with FIGO stage I-II, and their five-year survival ranges between 80% and 90%. Although the standard surgical approach for OC remains

laparotomy, the use of minimally invasive surgery (MIS) has become widespread in early-stage disease, especially in restaging procedures in which apparently healthy tissues for staging purposes are removed. However, despite a high number of studies evaluating the feasibility of this approach, the absence of robust data from prospective randomised trials makes the use of MIS still controversial. In this context, the most relevant data we can evaluate is the DFS, although few data exist about oncological outcomes, supported by a long follow up time. The aim of this study is to present data about robotic surgery in the treatment of early-stage ovarian cancer, focusing on oncological outcomes with a ten-year follow up.

Methods

In this single-centre retrospective observational study, all the consecutive patients who underwent robotic staging for clinical epithelial early-stage ovarian cancer from January 2008 to December 2016 were included.

Results

A total of 37 patients were included. The median age was 49 years (range 32-76); the median BMI was 22.7 (range 18-54). The upstaging rate (FIGO stage > IIA) was 10.8%. Operative time and estimated blood loss were, respectively, 180 min (range 70-300) and 50 ml (50-250). The median hospital stay was 2 days (range 2-12). In the whole series, 2 vascular injuries occurred, successfully managed intraoperatively, with no conversion. We reported 14 postoperative complications, of which only 2 of grade 3 (1 incisional hernia and 1 lymphocele). After surgery, 76% of patients underwent adjuvant chemotherapy. With a median follow up of 114 months (range 13-144), 6 patients (16%) experienced recurrence: 2 clear cell, 2 serous, 1 endometrioid and 1 undifferentiated. Only 2 deaths are reported. The sites of relapse were: peritoneal in 3 cases, lymph nodes in 1 case, lung in 1 case and bone in 1 case. The 5-year and 10-yen DFS were, respectively, 94.6% and 81.8%. The 5-year and 10-year OS were in both cases 94.6%. Four patients experienced a recurrence after 5 years of follow up.

Conclusions

With the limits of a retrospective study, our data showed that robotic surgical staging for epithelial early-stage ovarian cancer is associated with favorable oncological outcomes after 10 years of follow up.

ID 49

ROBOTIC APPROACH FOR THE TREATMENT OF GYNECOLOGICAL CANCERS RECURRENCES: A TEN-YEAR SINGLE-INSTITUTION EXPERIENCE

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Background

Although the management of gynaecological cancers recurrences may be challenging, due to the heterogeneity of recurrent disease, influenced by several factors including anatomical site of relapse, infiltrative pattern, primary treatment(s), chemo- and/or radio-sensitivity, and clinical characteristics of patients, secondary cytoreductive surgery through minimally invasive approach is gaining increasing interest in recent years. However, few cases of robotic surgery are reported.

The aim of this work is to present a descriptive analysis of gynaecological malignancies recurrences in our institution and the choice of a surgical treatment by robotic approach.

Methods

We performed a retrospective review and analysis of data of patients who underwent robotic surgery for recurrent gynaecological malignancies at Catholic University of the Sacred Hearth in Rome (Italy) from January 2013 to January 2024.

Results

In the study period 54 patients underwent successful robotic cytoreductive surgery. The median age was 63 years (range 43-84) and 20 patients (37%) were older than 65; the median BMI was 33 kg/m2 and most of the patients (59%) were obese (BMI>30). All the patients experienced a single site recurrence, except for the lymph node recurrences in which more lymph node stations could be involved. In 12 cases (22%) the relapse presented was the second or third relapse.

The most frequent patterns of recurrence were represented by lymph nodes (41%), followed by peritoneal (26%), pelvic (22%) and parenchymal (11%). In all patients complete cytoreduction was achieved. In 29 patients (54%) the surgical field was previous treated (surgery and/or radiotherapy). The median operative time was 270 min (range 80-660) and the median estimated blood loss was 100 ml (range 50-1000). There were 2 (3.7%) intraoperative complications, managed endoscopically; 10 early postoperative complications (18.5%), of which 4 were grade 3, and 3 late postoperative complications (5.5%), of which 2 were grade 3.

Most of the early (72.7%) and all the late postoperative complications were related to pelvic exenteration procedures. The 2-year progression-free-survival and overall survival were, respectively, 39.8% and 72.3%. Eight patients (35%) underwent further surgical procedures for the treatment of the new recurrence.

Conclusions

In the era of personalised medicine, the integration of different kinds of treatments, among which surgery through minimally invasive approach, may prolong survival and implement therapeutic possibilities. Robotic approach in the treatment of recurrent gynaecological cancers should be considered in selected patients with oligometastatic disease, in high-volume centres with expert surgeons, especially in obese patients.

ID 50

THE SUCCESS OF THE ROBOT IN A DGH IN UK – A GYNAECOLOGY ONCOLOGY JOURNEY

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Background

The trust invested 10 million pounds to bring the benefit of state of the art surgery to the population of Essex in UK. The first robot arrived at Colchester General Hospital in the middle of the pandemic in 2019. The gynaecology oncology service got access to the robot from 2020. Since then nearly 200 women have undergone robotic surgery.

Methods

Robust team-work, shared vision of a multi-disciplinary team, robust pathways and training opportunities led to the success of the robotic programme. We collected the data from a prospective audit.

Patients referred on a cancer pathway were operated within the service. The common indications were endometrial cancer, complex atypical hyperplasia, cervical pre-cancer, completion surgery after treatment of early cervical cancer, ovarian masses discussed in gynaecology oncology multi-disciplinary meeting. The benefits demonstrated are minimal blood loss (20 -50mls), reduced length of stay (1 day), majority of women had pain score 1-2 (mild pain), reduced complications, reduced critical care admission, return to theatre and conversion to open surgery.

A quarter of patients who would have undergone open surgery are now getting the benefit of minimal access surgery because of the robot. Surgeons are now completing quicker surgeries with growing experience hence reducing cancer-waiting times, back-log of patients awaiting surgery after COVID pandemic. With reduction in operating times more number of patients are being operated in each operating session. Patients are being discharged on the same day as their surgery hence saving bed space and reducing bed costs.

Conclusions

Longevity of senior surgeons are increased with better ergonomics with the robot. The oldest surgeon trained at our hospital is 63 years old. Patients referred to cancer services are elderly, obese with significant medical and surgical co-morbidities. They are benefitting from this tool with reduced length of surgical time, shorter anaesthetic time, reduced complications, reduced length of hospital stay, risk of wound infection, deep vein thrombosis and pulmonary embolism and quicker return to normal activities. I will be submitting patient experience videos (2) with patient consent during the presentation.

The success of the robotic programme at our hospital has been covered by BBC television network several times. I will be presenting a short video of the coverage in my oral presentation.

ID 51

VALIDATION STUDY (APOLLOINTRA) TO REPORT INTRAOPERATIVE COMPLICATIONS IN MINIMALLY INVASIVE BENIGN GYNAECOLOGICAL PROCEDURES (ROBOTIC AND LAPAROSCOPIC)

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Background

Intra-operative complications/adverse events (iAEs) occurrence does depend on the complexity of the surgery. Currently, there is no validated iAE classification, specific to Minimally Invasive Surgeries (MIS) in Gynaecology. We aimed to validate the revised definition of iAE and to make the iAE classification more precise, comprehensive, and universal standard criteria-based, specific in MIS gynaecology.

Methods

We did a retrospective validation study between January to August 2023 with 70 patients who underwent major benign gynaecological procedures (Hysterectomy, Myomectomy, and Endometriosis surgery) using laparoscopic and robotic approaches in the Tertiary Care Centre. Experts were blinded and contacted by email and social media and sent a link to the Monkey Survey questionnaire and responses were received. We conducted a modified Delphi study (two rounds) following ICARUS (A Protocol for the Development of the Intraoperative Complications Assessment and Reporting with Universal Standards Criteria) guidelines.

Three independent experienced MIS surgeons applied the definition and classification provided to them on the sample population with different complexities of gynaecological MIS and evaluated the practicability and usefulness of our proposed criteria. Interrater agreement of the classification (raw categorical agreement, weighted kappa) was determined.

Results

In the Delphi study, 43 of 51 experts (83 % return rate) from practicing expert laparoscopic and robotic gynaecological surgeons of different states in India took part in each round. The study resulted in a revised, comprehensive definition of iAE as any deviation from the ideal intraoperative course occurring between

intubation and extubation. The classification proposed six grades depending on the severity of iAEs (Grade(s): 0-no damage; I-minor error without any corrective actions; II-minor error with the corrective actions; III-error with major corrective action and change in the postoperative course; IV-life-threatening/permanent disability and V-death).

The pilot study showed good practicability on a 5-point Likert scale with a high raw agreement of 84%, a weighted kappa of 0.765, and an intraclass correlation coefficient of 0.938 [95% Confidence interval (CI)],] with excellent usefulness in implementing the ApolloIntra (Cronbach α 0.936) and highly recommended in practice (Cronbach α 0.929).

Conclusions

This is the first ever reported modified Delphi study with pilot evaluation from India for the systematically graded iAE reporting system.

While the Delphi study has enabled the development of a revised definition with the inclusion of anaesthesia complications and classification of iAEs by severity, further research with multicentric validation needs to be conducted to develop a universal standardised iAEs classification in MIS in Gynaecology.

ID 52

COMPARISON BETWEEN INTRAOPERATIVE COMPLICATIONS IN MINIMALLY INVASIVE BENIGN GYNAECOLOGICAL PROCEDURES (ROBOTIC VS LAPAROSCOPIC) AND CORRELATION WITH POSTOPERATIVE OUTCOME IN A TERTIARY CARE CENTRE: PROSPECTIVE COHORT STUDY

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Background

Intraoperative Surgical complications are a part of any surgery with no exception to Minimal invasive gynaecological surgeries (MIS -laparoscopy and robotic) and can have a huge impact on the postoperative period. Most of the previous studies have used the term "perioperative complications" (intraoperative and postoperative) but eventually reported mainly postoperative complications avoiding intraoperative complications (iAE). Robotic surgery due to advanced 3D vision is supposed to have fewer complications than laparoscopic surgeries. So, in this study, we aimed to perform a pilot study to compare various IAE between two MIS procedures (Lap vs Robotic) with their correlation with postoperative complications specifically with procedure type.

Methods

We did a prospective study with 80 cases who had undergone Laparoscopic (41) and Robotic (39) modes of three major gynaecological surgeries (myomectomy, hysterectomy and endometriosis resection)in a Tertiary care Centre between July to Oct 2023. Data was analysed in SPSS software. Categorical variables were summarised with n (%), while quantitative variables were summarised by mean±S.D. The difference in the two groups was tested for Statistical Significance using Parametric tests such as the t-test and non-parametric tests such as the chi-square test. Categorical variables were tested by the chi-square test. A p-value less than 0.05 was considered statistically significant.

Results

We found a higher AAGL stage of endometriosis in the robotic arm [48.1% in the laparoscopic arm (LA) vs. 51.9% in the Robotic arm (RA)] with an insignificant p-value (0.409).We noticed and reported 3 iAEs (as per ClassIntra), all in the LA (3.75%). Combined postoperative complications reported (as per Clavien-Dindo Classification) 32.5% (26 cases: Grade I-16 cases (61.5%) with 6 cases in RA and 10 cases in LA) ; Grade II- 8 cases (30.7%) with 3 cases in RA and 5 cases in LA) and Grade III- 2 cases (7.69%) with 1 case in RA and another 1 case in LA). Our study also reported that patients with iAEs (≥Grade II ClassIntra) consecutively experienced postoperative complications (Grade II Clavien-Dindo) with a highly significant p-value of 0.0001.

Conclusions

Our study showed a strong association between intraoperative and postoperative complications with more complications in the laparoscopic arm than in the robotic arm. This being a pilot study for iAE's comparison can be a foundation for larger studies. We also recommend reporting of all iAE's occurring in surgery which can also help in managing patients postoperatively based on complications.

ID 53

ROBOTICALLY ASSISTED HYSTERECTOMY VERSUS OPEN TRANSABDOMINAL AND CONVENTIONAL LAPAROSCOPIC HYSTERECTOMY FOR THE TREATMENT OF ENDOMETRIAL CANCER: A COMPARATIVE SYSTEMATIC REVIEW AND META-ANALYSIS OF SURGICAL, ANAESTHESIOLOGICAL AND ONCOLOGICAL OUTCOMES

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Faculty of Medicine

Background / Aim

Endometrial cancer is the sixth most common malignancy in women and its incidence is on the rise in the modern world. Treatment is based on surgical approach, with transabdominal open hysterectomy (OH) or laparoscopic hysterectomy (LH). Robotically assisted hysterectomy (RH) is a relatively newer alternative, which confers several advantages. This systematic review and meta-analysis aims at investigating whether RH is superior in comparison to OH and LH,

with regard to surgical, anaesthesiological and oncological outcomes, with sub-analysis of elderly and obese patients.

Methods

Relevant studies were searched for on PubMed, Scopus, Web of Science, Ovid and CINAHL in accordance with the PRISMA 2020 guidelines. The studies were evaluated for their relevance to the research question and their potential risk of bias.

Results

In total, 82 studies have been analysed. Cumulatively, the studies were conducted from 2000 to 2018, included 146,128 women, 71,100 of whom underwent RH, with a mean age ranging from 49.4±9.4 to 78±4 years and a mean BMI from 23.4±3.1 to 51.6±6.9. Most patients had early stage endometrial cancer, which was of low histological grade and of the endometrioid histological subtype.

Surgical outcomes for RH: operation duration was longer than both alternatives, intra-operative blood loss was lower than OH (even lower in elderly and obese women) and LH, transfusion rate was lower than OH but similar to LH, number of excised pelvic lymphnodes was smaller than OH, but larger than LH, complication rate was lower than OH, but similar to LH, hospitalisation duration was briefer than both (even briefer for elderly and obese women), readmission rate was lower than OH but similar to LH, conversion to laparotomy rate was lower than LH (even lower in obese women) and same day hospital release rate was higher than LH.

Anaesthesiological outcomes for RH: PACU opioid usage was lower than both, hospitalisation opioid usage was lower than OH but similar to LH and post-operative pain was lower than both. Oncological outcomes: recurrence rate was lower than OH but similar to LH and overall survival was higher than OH but similar to LH.

Conclusions

RH was superior in almost every outcome compared to OH and offered lower morbidity (lower conversion to laparotomy rate) and faster recovery (shorter length of stay, increased same day release rate, reduced post-operative pain) compared with LH, advantages more pronounced in special patient subgroups, particularly women with obesity.

ID 54

ROBOTIC ASSISTED SACROCOLPOPEXY WITH AUTOLOGOSU RECTUS FASCIA (SCARF) FOR THE TREATMENT OF APICAL VAGINAL PROLAPSE

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Minimally Invasive Unit, Faculty of Medicines and Health Sciences, Macquarie University Hospital, Macquarie Park, NSW Australia

Subject

To describe the technique of robotic assisted sacro-colpopexy (SCARF) for the treatment of apical vaginal prolapse.

Setting

Minimally Invasive Unit, Macquarie University Hospital, Australia.

Intervention

Robotic Assisted SCARF using Da Vinci-Xi.

Result and methods

A 75 yo lady with history of hysterectomy bilateral salpingo-oophorectomy for ovarian cancer, anterior and posterior vaginal repair presented with Stage 4 vaginal vault prolapse. She was averse to the use synthetic mesh. CT scan showed no evidence recurrent ovarian cancer.

Patient position

Patient is placed in 25 degrees Trendelenburg lithotomy position with a tilt of 5 degree to the left. Attention is paid to avoid support pressure areas with intermittent pneumatic compression devices.

Ten Steps for SCARF

1. Restoration of anatomy: Division of adhesions and retracts the falciform ligament exposing the graft.
2. Robotic intra-corporal harvesting of right posterior rectus fascia
    1) Establish anatomical landmark.
    2) Harvesting the posterior rectus fascia using instrument from left side of the abdomen.
    3) Insertion of residual ports and the robot is de-docked.
    4) Rotation of robotic boom and re docking with camera facing the pelvis.
3. Dissection of sacral promontory to expose the anterior longitudinal ligament.
4. Para rectal dissection with care to preserve the hypogastric plexus of nerves and lateralise the right ureter
5. Vagino-vesicle dissection till it reaches the trigone.
6. Rectovaginal dissection is developed using 30 degree upward-scope until it reaches the perineal body.
7. Tailoring of the graft: as the graft is stretchable and flexible. The wider part of the graft is cut longitudinally in the middle. Each sleeve is attached the anterior and posterior compartment. The narrow part of the graft is sutured to the anterior longitudinal ligament at the sacral promontory.
8. Fixation of the graft to the anterior and posterior vaginal wall using interrupted 2/0 Microporous, monofilament suture PTFE (Poly-tetra-fluoro-ethylene) CV2 ½ circle cut to 22cm.
9. Attachment to sacral promontory: three or four sutures are placed to attach the graft to the anterior longitudinal ligament.
10. Re-peritonealisation: the peritoneum is re-anastomosed to avoid entrapment of abdomen and pelvic viscera.

Patient was discharged from hospital the next morning with no bladder and bowel dysfunction with minimal pain. There was minimal blood loss, and she made a rapid recovery.

Conclusions

Robotic Assisted Sacro-colpopexy with autologous rectus fascia is a feasible mesh free approach in the treatment of apical vaginal prolapse.

ID 55

TECHNIQUE OF ROBOTIC-ASSISTED SACROCOLPOPEXY USING AUTOLOGOUS RECTUS FASCIA GRAFT (SCARF)

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Minimally Invasive Unit, Faculty of Medicines and Health Sciences, Macquarie University Hospital, Macquarie Park, NSW Australia

Subject

To describe the tecchnique of sacro-colpopexy for the treatment of apical vaginal prolapse.

Setting

Macquarie University Hospital: Minimally Invasive Unit

Intervention

Technique of Robotic Assisted SCARF using Xi Davinci.

Result and methods

A 75 yo lady with history of hysterectomy bilateral salpingo-oophorectomy for ovarian cancer, anterior and posterior vaginal repair presented with Stage 4 vaginal vault prolapse. She was averse to the use synthetic mesh. CT scan showed no evidence of recurrent ovarian cancer.

Patient position

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Ten Steps for SCARF

1. Restoration of anatomy: Division of adhesions and retracts the falciform ligament exposing the graft.
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    3) Insertion of residual ports and the robot is de-docked.
    4) Rotation of robotic boom and re docking with camera facing the pelvis.
3. Dissection of sacral promontory to expose the anterior longitudinal ligament.
4. Para rectal dissection with care to preserve the hypogastric plexus of nerves and lateralise the right ureter
5. Vagino-vesicle dissection till it reaches the trigone.
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7. Tailoring of the graft: as the graft is stretchable and flexible. The wider part of the graft is cut longitudinally in the middle. Each sleeve is attached the anterior and posterior compartment. The narrow part of the graft is sutured to the anterior longitudinal ligament at the sacral promontory.
8. Fixation of the graft to the anterior and posterior vaginal wall using interrupted 2/0 Microporous, monofilament suture PTFE (Poly-tetra-fluoro-ethylene) CV2 ½ circle cut to 22cm.
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10. Re-peritonealisation: the peritoneum is re-anastomosed to avoid entrapment of abdomen and pelvic viscera.

Patient was discharged from the next morning with no bladder and bowel dysfunction with minimal pain. There was minimal blood loss and she made a rapid recovery.

Conclusions

Robotic Assisted Sacro-colpopexy with autologous rectus fascia is a feasible mesh free approach in the treatment of apical vaginal prolapse.

ID 56

ROBOTIC ASSISTED EXCISION OF PARA-AORTIC NODAL MASS IN A RECURRENT SETTING

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Introduction

Minimal invasive para-aortic lymphadenectomy is a challenging procedure due to the limited surgical field and the associated technical difficulties. With this video abstract from the Northern Gynaecological Oncological Centre (NGOC),Gateshead,UK, we would like to share our experience of robotic assisted excision of para-aortic nodal mass in a recurrent setting.

Background

A 53-year old patient, presented with intermittent abdominal pain. She had a history of uterine carcinosarcoma with extensive high grade neuroendocrine differentiation, FIGO stage 3C1 and a synchronous endometroid adenocarcinoma of the right ovary, FIGO stage 1A.

The patient has initially been treated in the NGOC with a laparotomy, total abdominal hysterectomy, bilateral salpingo-oophorectomy, pelvic and para-aortic node excision and infracolic omentectomy. (complete cytoreduction, May 2021) followed by adjuvant treatment. She completed adjuvant chemotherapy with 4 cycles of Carboplatin & Etoposide and adjuvant radiotherapy (November 2021).

An up-to-date CT scan showed a new suspicious infra-renal 12 mm left para-aortic node and a subsequent PET scan confirmed FDG

avidity within this enlarged node. Following MDT discussion, a robotic assisted excision of the enlarged para-aortic node was offered to the patient (December 2023).

Procedure

Laparoscopic entry was performed through Palmer's point due to the previous laparotomy. Four robotic ports were linearly placed at the level of the umbilicus. Da Vinci XI robotic system was docked towards the upper abdomen.

Given the previous extensive surgery and pelvic radiotherapy, the sigmoid colon was densely adherent to the left abdominal wall with multiple loops of small bowel were adherent to the large bowel. An enlarged para-aortic lymph node above the Inferior Mesenteric Artery (IMA) and below the renal vessels was identified, with no other evidence of peritoneal or distal disease.

After extensive adhesiolysis, the operative field was prepared, the retroperitoneum was accessed at the level of the left common iliac artery and the retroperitoneal spaces were developed to identify the Aorta and Vena Cava up to the renal vessels. Inferior Mesenteric Artery, Vein and Gonadal vessels identified and isolated. The enlarged node was identified, resected and retrieved using an Endocatch bag.

Patient recovered well from the operation and she was discharged post-operative day 1.

Conclusions

Excision of enlarged para-aortic nodes after radical surgery and pelvic radiotherapy can be safely performed with the DaVinci XI robotic system. The final histology showed no residual malignancy, so the probability of false positive PET results should be discussed with the patient prior to any shared decision making.

ID 57

SINGLE PORT ROBOT INTERVAL DEBULKING SURGERY IN OVARIAN CANCER

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Single port (SP) robotic surgery is now popular in gynaecological surgery. Not only benign cases but also malignant cases are performed by SP surgery.

Recently a numbers of ovarian cancer surgeries are indications of robotic surgery. Especially there has been a growing interest in exploring minimal invasive surgery for patients who exhibit a response to neoadjuvant chemotherapy.

In this video, we propose the surgical procedures for single port robot-assisted interval cytoreductive surgery for advanced ovarian cancer

ID 58

A PILOT ROBOTIC SIMULATOR COURSE FOR FOUNDATIONAL TRAINING IN ROBOTIC SURGERY

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Introduction

Simulation-based training is recognized for enhancing clinical skills without impacting patient care, offering cost-effective and risk-free entry into robotic surgery. The Fulham Road gynaecological collaboration introduces a Robotic simulator course, emphasizing its efficacy in the foundational training of robotic surgery.

Methods

The course framework encompasses five phases.
Phase 1: Orientation.
Phase 2: SERGS 6 exercises on robot simulator: clutch, wrist articulation, 4th arm cutting, camera 0, energy pedals 2, and sea spike.
Phase 3: Arms tied exercises impairing trainees from lifting hands off the console: wrist articulation and sea spikes.
Phase 4: Hysterectomy module
Phase 5: Other exercises- round the world needle driver, puzzle piece dissection and ring rollercoaster. A comprehensive survey evaluated the course's feasibility and acceptability among 9 trainees and 14 faculty members.

Results

Overall, feedback from both trainees and faculty regarding the course was overwhelmingly positive, emphasizing its practical value. Descriptive analysis indicated an average acceptability rating of 8.47 to 10.0 on a ten-point scale across all course phases. Contrast analysis further revealed that phase 2 (SERGS exercises) and phase 4 (Hysterectomy) received significantly higher ratings compared to phases 3 and 5 (p=0.009). Notably, there were no significant differences in scores between faculty and trainees for any of the phases.

Conclusions

The pilot Robotic Simulator course from the Fulham Road gynaecological collaboration proves to be a practical and beneficial

introductory platform for novice trainees in robotic surgery. It effectively bridges the gap between theoretical knowledge and practical surgical skills, with particular emphasis on the realism and applicability of the SERGS exercises and the hysterectomy module.

ID 59

ROBOTIC ACUM(ACCESSORY AND CAVITATED UTERINE MASS)EXCISION USING INTRA-OPERATIVE USG

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Aim
Robotic ACUM(Accessory and Cavitated Uterine Mass)Excision Using intra-operative USG.

Methods
Patient in lithotomy position.Parts painted and draped under General anaesthesia.
Per-Speculum Examination: Cervix and Vagina healthy.
Pervaginal Examination:Uterus anteverted,normal in size, mobile, bilateral fornices free.

UCL
7 cms

Cystoscopy
Bulge noted in supratrigonal region close to the right ureter. Bladder biopsy taken and sent for HPE. 2cm lesion noted in the anterior wall of ureter and tract extending to the cervix.
Standard robotic four 8 mm and one 12 mm right subcostal assistant port placed.

Intra-Operative Findings
Uterus appeared normal in size measuring 7*5 cms ,bilateral fallopian tubes and ovaries appeared normal. UTERINE ACUM noted in the anterior wall of the uterus on the right side measuring 6*4 cms. Intra-operative Ultrasound done to localise and mark the borders of the Uterine ACUM. Uterovesical fold dissected and pushed down. Inj Vasopressin (20 units diluted in 200ml NS) injected into anterior wall of the uterus on the right side. Real time images were obtained during surgery which was used to make precise incision over the anterior surface of the uterus. The usg probe was introduced through the 12 mm assistant port and maneuvered using large needle driver.

Intra-operative transvaginal USG done to know the extent of UTERINE ACUM. The excision of the UTERINE ACUM was done using hot shears and fenestrated bipolar forceps with minimal blood loss. The incision site was closed using V-LOC 2-0.Surgicel placed over the incision site and uterovesical fold closed using MONOCRYL 2-0.Specimen retrieved via endobag and sent for HPE.Haemostasis assured. Pneumoperitoneum deflated, no bleeding.Port site closure done.

Results
HPE
Bladder mucosa biopsy: Features are consistent with mullerianosis.
ACUM lesion: Features are consistent with Accessory and cavitated uterine mass(ACUM).

Conclusions
INTRA-OPERATIVE USG during Robotic Surgery is a versatile tool in the armamentarium which can be used to identify leiomyoma, adenomyoma, endometrioma fibroid mapping, UTERINE ACUM excision.

It can be used for precise incision intra-operatively. Intra-operative transvaginal USG also can be a tool to use in difficult cases to know the extent of the lesions. All these tools can help us perform the difficult surgeries with more precision, high magnification, less blood loss, decreas the operative time, less morbidity and decrease the duration of hospital stay of patients.

ID 60

ROBOTIC HYSTERECTOMY IN EXTREME OBESITY

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Background
Surgery is technically more challenging and perioperative complications more common in obese patients. For morbidly obese patients (BMI ≥40 kg/m2) laparoscopic surgery is particularly challenging but also more advantageous. Despite this, there are still difficulties associated with traditional laparoscopic surgery that may be overcome by using the robot. Robot-assisted surgery was introduced in our department in 2009 following a training program for surgeons and operating room teams. After experience was gained, more challenging patients and procedures were undertaken, including surgery in morbidly obese women. This is a presentation of our experience and learning curve of treating these patients surgically utilising the advantages of the robot.

Methods
This is a retrospective analysis and presentation utilising our database of more than 2100 gynaecological cancer robotic procedures. We identified more than 150 women with BMI of 40 and above who had robotic hysterectomy for early endometrial cancer in our cancer referral tertiary centre from 2012 until 2022. We examined intraoperative and immediate postoperative complications, blood loss, conversion to laparotomy rates, and the length of stay in the hospital. We compared our outcomes between the two groups 2012-2017 vs 2017-2022.

Results
We identified important steps that are crucial in these challenging procedures including patient positioning, placement of trocars and

operating in low intra-abdominal pressures. The majority of these cases had minimal blood loss and did not require any blood transfusion. The infection rate was small and the average length of stay was one day. Most of the cases were discharged home the next day of the surgery. It is interesting to mention that the number of the patients with raised BMI was increasing as the surgical expertise was improving.

Conclusions

After an initial learning phase, robot-assisted laparoscopic hysterectomy is associated with shorter hospital stay, less bleeding and fewer complications in morbidly obese women. Robot-assisted surgery requires training and specific experience of the surgical, anaesthetic, and theatre staff.

To achieve the best possible results, surgery in morbidly obese patients should be performed at institutions with such experience.

ID 61

"IAVAZZO SCORE", A PREOPERATIVE MEASURE TO ESTIMATE THE TIME OF ROBOTIC-ASSISTED GYNAECOLOGICAL PROCEDURES

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Aim

Long operation times are still a disadvantage of robotic-assisted gynaecological procedures. A score that forecasts the length of such surgeries may be valuable.

Methods

A review of robotic-assisted gynaecological procedures at our institution was carried out. We evaluated preoperative values such as body mass index, uterine size, past abdominal operations, method of previous deliveries, and pathology that led patients to the operating room and developed a preoperative prognostic score, the 'Iavazzo score'. We subsequently correlated this score with the duration of operation.

Results

A total of 57 patients were included in this study. The mean 'Iavazzo' score was 7.96, while mean operation and overall time were 140 and 208.8 minutes, respectively. The correlation between Iavazzo score and operation time was statistically significant ($p < 0.001$).

Using median operation time, we discovered an area under the curve of 0.86 and a cut-off value of 7.5 for the Iavazzo score.

Conclusions

The 'Iavazzo' score can be a useful predictive score for determining the time of robotic-assisted gynaecological operations.

ID 62

VASCULAR LESION DURING SENTINEL LYMPH NODE REMOVAL

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A female patient underwent total hysterectomy and bilateral annexectomy for endometrial cancer. During the removal of sentinel lymph node identified with indocyanine green, an accidental lesion of the iliac vein was caused. At this point the vascular lesion was resolved by placing a vascular clamp called a bulldog upstream of the lesion, which was sutured with a reabsorbable monofilament. The sentinel lymph node was removed with bipolar forceps and monopolar scissors, placed in a sterile glove finger and sent for final histological examination. Surgery continued without further complications.

At the end of the surgery a drainage was placed in the pelvis. The postoperative course was regular and the patient was discharged the next day after an ultrasound check. No adjuvant therapies were needed. The patient is currently undergoing on oncological follow-up.

ID 63

RADIOTHERAPY PLANNING SOFTWARE DERIVED 3D STRUCTURAL IMAGING FOR PLANNING AND EXECUTION OF ROBOTIC SECONDARY CYTOREDUCTION IN SINGLE/OLIGOMETASTATIC RECURRENT GYNAECOLOGICAL CANCERS

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Aim

Retrospective series have shown minimally invasive secondary cytoreductive surgery is feasible in selected cases of recurrent gynaecological cancers. However, no predictors of MIS cytoreductive surgery feasibility are currently available. Free surgical margin is the most important criteria for secondary cytoreduction. Isolated pelvic or nodal recurrences pose surgeons with the challenge of involvement of bladder, rectum, ureters or major vessels. Based on preoperative imaging we sacrifice these vital structures for the sake of adequate margins.

This study aimed to utilise 3D structural images derived from the radiotherapy planning software based on preoperative images for planning and executing robotic surgeries with the intent of organ preservation while achieving adequate margins.

Methods

Employing a distinctive approach, the radiotherapy treatment planning software, Eclipse Treatment Planning System, v16.1 (Varian

iMedical Systems Inc, California, USA), was utilised to intricately construct a 3D rendition of pelvic structures, meticulously contouring recurrent disease and important adjacent organs like the rectum and ureter (in the first case), and the inferior vena cava (in the second case). Notably, this innovative technique stands unparalleled in existing medical literature.

Subsequently, leveraging the 3D visualisation of contoured structures whereby the anatomical relationship among the contoured structures were seen from different planes and angles, surgical strategies were devised to optimise treatment planning.

Results

This planning was utilised in two women and complete gross resection was achieved in both of them without sacrifice of vital organs. The first patient presented with vault recurrence of cervical cancer 3 years from primary radical surgery. It was single lesion arising from vault and encasing the right ureter with involvement of a small segment of rectum as per MRI report. 3D image revealed that the right ureter was adherent but not encased by the mass and was successfully salvaged at surgery.

The second patient presented with paraaortic nodal recurrence of endometrial cancer and preoperative CT scan revealed that a segment of IVC was infiltrated by the mass. 3D image revealed that IVC was adherent to the mass and not infiltrated. The nodal mass was removed successfully at surgery with a small IVC repair without any vascular surgery intervention or conversion.

Conclusions

3D image planning definitely defined the course of the surgery. This technology increased the chances of achieving a complete minimally invasive cytoreduction. Integration of such imaging modalities on the robotic platform and real time utilisation will go a long way in the evolving discipline of Image Guided Surgery.

ID 64

INTRA-OPERATIVE COMPLICATIONS DURING ROBOTIC ASSISTED GYNAECOLOGICAL CANCER SURGERIES

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Aim

Since its approval for gynaecological surgeries, robotic assisted surgery has been an integral part of gynaecological surgeries both for benign and malignant conditions. Even though intra-operative complications are rare, they do happen. The risk of intra-operative complications like vascular injury, bowel injury is reported to be 1-1.5%.

This video demonstrates intra-operative complications during robotic assisted gynaecological cancer surgeries.

Methods

We started robotic surgery programme using da-Vinci Is platform in 2012. At our centre have performed over 800 gynaecological cancer surgeries. Complications during robotic surgery can be:

1. Equipment related
2. Position related.
3. Anaesthesia related
4. Procedure related

In this video we demonstrates intra-operative complications during gynaecological cancer surgeries using da Vinci platform.

Its a compilation of 5 small videos demonstrating different vascular, bowel and bladder injuries. This video also demonstrates the way we tackled these complications and lessons learnt.

1. External iliac vein injury due to loss of insulation cover of monopolar shearer.
2. Internal iMac artery injury during a pelvic exenteration in a post radiation central recurrent Carcinoma cervix.
3. Bladder in just during a radical hysterectomy.
4. Small bowel injury during adhesiolysis.
5. Inferior mesenteric artery injure during paraortic node dissection.

Conclusions

Robotic assisted surgery is safe and the complications rates are comparable to conventional or laparoscopic surgery. Proper training, team work, complete preoperative evaluation, protocols for patient positioning and most importantly training the team for immediate conversion in case of vascular injuries is important to reduce intra-operative and postoperative complications and mortality.

ID 65

IMPACT OF UTERINE WEIGHT ON SURGICAL OUTCOMES IN ROBOTIC HYSTERECTOMY: AN AMBISPECTIVE ANALYSIS

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Aim

Robot-assisted surgeries are increasingly used for the treatment of benign gynaecological conditions. However, their impact in cases of significantly enlarged uteruses remains uncertain.

This study aims to investigate whether the weight of the uterus influences the surgical results of robotic hysterectomy.

Methods

Ambispective analysis of 306 cases was performed, of which 265 cases were analysed retrospectively. The outcome measures included total operative time including docking time, console time and vault closure time, complication rates and quality of life (WHOQOL-BREF questionnaire) stratified based on uterine sizes into three groups by every 250 gm.

Results

Of the 306 cases, 76.47% cases (n=234) had uterine weight <250 gm, 18.30% cases (n=56) had uterine weight between 250 to 500 gm while 5.23% cases (n=16) had weight of uterine specimen >500gm. The total operative time was significantly lower in the <250 gm group compared to >500gm (81.92 ±22.81 versus 111.88 ± 40.27 minutes; P=0.003) contributed primarily by the console time. Although the need for postoperative blood transfusion was higher in the >500gm group, the overall complication rate between the three groups was similar. The three groups had comparable quality of life through all the four domains.

Conclusions

The present study underscores the influence of uterine weight on robotic hysterectomy outcomes, revealing increased operative times and postoperative haemoglobin drop for uteri over 500 grams. Despite these challenges, complications were not significantly affected by uterine size.

ID 66

INNOVATION IN LAPAROSCOPIC SURGERY ACCESS: LEVALAP 1.0

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It is estimated that 40 % to 75 % of laparoscopic complications occur during primary port placement, including Veress needle insertion. Therefore it is of utmost importance to implement innovation devices to permit a safe and fast access to the abdominal cavity and pneumoperitoneum establishment in minimal invasive surgery.

Levalap 1.0 is a single-use recyclable hemispheric vacuum system that allows the introduction of the Veress needle through a polymax septum. It is easy to place and adapts perfectly to the abdominal wall anatomy at any location and permits homogeneous traction and increases the safe distance to peritoneal and retroperitoneal structures. In this video we present the technique for Levalap 1.0 use and we use a lateral port in order to have a visual control of this device performance in the peritoneal cavity at the momento of Veress Needle insertion.

In conclusion, LevaLap aims to facilitate more precise, rapid and efficient access. Also increase patient safety and implement access at the 1st attempt and also eliminating the need of a 2nd operator during surgery access.

ID 67

ROBOTICALLY ASSISTED LAPAROSCOPIC SUTURE SACROHYSTEROPEXY: A MINIMALLY INVASIVE MESHLESS UTERINE-SPARING TECHNIQUE FOR UTERINE PROLAPSE

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Aim

Uterine prolapse is a debilitating problem for many women and represents a failure of apical support of the pelvic organs. Laparoscopic mesh sacrohysteropexy has been established as an effective, safe, and popular technique to treat uterine prolapse, and for many has replaced the previous gold standard of vaginal hysterectomy. Nevertheless, recent controversies regarding synthetic mesh in pelvic reconstructive surgery have led to a search for alternative procedures to treat this common condition.

We perform a minimally invasive technique that recreates the pivotal supports for the pelvic organs, using a combination of permanent and non-permanent sutures. Medium-term data from our initial cohort suggest that suture sacrohysteropexy is an effective treatment for uterine prolapse with a 95% anatomical success rate at the apex.

Methods

Here we highlight the case of a 57-year-old patient with stage II uterine prolapse and stage III cystocele, who was keen to proceed to surgical management preserving her uterus and avoiding the use of a mesh implant. We present a video of a robotically assisted laparoscopic procedure, demonstrating key steps of the technique: laparoscopic repair of the vagina, plication of uterosacral ligaments, 'laparoscopic McCall culdoplasty' and anchoring permanent sutures onto the sacral promontory.

Surgical success was assessed objectively and subjectively at 3 months. Anatomical success was defined as apical prolapse of stage 1 or less.

Results

As well as symptom resolution, the anatomical result revealed resolution of prolapse in all compartments at 3 months.

Conclusions

This technique of minimally invasive suture sacrohysteropexy seems a logical progression in prolapse surgery, responding to patients' wishes for minimally invasive meshless procedures with uterine preservation.

ID 68

EVOLUTION OF ROBOTIC USES IN GYNAECOLOGICAL SURGERY IN THE PAST 3 YEARS IN HOSPITAL REY JUAN CARLOS

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Robotically assisted surgeries are established for elective operations. It is primarily used in gynaecologic oncology but is increasingly

introduced in benign surgery. There has been an exponential growth of robot-assisted procedures in the last years.

Aim
The aim of this study is to describe the application of robotic surgery in 2023 in gynaecological conditions in Hospital Rey Juan Carlos (Móstoles, Spain) and to compare it with the previous 2 years in the same centre.

Methods
Review of all robotic procedures in gynaecology between 2021 and 2023 in Hospital Rey Juan Carlos.

Results
A total of 100 surgeries were performanced in 2023. The most frequent Surgery was Hysterectomy (40) followed by colposacropexy (22). The third most common procedure was myomectomy (18). Neither robotic-specific problems nor extensive complication rates were reported. The average of hospitalisation was 1.3 days, 0.6 less than the previous year. The increase of surgeries in 2023 respect 2022 and 2021 was 10 and 38 respectively.

Conclusions
There has been a growing number of applications in various surgical specialties including gynaecology. The case volume is increasing exponentially and the numbers continue to grow including benign conditions. Nearly half of our robotic surgeries were in gynaecologic benign pathology, such as big uterus (> 16 weeks) and colposacropexies that would have been indicated for laparotomy in other circumstances.

ID 69

ROBOTIC GYNAECOLOGICAL SURGERY- THE FIRST 50 CASES: ARE WE ON A GOOD PATH?

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Background
Since the beginning of this century, minimally invasive approach has been, whenever adequate, recommended for every surgical context and gynaecology has not been an exception. The emergence of robotic assistance has allowed it to offer it to nearly all patients, particularly to obese patients and/or with a very enlarged uterus, where the straight stick laparoscopy faces important limitations.

Methods
In this publication the authors present their initial experience in a tertiary hospital from Lisbon, Portugal, with the robotic systems DaVinci Xi and X. Methods included a full review of all cases with descriptive data analysis. Complications were graded according to the Clavein-Dindo classification.

Results
Between October 2022 and January 2024, fifty women were submitted to robotic surgery in our department. Average age was 53 years, with a mean body mass index (BMI) of 28,9 (min. 19,3 max. 49). The main indication for surgery was endometrial pathology (52%), with 14 cases of early stage endometrial cancer. The majority of women was submitted to total hysterectomy (36% of cases) and time of surgery was 199, 86 minutes (min. 75 max. 420). Only 1 case needed conversion to open surgery.

The intraoperative blood loss was less than 50 ml in the vast majority of cases but 2 patients lost 650 ml and 790 ml. No patient needed blood transfusion. Nearly all patients were discharged on day 1 post-op (86%) and there were two hospital readmissions- The average weight of the surgical specimen was 148.2g, with a maximum of 685g.

Conclusions
Overall these results are quite positive, particularly for all the women that otherwise would have been submitted to an open approach, with no increase in morbidity or mortality. We do seem to be on the best path.

ID 70

SAME DAY DISCHARGE ROBOTIC HYSTERECTOMY IN THE MORBIDLY OBESE – A CASE SERIES

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Background/Aim
Same day discharge is a safe and cost-effective pathway for suitable patients undergoing minimal access gynaecology surgery including hysterectomy. However, same day discharge in the morbidly obese patient is uncommon. Robotic assisted surgery is superior to standard laparoscopy for those with extreme obesity (Brunes 2021) due to a due to a combination of enhanced visualisation of the pelvis, the ability to use the 4th arm for bowel retraction, improved ergonomics for the surgeon and reduced ventilatory difficulties with reduction in intra-abdominal pressures and steep head-down positioning.

We present a case series of 4 patients undergoing robotic assisted hysterectomy (RAH) with successful same day discharge.

Methods
A retrospective review of electronic case notes was carried out for morbidly obese patients undergoing RAH at Chelsea and Westminster NHS Hospital, London, UK September 2023-December 2023.

Results
4 patients underwent RAH. The median BMI was 46.33 and median age was 63.5. All patients underwent hysterectomy for endometrial hyperplasia or FIGO stage 1 endometrial cancer. The median blood loss was 37.5 ml and the median operative time was 132 minutes.

The intra-abdominal pressures were kept between 6-8 mm hg. There were no intra-operative or postoperative complications encountered in any of the patients.

Conclusions

Same day discharge robotic hysterectomy is a well-established, safe pathway that improves patient experience and healthcare provider economics. We demonstrate the same principles can be applied in the morbidly obese patient undergoing robotic hysterectomy with a BMI of >40 no longer seen as a barrier to same day discharge.

ID 71

ROBOTIC-ASSISTED MINIMALLY INVASIVE SURGERY FOR INTERVAL DEBULKING SURGERY IN OVARIAN CANCER: A MULTIQUADRANT APPROACH

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Background

Minimally Invasive Interval Debulking Surgery (IDS) has emerged as a promising approach for managing advanced ovarian cancer. Robotic-assisted surgery offers potential advantages in this setting; however, performing multiquadrant robotic procedures poses significant challenges.

Methods

In this study, we compiled surgical videos showcasing different procedures in various abdominal quadrants: pelvis, lower mesogastric region, upper mesogastric region, left upper quadrant, and right upper quadrant. Each video demonstrated trocar positioning, instrument triangulation, identification of specific anatomical structures, detailed minimally invasive surgical anatomy, and surgical strategy tailored to the unique characteristics of each abdominal quadrant.

Results

The procedures included:
Pelvis: Total hysterectomy, bilateral salpingo-oophorectomy (BSO), pelvic peritonectomy, rectosigmoid mesorectal sparing resection, and totally intracorporeal colorectal anastomosis.
Lower mesogastric region: Paracaval lymphadenectomy.
Upper mesogastric region: Radical omentectomy.
Left upper quadrant: Splenectomy, removal of lesser omentum, lymphadenectomy of the celiac trunk, and resection of the right diaphragmatic pillar.
Right upper quadrant: Diaphragmatic peritonectomy.

Conclusions

Robotic IDS is feasible in selected cases, offering potential benefits such as reduced morbidity and shorter recovery times. Intraoperative assessment plays a crucial role in determining the suitability and success of robotic IDS. Despite challenges, complex multiquadrant robotic surgery is achievable, necessitating dynamic changes in docking to optimise access to tumour sites. However, it is imperative to perform robotic IDS in expert centres equipped with the requisite expertise and resources. Centralised care in specialised facilities ensures safe and effective outcomes, highlighting the importance of collaboration among expert centres to refine techniques and improve patient care.

ID 72

THE UK'S FIRST EMERGENCY ROBOTIC GYNAECOLOGY SERVICE – 6 CASES OF ROBOTIC MANAGEMENT PELVIC SEPSIS

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Background

Pelvic sepsis, most commonly driven by tubo-ovarian abscesses, can be treated with broad-spectrum antibiotics in isolation or in combination with imaging-guided drainage. This approach fails in up to 25% of cases, necessitating surgical intervention (1).

Surgical intervention in the form of laparoscopy or laparotomy with division of adhesions and drainage of abscess, uni- or bilateral salpingo-oophorectomy, and hysterectomy can be technically difficult and associated with high risk of visceral injury or incomplete resolution of symptoms. This is often due inadequate access, inadequate surgical view, and obliteration of anatomical tissue planes. Robot-assisted laparoscopy supports the surgeon to overcome these obstacles. The role of emergency robotic surgery is poorly defined in the literature. We present the first case series of outcomes from six emergency robotic cases for treatment of pelvic sepsis and the UK's first emergency robotic gynaecology service.

Methods

Six prospective emergency cases were collected over a 6-month period at a high-intensity, well-established robotic tertiary centre for complex benign gynaecology and endometriosis. Data was collected from presenting admission, surgical complexity and primary outcomes including length of hospital stay, duration of antibiotics and time to discharge.

Results

Robotic surgery cases led to shorter duration of hospital stay, more complete surgical access and resection of disease. No complications were encountered.

Conclusions

We present the first case series of outcomes from six emergency robotic cases for treatment of pelvic sepsis and the UK's first emergency robotic gynaecology service.

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ID 73

ROBOTIC-ASSISTED SACROCOLPOPEXY (RASC) IN A RENAL TRANSPLANT PATIENT WITH EHLERS DANLOS SYNDROME (EDS); THE FIRST CASE REPORT AND LITERATURE REVIEW OF PERI-OPERATIVE CONSIDERATIONS

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Introduction
With ageing populations and advances of healthcare, patients with complex medical histories are more likely to present to our practices. Similarly, robotic-assisted surgery is gaining momentum with view to improving patient outcomes. Here, we present the first robotic-assisted sacrocolpopexy(RASC) in a renal transplant patient with Ehlers-Danlos syndrome (EDS), and review the literature for perioperative considerations.

Methods
Our 51 year old patient presented with obstructed micturition and stage 4 vault prolapse (following previous vaginal hysterectomy for prolapse). The patient had suffered from adult polycystic kidney disease, renal insufficiency, had had peritoneal dialysis then renal transplantation in the right iliac fossa, and was currently on anti-rejection therapy. She also suffered of severe visual impairment following cerebral haemorrhage and was wheelchair bound. Both shoulder joints were supported by braces to prevent recurrent dislocations.

A pre-operative diagnostic laparoscopy was performed to evaluate abdominal accessibility and aid decision regarding surgical approach for prolapse repair.

We reviewed the literature for risks associated with these cases and mitigations.

Results
Uncomplicated RASC was performed with uneventful recovery, no prolapse recurrence and improved quality of life at 1 year follow-up.

Discussion
Patients such as the above, are high risk for both anaesthetic and peri-operative surgical complications due to both EDS and renal transplant. In addition, safety and feasibility of robotic-assisted surgery in such patients have not been explored. Management of these patients needs to be conducted via multidisciplinary team including anaesthetic and renal function assessments pre-operatively.

Laparoscopic assessment was focused on: localisation of the transplanted kidney (in relation to the robotic ports) to avoid its injury and whether enough peritoneum would be available in the right iliac fossa to re-peritonealise the mesh. Also quantifying intra-peritoneal adhesions (due to previous peritoneal dialysis) in addition to standard pelvic assessments for sacrocolpopexy: level of aortic biforcation and access to sacral promontory.
The use of the robot in these cases may also be beneficial due to operating at lower intra-abdominal pressures (compared to laparoscopy), in addition to other benefits e.g. wristed instruments and 3D magnified operative views.

Conclusions
We demonstrated the feasibility and safety of robotic-assisted sacrocolpopexy(RASC) in a renal transplant patient with Ehler-Danlos Syndrome. To our knowledge, this is the first reported case of RASC in renal transplant patient. We also reviewed the literature for potential risks and mitigations.

However, more evidence is needed in this regard. We call upon specialist societies to utilise surgical databases to support such cause.

ID 74

ROBOTIC MODIFIED RESECTION OF THE ILEUM DUE TO ENDOMETRIOSIS - STEP BY STEP TECHNIQUE

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Aim
To demonstrate feasibility and the technique of modified resection of the ileum due to the endometriotic nodule closening the lumen of the small bowel.

Methods
The video demonstrates step by step technique of the ileum resection.

Results
Main aspects of the procedure were identified and systematised in 10 steps procedure :

1. Positioning of the patient and trocars.
2. Localisation of endometriosis.
3. Cutting the ileal mesentery.
4. Cutting of the ileum below endometriotic nodule.
5. Cutting of the ileum above endometriotic nodule.
6. Repositioning of the bowel.
7. Cuting of antimesenteric walls of the ileum.
8. Making anastomosis.
9. Closening of the wall of the ileum.
10. Checking of the intestinal anastomosis.

Conclusions
Robotic resection of the ileum is a feasible technique to remove endometriosis in a minimaly invasive way during one surgery of endometriosis resection.

ID 75

ROBOTIC SURGERY FOR PRIMARY ENDOMETRIAL

CARCINOMA- A SINGLE CENTRE EXPERIENCE

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Background

Early-stage endometrial cancer offers favourable survival outcomes when managed surgically, with minimal invasive surgery being the recommended approach. In our tertiary referral centre, robotic surgery was implemented in 2009, and over the last seven years, robotic assistance has been predominantly employed in almost all minimally invasive procedures.

Aim

To conduct clinical service evaluation of robotic surgery for primary endometrial cancer, examining clinico-pathological features, methods of lymph node assessment, and recurrence patterns.

Methods

Retrospective analysis of electronic medical records of patients who underwent robotic surgery for primary endometrial cancer from January 2018 – December 2021 at our centre.

Results

A cohort of 363 patients were identified with a mean age of 68.7 years. Among them 22% had class 3 obesity (BMI>40). 66% had previous abdominal surgery and 27% had performance status of ECOG>2. 83.5% were presumed stage I disease, 4% were stage III. Lymph node assessment was omitted in low grade endometrioid tumours with presumed stage IA (12%). 81.5% had bilateral pelvic lymphadenectomy and 6.5% had bilateral sentinel lymph node dissection. In contrast to pre-op stage, 73% were stage I post operatively, 19% were diagnosed as stage III or IV.

The tumour histology distribution was low grade (grade 1-2) endometrioid (49.5%), high grade (grade 3) endometrioid (21%), high-grade serous/clear cell (20.5%), carcinosarcoma (7%), other (2%). Intra-op complication was present in 3 patients. Post op complication was identified as follows: 2 patients with grade IIIA, 3 patients with grade IIIB and 2 patients with grade 4 Clavein Dindo complication. 28% displayed diffuse lymphovascular space invasion (LVSI), 33% exhibited p53 mutation, and 30% were characterised by mismatch repair (MMR) deficiency.

Adjuvant radiation therapy, comprising vaginal brachytherapy, was received by 45% of patients, and 15% were treated with external beam radiotherapy. 21.5% had adjuvant chemotherapy. With a median follow up of 47.5 months the overall survival of the study population was 89%. 42% of those with p53 mutant tumours and 30% with MMR deficient tumours recurred.

Conclusions

Robotic surgery for endometrial cancer is safe and effective in a high-risk population. During the study period, accuracy of sentinel lymph node detection was tested and is currently incorporated as the standard practice. Though the study predates the practise of complete molecular analysis, the prognostic significance of p53 mutant tumours is evident, adding on to the justification of assigning them a separate stage according to FIGO 2023 update.

ID 77

REVISITING PELVIC ANATOMY WITH ROBOTIC ASSISTANCE

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Gynaecological surgery is becoming increasingly complex as innovation makes progress in managing simple cases by non surgical techniques. Undergraduate and postgraduate teaching has not kept pace with innovation, leaving significant gap in surgical training in managing challenging cases. Understanding anatomy is cornerstone in performing safe surgical procedure and decreasing risk. Many medical schools around the world have excluded anatomical dissection from the curriculum for many reasons. There are ethical issues, lack of resources and decrease in training period, leading to qualification of surgeon with basic skills not enough to manage complex cases.

Innovation in surgical tools have made exponential growth ranging from ergonomics, visualisation and 3D depth perception. These features make teaching and learning in live theatre significantly beneficial for trainee and trainers.

Video demonstrates robotic assisted procedures with clarity in different anatomical structures both intra and retroperitoneal including neurovascular anatomy.

ID 78

"FOLLOWING THE RIVER TO THE LAKE": DETECTION OF SENTINEL LYMPH NODES IN ENDOMETRIAL CANCER PATIENTS USING A ROBOTIC PLATFORM

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Background/Aim

Endometrial cancer is still the sixth most prevalent cancer in women recognized worldwide. To monitor patients with endometrial cancer and assist with their surgical staging, sentinel lymph node biopsy has been established. According to the guidelines, patients with early-stage endometrial cancer should be performed with minimally invasive approach, such as laparoscopic or robotic.

The aim of this presentation is to highlight the most important tips

and tricks to optimise sentinel lymph node identification and dissection based on our experience.

Methods

Based on histological and imaging investigations, patients with endometrial cancer, who are referred for minimally invasive surgical treatment and sentinel lymph node biopsy for staging purposes, are selected. The technique used to biopsy the sentinel node was a robotic procedure using all 4 arms of the Da Vinci Surgical System. Injection of indocyanine green was done right before the beginning of the surgery.

Results

44 patients with endometrial cancer were treated robotically in our Department since January 2022. Eighteen patients were staged as endometrial cancer IA, while 26 patients as endometrial cancer stage IB. Five patients who were preoperatively staged as endometrial cancer stage IB based on MRI imaging, were downstaged to IA through pathological examination of the surgical specimen. In 4 patients (9.1%), it was not possible to find any sentinel lymph node based on pathological findings (mainly in the early learning curve).

Bilateral sentinel lymph node identification was achieved in 35 patients (79.5%), while unilateral identification was recorded in 5 patients (11.4%). In 19 patients sentinel nodes were found in the external iliac artery area, in 12 patients in the internal iliac vessels area, while in 9 patients the sentinel node was found at the obturator fossa.

Conclusions

When it comes to the best possible identification of the sentinel lymph node in patients with endometrial cancer, there are a few key tips and tactics to know, like when and where to inject indocyanine green dye. An enhanced and efficient identification of the sentinel lymph node is the result of procedure standardisation and the identification of anatomic landmarks.

ID 79

ESTABLISHING ROBOTIC SERVICE IN A GREEK PUBLIC HOSPITAL COMPARING SURGICAL OUTCOMES AND LEARNING CURVE OF A GYNECOLOGIC DEPARTMENT

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Background

Robotic hysterectomy is an effective and safe procedure that ensures quicker rehabilitation and better cosmetic results.

Methods

A retrospective analysis of patients that underwent hysterectomy with the open abdominal, laparoscopic and robotic approaches is conducted. We evaluated the outcomes and compared the results between robotic (RH), laparoscopic (LH), and abdominal hysterectomy (AH). Moreover, we stratified the robotic arm into two groups in order to study our learning curve and how affects the surgical outcomes.

Results

In total 378 patients were included. 155 patients underwent RH and were matched to LH and AH. RH and LH groups, when compared to AH group had statistically better outcomes regarding estimated blood loss (1.11 vs 1.46 vs 1.83 g/dl, respectively), first gas discharge (0.52 vs 0.65 vs 1.28 days,) and length of hospital stay (1.29 vs 1.71 vs 3.06 days), while operation time was found to be higher in those two groups (AH: 130.77, LH: 172.11, RH: 160.81 mins). Regarding the learning curve, we found that after the first 10 robotic procedures outcomes and operation time were comparable to those of abdominal and laparoscopic groups.

Conclusions

Our experience with robotic hysterectomy revealed better outcomes regarding estimated blood loss, first gas discharge, and length of hospital stay, with comparable results regarding operation time with abdominal and laparoscopic groups after initial operations' learning curve.

ID 80

THE IMPORTANCE OF UNEXPECTED CERVICAL CANCER STAGING: VASCULAR ANATOMICAL VARIATIONS AND SENTINEL NODES WITH ATYPICAL LOCATIONS

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Introduction

Since October 2018, lymph node (LN) status has become part of the FIGO staging system, given that it is one of the most important prognostic factors among women with cervical cancer (CC). Sentinel lymph node (SLN) biopsy has the added benefit of detecting LN metastases in uncommon locations that are not typically included in a standard lymphadenectomy.

The aim of this study was to determine the rate of atypical lymphatic drainage in patients with early-stage CC using a hybrid tracer (ICG-99mTc-nanocolloid) and to describe the vascular anatomical variations in gynaecological surgery at the level of the paraorthic area in locally advanced CC (LACC).

Methods

This prospective, observational, descriptive, single-centre study was conducted at Son Espases University Hospital between January 2019 and October 2023. Patients with clinical early-stage CC who

underwent SLN mapping during surgical staging were included. The external iliac and obturator nodes were defined as common SLN locations. The para-aortic, common iliac, presacral, internal iliac, and parametrial nodes were defined as uncommon locations. All women underwent robotic (da Vinci® Surgical System) surgery for SLN procedures. SLN detection was performed with a hybrid tracer composed of 0.75 mL of ICG added to a vial of 99mTc-nanocolloid, and SLN was defined as green and increased activity detected via the gamma probe.

Results

Thirty-nine patients with CC were included in the current study. The overall SLN detection rate was 97.4%, with 89.5% of cases occurring bilaterally. Positive SLNs were found in 21.1% of patients. Of the total SLNs (146), 10.3% corresponded to an atypical zone (the most frequent, common iliac vessels). In summary, atypical lymphatic drainage was present in 8 out of 38 (21.1%) patients. A greater proportion of SLNs in the atypical area than in the usual area had metastasis (37.5% vs 16.7%; p=0.327).

Parametrial nodes were detected in 15.7% of patients (four as sentinel lymph nodes and two in the histological study of the radical hysterectomy), two of whom (5.2%) had metastases. Incidental vascular anatomical variants were found in four patients during preoperative lymphadenectomy.

Conclusions

SLN biopsy can detect unusual drainage in a significant proportion of patients with CC. Atypical SLNs have a greater percentage of metastatic involvement, which consequently improves staging and tailoring therapy.

To perform lymphadenectomy safely and accurately, surgeons must be familiar with the surgical anatomy and its variants. Patient morbidity and mortality can be decreased using an appropriate technique and identifying anatomical landmarks.

ID 81

ROBOTIC-ASSISTED LAPAROSCOPIC REPAIR OF ISTHMOCELES: THE FEASIBILITY OF OPERATIVE TREATMENT AND IN WHICH POPULATION

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Background

Isthmoceles, known as uterine niches, often a consequence of cesarean sections (CS), present various underlooked clinical challenges including symptoms, such as dysfunctional uterine bleeding, dysmenorrhea and secondary infertility and subsequent obstetrical complications.

This study aims to evaluate the feasibility of robotic-assisted laparoscopic scar repair for uterine niches and its impact on gynaecological symptoms and future pregnancies.

Methods

A retrospective analysis was conducted on patients that underwent robotic-assisted laparoscopic scar repair for uterine niches at our tertiary centre. Data including patient demographics, pre- and postoperative sonographic findings, surgical techniques, and outcomes of subsequent pregnancies were collected and analysed. Statistical analysis included patient demographics, pre- and postoperative findings (rest myometrial thickness, adjacent myometrial thickness and largest diameter of niches) as well as gynaecological and obstetrical outcomes.

Results

Fifty-one cases were included in the analysis, with a mean age of 33.6 years and mean BMI of 25.7 kg/m². Preoperatively, most patients (79.6%) presented with symptoms such as vaginal spotting (43.1%), secondary infertility (39.2%), and lower abdominal pain (29.4%). The surgical procedure had no intraoperative or postoperative complications, with an average operation time of 124.7 minutes and blood loss of 454.2 ml.

Postoperative ultrasound showed a statistically significant increase in residual myometrial thickness (RMT) (1.75±1.4 (STD) mm vs 4.9±3.4 (STD) mm, t=-5.33; [P <0.001]) and a decrease in niche diameter (11.3±5.0 (STD) mm vs. 9.1±4.7 (STD) mm (P =0.141]). Follow-up interviews revealed symptom improvement in 71.4% of patients and successful conception in 65.4% of those desiring pregnancy postoperatively.

Conclusions

Robotic-assisted laparoscopic scar repair appears to be a safe and effective treatment modality for uterine niches, leading to symptomatic improvement and favourable outcomes in subsequent pregnancies. However, individualised patient selection is crucial, considering factors such as symptom severity and pregnancy plans. Further research is needed to refine treatment guidelines and optimise patient outcomes

ID 82

ROBOT ASSISTED LAPAROSCOPIC OVARIAN ENDOMETRIOTIC CYSTECTOMY- STEP BY STEP APPROACH

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Endometriosis is a chronic inflammatory disease affecting the quality of life of many women across the world. Ovarian endometriomas are the most commonly diagnosed form of endometriosis, probably because of the good sensitivity of Ultrasound scan. Ovarian endometriosis can be a marker of deep endometriosis. Management

of endometriomas in young women have a lot of concerns including fertility preservation and the suspicion of malignancy. Of the management options available to manage endometriomas, cystectomy seems to the better option in most of the cases. Laser ablation and electrocautery can be options in certain cases.

Performing a cystectomy in endometrioma with minimally invasive approach needs good knowledge about pelvic anatomy, enough experience to handle tissues with care and the skills to perform the surgery minimising the damage to normal ovarian tissues. The surgeon needs to be aware of the blood supply of the ovary and the high risk of bleeding near the hilum of ovary. The aim of this video is to demonstrate a stepwise approach of Robot assisted laparoscopic cystectomy for endometrioma, emphasising meticulous dissection.

The steps include:

1. Collecting peritoneal washing and biopsies if required.
2. Releasing ovary with endometrioma from the surrounding adhesions (usually the cyst drains at some point)
3. Finding the cleavage plane by either extending the cyst opening if already drained or to create incision at the thinnest part of the cyst, away from the hilum.
4. Using gentle traction and counter traction to separate cyst capsule from the ovarian parenchyma.
5 Ensuring final haemostasis avoiding damage to major blood supply at the hilum.
6. Placing the Cyst wall in Endo-bag and retrieving through one of the port sites.

The procedure was done in a 31-year-old nulliparous woman with an 8 x 6 x 6 cm endometrioma in left ovary in the MRI scan. The CA 125 levels were mildly elevated. Ovarian cystectomy was done as described above. The histopathological examination confirmed ovarian endometrioma.

ID 83

SURVIVAL IMPACT OF THE ROBOTIC-ASSISTED LAPAROSCOPY (RAL) VS CONVENTIONAL LAPAROSCOPY (LPS) IN THE TREATMENT OF THE ENDOMETRIAL CANCER

V. Delso, L. Sánchez-Barderas

Background

This study aimed to analyze the impact of minimally invasive surgical (MIS) approaches on survival rates in women diagnosed with endometrial cancer (EC).

Methods

A total of 723 women diagnosed with apparent early-stage EC were operated on by MIS, 468 (64.7%) by conventional laparoscopy (LPS) and 255 (35.3%) by robotic-assisted laparoscopy (RAL). A Propensity Score model was performed using sociodemographic features, tumor characteristics, and prognostic factors to obtain homogeneous and comparable groups.

Results

In the unmatched study, women operated on by RAL had higher BMIs (p = 0.029), more comorbidities (p = 0.005), and worse ASA scores (p = 0.005). When matched by age, body mass index, comorbidities, ASA score, histological type, grade, myometrial invasion, and FIGO stage, 484 patients (242 similar pairs) were selected. The 5-year Disease-free (DFS) was 84.7% in the LPS group and 84.6% in the RAL group (HR 0.977, 95%CI 0.632–1.57; p = 0.989). The 5-year overall (OS) was 80.6% in the LPS group and 81.3% in the RAL surgery group (HR 0.955 95%CI 0.63–1.448; p = 0.827). The 5-year specific survival (SS) percentage related to EC was 92.9% in the LPS group and 89.2% in the RAL surgery group (HR 1.452, 95%CI 0.787–2.678; p = 0.232).

Conclusions

When matched by homogeneous groups, the surgical approach for women with EC does not impact on DFS, SS, or OS rates.

ID 84

ROBOTIC REPAIR OF UTERINE DEHISCENCE IN SECOND TRIMESTER OF PREGNANCY

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A patient with a history of caesaeran section in her previous pregnancy presented at 13 weeks of gestation in our obstetric unit for fetal ultrasound screening. In the examination, fetus and placenta appeared completely normal. However, the anterior uterine wall appeared interrupted in terms of a scar dehiscence after caesaeran section. No residual myometrium was visible over a longitudinal distance of 14mm.

We discussed this finding extensively with the patient. As the risk for complications such as further dehiscence with prolapse of the amniotic sac or even rupture appeared substantial, a robotic repair with adaptation of myometrium was discussed. The surgery was carried out at 13+6 weeks of gestation. The myometrium was adapted under ultrasound guidance with 5 interrupted Ti-Cron 0 sutures.

There were no intraoperative complications. Follow-up revealed a good myometrial adaptation with 5mm of residual myometrium. The management of uterine scar dehiscence in pregnancy is delicate and highly individual as data and guidelines are lacking.

ID 85

IMPLEMENTATION OF ROBOT-ASSISTED SURGERY USING TRANSVAGINAL TRANSLUMINAL

TRANSLUMINAL ENDOSCOPIC SURGERY WITH NATURAL ORIFICE (VNOTES). TOTAL HYSTERECTOMY AND BILATERAL ADNEXECTOMY

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Background/Aim
Total hysterectomy with double adnexectomy by Da Vinci with vaginal access via vNOTES.

Methods
Use of the vNOTES Gel Port and the Da Vinci Xi.

Results
3 total hysterectomies with double adnexectomy were performed normally.

Conclusions
It is a valid technique for non-malignant pathology. Saves abdominal incisions. Excellent postoperative recovery. Benefit of working instruments in the vaginal canal thanks to the articulated arms of the Da Vinci.

ID 86

MALFUNCTION OF ROBOTIC SYSTEMS DURING GYNAECOLOGIC SURGERIES – EXPERIENCE FROM A SINGLE INSTITUTION

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Introduction
Robotic surgery has now become a commonly used platform for gynaecological surgeries. During surgery, malfunctions can occur to the robotic system or instruments which could impact the surgery and patient safety. This is a retrospective analysis looking into the number of system errors and instrument malfunctions happening during robotic gynaecologic surgery.

Methods
This was a single institution retrospective analysis of patients undergoing gynaecologic robotic surgery from Jan 2015 till June 2022. Details of instrument malfunctions and surgical procedures were collected from the prospectively maintained database for robotic surgery.

Results
921 patients underwent surgery during this period. Instrument malfunction (instrument damage, cable detachment, cautery cover damage for monopolar scissors) happened in 13 patients. Patient cart arm malfunction occurred 4 times, vision cart malfunction with loss of camera feed to one eye happened twice. In one instance there was complete shut down due to power failure in addition with failure of power back up.

Out of these 20 instances(2.17% of procedures) where malfunctions happened, 19 were correctable and procedure completed robotically, but for one patient surgery had to be converted to open to complete the procedure.

Conclusions
Robotic malfunctions can occur during surgery. Malfunctions due to robotic system or instrument problems occurred in 2.17% of patients although critical robotic equipment malfunction affecting patient outcome happened only in0.1%. Knowledge and awareness of what can go wrong and how to trouble shoot is important for a surgeon.

ID 87

SURVIVAL IMPACT OF THE ROBOTIC-ASSISTED LAPAROSCOPY (RAL) VS CONVENTIONAL LAPAROSCOPY (LPS) IN THE TREATMENT OF THE ENDOMETRIAL CANCER

V. Delso, L. Sánchez-Barderas, P. J. Coronado

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Methods
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Results
In the unmatched study, women operated on by RAL had higher BMIs ($p = 0.029$), more comorbidities ($p = 0.005$), and worse ASA scores ($p = 0.005$). When matched by age, body mass index, comorbidities, ASA score, histological type, grade, myometrial invasion, and FIGO stage, 484 patients (242 similar pairs) were selected. The 5-year Disease-free (DFS) was 84.7% in the LPS group and 84.6% in the RAL group (HR 0.977, 95%CI 0.632–1.57; $p = 0.989$). The 5-year overall (OS) was 80.6% in the LPS group and 81.3% in the RAL surgery group (HR 0.955 95%CI 0.63–1.448; $p = 0.827$). The 5-year specific survival (SS) percentage related to EC was 92.9% in the LPS group and 89.2% in the RAL surgery group (HR 1.452, 95%CI 0.787–2.678; $p = 0.232$).

Conclusions
When matched by homogeneous groups, the surgical approach for women with EC does not impact on DFS, SS, or OS rates.

ID 88

INNOVATION IN VNOTES: TRANSVAGINAL HYSTERECTOMY AND BILATERAL SALPINGECTOMY USING A FLEXIBLE ROBOTIC SYSTEM

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Background

In this educational video, the authors present the case of a 53 year old female patient presenting with recurrent post-menopausal bleeding and anemia. The patient did not report any family history of gynecologic cancer, but only obesity and hypertension as comorbidities.

The aim is to demonstrate the use of a novel flexible robotic surgical system to perform the second most common procedure among women in the United States: the hysterectomy. The robotic system used in this case is the Anovo™ Surgical System, designed for Robotic Vaginal Natural Orifice Transluminal Endoscopic Surgery (RvNOTES), which represents an innovation in the panorama of Vaginal Natural Orifice Transluminal Endoscopic Surgery (vNOTES).

Methods

The preoperative work-up consisted of a gynecologic examination, pelvic ultrasound, and cervical cytology. Transvaginal ultrasound highlighted an abnormal thickness of the endometrium measuring 12 mm including a soft tissue lesion measuring 12 mm. The patient underwent a total hysterectomy with a bilateral salpingectomy using the Anovo™ Surgical System (Momentis Surgical) at the HCA Florida Kendall Hospital, Miami, Florida, United States. The surgical procedure was conducted with the patient in a dorsal lithotomy position with both legs in Allen® stirrups and a 30-degree Trendelenburg tilt. The surgery was performed using a standardised technique.

Results

Total operative time was 57 minutes from knife to skin. No intraoperative complications were noted. Estimated blood loss was less than 50 mL. The patient was discharged on the same day of surgery with no postoperative complications. Final pathological findings showed the presence of adenomyosis, fibroids, and negative evidence of hyperplasia or malignancy.

Conclusions

With this technique, thanks to the advantages of the vNOTES, the surgeon can perform a less invasive surgery for the patient if compared to the conventional laparoscopic or robotic approach, by reducing the number of the abdominal incision to one which is only for the scope. The benefits of the transvaginal approach are enhanced via the use of the robotic system that allows the surgeon to perform the procedure without any visual restrictions thanks to the superimposable laparoscopic view.

This approach helps to overcome the limitations of the conventional vaginal NOTES thanks to the triangulation of the instruments, which also prevents the fulcrum effect of laparoscopy: all of the articulations of the robotic arms occur inside the abdomen. In conclusion, robotic surgery in this scenario would contribute to help inexperienced surgeons in vaginal surgery, as if the procedure was performed transabdominally.

ID 89

ROBOTIC BURCH COLPOSÜSPANSION FOR STRESS URINARY INCONTINANCE

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Aim

To present step by step Robotic Burch Colposüspansion for Stress Urinary incontinence.

Methods

A video presentation of Burch Colposüspansion performed with Da Vinci Xi.

Results

35 years old woman G2, P2, Vaginal delivery x2, complaining urinary incontinence while coughing, sneezing.
Sistemic illness: HT
Operation history: no
Examination: Cough stress test was positive. POPQ stage-2 uterıne prolapse.
TVUSG: uterus was 31x34x22 mm
Endometrıum: 6 mm, ovaries were normal.
Preoperative Pap smear: malignancy negative.
HPV: Robotic lateral uterıne suspension and Burch Colposüspansion was performed under general anesthesia with dorsolithotomy position. Da Vİnci Xi robot was docked on abdomen; camera was inserted on supraumblıcal port, right port was for monopolar scissor, left arm was for bipolar grassper and second left port was for assistance. **Operation duration:** 162 minutes
Blood loss: 150 cc
Intraoperative complication: No
Hospital stay: 2 days
Patient was continent and no prolapse recurrence during 2 years follow up period.

Conclusions

Robotic technology maintain surgeon easley dissection and saturation in deep pelvic area. In addition it offers patients quick recovery.

ID 90

ROBOTIC VNOTES HYSTERECTOMY AND BILATERAL SALPHINGO-OOPHORECTOMY

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Aim

To present step by step Robotic vNOTES Hysterectomy and bilateral salphingo oophorectomy.

Methods

52 years old age, G1P1 woman operated for chronic pelvic pain, adenomyosis and ovarian fibroma.
Systemic illness: Hypertension
Operation history: caesaeran section x1
TVUSG: Uterus Adenomyomatic enlarged 41x66x74 mm
Endometrial line: 6 mm, 11x21 mm mass fibroma? on the left ovary.
Preoperative Endometrial bıyopsy: Endometrial polyp
VS: malıgnancy negative
Plan: Robotic vNOTES hysterectomy and bilateral salphingo oophorectomy

Results

Under general anestehesia and dorsolithotomy position, colpotomy anterıor and posterıor was performed, Alexis wound retractor was inserted around the cervix. A vaginal port was inserted on the alexis and Da Vinci Xi robot was docked between patients legs. vNOTES Hysterectomy and bilateral salphıngo oophorectomy was performed with Da Vinci Xi robot.

Operation duration: 145 min
Blood loss: 150 cc
Intraoperative complication: no, patient was discharged 24 hours later.
Hystologic diagnosis was Adenomyozis and left ovarian fibroma.

Conclusions

vNOTES technique can be applicable effectively with Da Vinci Xi robotic system. Patients can be discharged in a shorter time with no visible scar.

ID 91

A 5-STEP STANDARD RETRIEVAL TECHNIQUE FOR LARGE SPECIMENS IN ROBOTIC SURGERY

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Background

Robotic surgery has made it possible to perform complex operations with much ease and efficiency. Robotic hysterectomy for a large size uterus or myomectomy for much larger fibroids or multiple fibroids is becoming common place.

Advances in available robotic gynaecological surgery instruments, their wrist articulation and subsequent dexterity, with 30-degree 3D views has enabled surgeons to perform more complex surgeries which have historically been performed as open procedures.

Specimen retrieval, however, remains a challenging area. Power morcellation was commonplace to remove larger masses however after contamination concerns, is being promoted as in-bag morcellation. We have found it challenging or at best time-consuming using in-bag power morcellation techniques.

We present a standard technique which marries robotic dexterity and efficiency. The technique allows for the most efficient way to retrieve smaller or larger tissues using a standardised stepwise approach. The Alexis retractor system along with 8mm robotic surgery umbilical port site placement allows the introduction of the retrieval bag and placing large specimens in the bag with robotic arms before undocking followed by knife morcellation in bag through a 2.5 cm incision.

Conclusions

A standardised 5-step tissue retrieval technique in collaboration with the robotic surgery system is the holy grail for safe and efficient retrieval of large specimens.

ID 92

RECTAL SHAVE FOR BOWEL ENDOMETRIOSIS: 3 WAYS TO SHAVE AND FUNDAMENTAL PRINCIPLES

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Aim

We present a systematic approach for the excision of a rectovaginal nodule. Dissecting a complex procedure into five easy systematic steps to restore pelvic anatomy and excise disease in line with anatomical restoration.

Methods

Excision of deep infiltrating endometriosis involving the bowel is a challenging procedure for all gynaecology surgeons who manage complex endometriosis. There are many techniques described in the literature including bowel shave, disc excision and bowel resection followed by anastomosis. Bowel shave remains the most common technique for its favourable results such as reduced morbidity with better symptoms control. Many case series have suggested that given the benign nature of the disease, a rectal shave should remain the primary technique.

Robotic surgery has expanded our ability to work in the same surgical spaces but with extreme precision. We describe this complex operation in five steps. Excision of pelvic sidewall disease, lateralising the ureters and ovarian fixation leading to isolation of the rectal nodule. Last, excision of the nodule from the bowel (shaving).

We demonstrate three techniques which can be applied to performing a rectal shave for bowel endometriosis. First is the use of a cold knife, second, the use of point diathermy to lift the nodule off the bowel and third, circumferential incision of the muscularis.

Conclusions

Standardising a shaving technique will assist surgeons to adopt the same approach and reproduce this safely along with teaching it to trainee surgeons. Robotic surgery enhances surgical ability for a structured and systematic approach for excision of rectovaginal nodules.

ID 93

CONVENTIONAL LAPAROSCOPY VS ROBOTIC-ASSISTED TREATMENT FOR SEVERE ENDOMETRIOSIS – QUALITY OF LIFE OUTCOMES

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Background/Aim

Currently, data for outcomes including QoL for treating severe endometriosis with robotic surgery are lacking in the literature. Our aim was to quantify and compare parameters, including quality of life and length of hospital stay, between 2 treatment methods: conventional laparoscopy versus robot-assisted treatment of severe endometriosis requiring pararectal space dissection.

Methods

Retrospective cohort of 297 women undergoing complex conventional laparoscopy or robot-assisted surgery for severe endometriosis at a BSGE accredited endometriosis centre in Colchester, UK. Parameters including quality of life (QoL), and length of hospital stay (LoS) were analysed and compared between the two types of surgery, using GraphPad Prism. Data was collected at time of surgery and at 6-months post-operative follow-up.

Results

A total of 195 conventional laparoscopy (CL) and 102 robot-assisted (RA) surgeries were performed by 3 surgeons between 2015 and 2023.

On average, an RA case required 32.71 hours of in-hospital stay, while a CL case required 63.03 hours. Thus, there was a statistically significant decrease in LoS of average 30 hours for RA cases vs CL cases, at $p<0.0001$.

Additionally, 87% CL and 61% RA cases were followed up at 6 months post-operatively. There was a statistically significant difference, at $p<0.0001$ level, of improvement in QoL score at 6 months in RA cases (75%) compared to CL cases (45%).

Conclusions

RA laparoscopic excision of severe endometriosis (as defined by BSGE/RCOG definition of that requiring dissection of the pararectal space) shows statistically significant shorter in-patient hospital stay and improved quality of life score 6 months post-surgery. This is in line with the quality-of-care standards set by the NHS England and BSGE guidelines. Our results support the beneficial use of robotic surgery for treatment of severe endometriosis in order to improve patient outcomes.

ID 94

MODIFIED TECHNIQUE FOR INSTRUMENT INSERTION FOR THE DA VINCI XI ROBOTIC SYSTEM IN DIFFERENT GYNECOLOGICAL PROCEDURES

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Background

During the last decades, there has been a worldwide increase in robotic gynaecological minimally invasive surgery (MIS) performed using the da Vinci Surgical System, especially with the last version, the Xi, where three or four robotic arms, including an endoscope to see inside the patient, are inserted into a patient's body through small entry ports to remotely perform the surgical operation. Thus, there are always evolving techniques for different kinds of procedures and also for the implementation and the maximisation of the use of the robotic systems.

Methods

The continuous training provided with the Da Vinci Surgical System assures that every single robotic surgeon can standardise and maximise its own expertise in the use of the Da Vinci Xi. Nevertheless, in the course of our 1 year' experience with the Da Vinci Xi at the Azienda Ospedaliera Universitaria San Giovanni di Dio e Ruggi d'Aragona, Salerno, Italy, after 32 different procedures, varying from benign to malignant surgeries, we developed a modified technique for instrument insertion, which is faster and less time consuming.

Indeed, for usual instrument insertion it is recommended to place the camera in the central trocar and then insert robotic instruments in the lateral ports. Nevertheless, this can be hard sometimes because of the configuration of patients' abdomens, port placement and type

of surgical procedure. Since for the majority of our procedures we use a modified port positioning, the first assistant is usually positioned at the right side of the patient, and the assistant trocar in the middle of a line between the ASIS and the umbilicus. Thus, to insert the robotic instruments we place the camera through the right lateral assistant trocar and then we proceed with the insertion of the robotic instruments.

Results

With our technique we could reduce the total docking time, minimising collisions between robotic arms during the insertion and avoid possible changing in the positioning of the camera through different ports during the insertion.

Conclusions

This technique of instrument insertion is easy to be performed, even for fellows. It does not require a high knowledge of port geometry for instrument insertion and can be applied to almost the totality of the gynaecological procedures.

ID 95

MEASURING THE QUALITY OF SURGICAL CARE AND SETTING BENCHMARKS FOR TRAINING USING INTUITIVE DATA RECORDER TECHNOLOGY (MASTERY) IN GYNAECOLOGY

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Aim

Robotic assisted surgery (RAS) aims to transform operational delivery of surgical care, promoting procedural harmonisation and productivity to benefit patients and their healthcare systems. MASTERY is a systemwide initiative led by the Royal College of Surgeons (Eng.)

Robotic and Digital Surgery Group (RADAR), to develop clinically relevant objective performance indicators (OPI) for scalable evaluation of technical performance in robotic surgery.

Methods

MASTERY is a prospective, multicentre study collecting state of the art robotic systems data from five index cancer operations (prostate, rectal, uterine, lung, pancreatic); comprehensively annotated with patient and surgeon information, patient outcomes, including patient reported outcomes.

Technical performance was standardised prospectively by expert consensus. Eligible patients were ≥16 years, undergoing an index procedure by RAS. Surgeons provided personal (age, sex, handedness), professional (trainee grade, years as a consultant), and robotic experience (total cases, annual case volume).

Results

Between 09/03/2021 and 30/06/2023 15 NHS sites participated, and 130 surgeons were registered; comprising 48 trainees and 82 consultants. A total of 667 patients were recruited, yielding 429 (64%) evaluable data sets (urology n= 154; thoracic n=116, gynaecology n=73, colorectal n=68, hepatobiliary n=18). We will present study methodology, cohort characteristics, plan for analysis using hybrid artificial intelligence techniques and early results focussing on the outcomes in hysterectomy.

OPIs included economy of motion, time to finish a task, number of clutching, third arm swapping and total distance hand movement. Overall, 25 gynaecologists participated (44% consultants, 56% trainees) in 6 centres.

Conclusions

Technical performance of index robotic cancer operations was standardised across multiple surgical disciplines, encompassing 130 surgeons delivering care at 15 NHS sites. Acquisition and retrieval of robotic systems data yielded evaluable task based OPI in 64% of cases. We will discuss further analysis to identify OPI in hysterectomy associated with surgeon skill and evaluate how OPI interact with patient characteristics and disease severity to predict post-operative patient outcomes.

ID 96

A NOVEL APPROACH TO ROBOTIC COLPOSUSPENSION

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Background/Aim

The video demonstrates a novel minimally invasive approach to robotic colposuspension. Laparoscopic colposuspension and more recently robotic colposuspension has been performed by a technique similar to the traditional open Burch colposuspension.

This involved opening the peritoneum medially between the two lateral obliterated umbilical ligaments, dissecting down the bladder, dissection in the retropubic space to expose the paracolpos and iliopectineal ligaments and insertion of sutures on either side of the bladder neck.

Methods

The novel robotic technique shown in the video involves a lateral approach to the iliopectineal ligaments and dissection of the paracolpos without the need to dissect down the bladder. The precision surgery allows suturing within a confined 1-2 cm space on either side, making it possible to insert the colposuspension sutures without extensive dissection.

Results

There is a lower risk of bladder injury with this approach. This technique allows for faster recovery, reduced morbidity, quicker

return to activities and day-case surgery. This technique also requires reduced operating times compared to standard laparoscopic or robotic colposuspension; and thus leads to improved productivity and theatre utilisation.

Conclusions
The novel approach to robotic colposuspension thus benefits patients, surgeons and an overstretched healthcare system.

ID 97

ROBOTIC INFRARENAL PARA-AORTIC NODAL DISSECTION FOR ENDOMETRIAL CANCER RECURRENCE

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10-23% of early stage endometrial cancers recur, with isolated lymphatic recurrence being rare at 1.6%(1).

We present a case of isolated nodal recurrence one year following treatment for stage 1b dedifferentiated endometrial high-grade carcinoma. Surveillance computer tomography revealed an enlarged left para-aortic node measuring 22x32mm, situated posterior to the left renal vein. This patient had previously donated her right kidney, and the recurrence was in close proximity to her remaining kidney.

The surgery was therefore performed in collaboration with uro-oncology. The patient was positioned in the right lateral and five robotic ports placed around the left mid-clavicular line. The splenic flexure of the descending colon was mobilised. Left kidney was mobilised from the psoas to enable upward traction and visualisation of renal and aorta. The ovarian vein was ligated at insertion and ovarian artery ligated at origin. In order to enable safe excision, the diseased node was mobilised from the renal vessels and aorta. The patient maintained normal renal function and was discharged after 24 hours.

We have demonstrated the benefits of collaborative, multi-disciplinary working which supports gynae-oncology surgeons to familiarise alternative approaches to the retroperitoneal space. The robotic platform's 3D visuals and improved dexterity enables greater precision and faster post-operative recovery following complex surgery.

ID 99

ROBOT-ASSISTED LAPAROSCOPIC REPAIR OF A SYMPTOMATIC POST-CESAREAN SECTION ISTHMOCELE WITH HYSTEROSCOPIC GUIDANCE USING FIREFLY® TECHNOLOGY: A VIDEO CASE REPORT

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Aim
To describe our technique for robot-assisted laparoscopic management of post–caesarean section isthmocele with hysteroscopic guidance using Firefly® technology.

Design
Surgical video article2

Setting
A 42-year-old patient with a history of three previous caesarean deliveries complained of chronic pelvic pain and dysmenorrhea. Transvaginal ultrasound examination revealed a 10x12 mm niche.

Main Outcomes Measure
Repair of isthmocele and relief of symptoms.

Intervention
Excision of fibrotic isthmocele tissue and myometrial repair were performed by robot-assisted laparoscopy with hysteroscopic guidance using Firefly® technology. Hysteroscopy with ICG injection was performed to visualise the borders of the uterine defect and determine adequate margins for full removal. A 100 mL solution of ICG at a concentration of 2.5mg/mL was injected. The first step of the procedure involved cautious mobilisation of the bladder from its adhesions with the site of the previous caesarean scar.

The robot was then switched to Firefly mode to highlight the isthmocele region in bright green. We proceeded to mark the boundaries of the isthmocele with cautery and then excised the caesarean scar.

Myometrial repair was performed using a double layer closure with 3/0 absorbable synthetic monofilament.

Results
The operating time was 110 minutes. The patient was discharged the following day with complete resolution of pelvic pain and a normal pelvic ultrasound scan 6 weeks later. Six months after repair, the patient underwent a repeat ultrasound that showed an intact repair with normal myometrial thickness. On follow-up, menstruation returned to normal.

Conclusions
Isthmocele is an iatrogenic defect in the uterine myometrium that can reduce the quality of life of women. Robotic-assisted repair with hysteroscopic guidance is a safe and effective way to address an isthmocele in symptomatic patient.

ID 100

ROBOTIC-ASSISTED COLPECTOMY

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Aim

To describe de surgical steps of the Robotic Total Colpectomy and their associated risks and benefits.

Methods and Results

Robotic Total Colpectomy was performed and its steps were recorded and discussed along with their risks and benefits.First, possible adhesions should be released. Then, main pelvic structures like de ureters should be identified to avoid potential lesions.

After seeing the iliac vessels, we would identify the vaginal vault and we will dissect the vesicovaginal space using a monopolar forceps and bipolar scissors. This space is between the anterior of the vagina, back to the bladder, down to the trigone and laterally limited by the bladder pillars.

At this point, care must be taken not to dissect too laterally to avoid injury to the ureter and vessels found within the bladder pillars. A manipulator will be used in this case to separate the vagina.

The next step is the dissection of the rectovaginal space, which enclosed anteriorly by the vaginal wall, posteriorly by the rectum and laterally by the uterosacral and Mackenrodt ligaments. Then, we release the uterosacral ligaments and, finally we will release the paracolpos that holds the lower portion of the cervix and the upper part of the vagina to the lateral wall. With the aid of monopolar scissors, the surgical piece should be cut and coagulated.

Colpectomy is the treatment of choice in post hysterectomy premalignant and malignant vaginal lesions, with a healing rat up to 80%. Its recurrence rate rises around 10% in free margins and 35% in case of involved margins. It should always be considered the percentage of ureteral and vesical injuries (15-40%).
It gives a better surgical field compared to laparoscopic surgery. Also, it reduces the bleeding and surgeons' tremor during the procedure.

Conclusions

The robotic-assisted total colpectomy can minimise the complications of this procedure, making the procedure safer and faster compared to other procedures.

ID 101

ROBESITY STUDY: COMPARATIVE ANALYSIS OF ROBOTIC SURGERY AND OTHER APPROACHES IN ENDOMETRIAL CANCER PATIENTS WITH OBESITY - A SYSTEMATIC REVIEW AND META-ANALYSIS

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Aim

The increasing prevalence of obesity in endometrial cancer (EC) patients presents a significant challenge in surgical management. Selecting the optimal surgical approach for these patients remains a complex task. This systematic review and meta-analysis aim to compare the outcomes of robotic surgery with laparotomy, laparoscopic, and vaginal approaches in EC patients with obesity.

Methods

A systematic search was conducted from 2000 to December 2023 to identify studies comparing robotic surgery with other surgical approaches (laparotomy, laparoscopy, and vaginal) in EC patients with obesity. Data on patient demographics, operative time, blood loss, hospital stay, lymph nodes retrieved, and various complications including intraoperative and postoperative complications were analysed.

Results

Pending data from the forthcoming meta-analysis, the review was initiated with a screening of 236 potentially eligible studies, meticulously evaluating each for inclusion criteria. Subsequently, 23 articles meeting predefined standards were incorporated. Preliminary findings indicate that robotic-assisted surgery offers comparable operative times to non-robotic approaches in most cases, shorter hospital stays, and reduced blood loss.

Rates of conversion to open surgery in high-BMI patients appear to be lower compared to laparoscopy. Robotic surgery seems to have a lower incidence of postoperative complications compared to open surgery.

Conclusions

Robotic surgery presents favourable outcomes for obese EC patients, with reduced blood loss and shorter hospital stays compared to alternative approaches. Robotic surgery exhibited a lower conversion rate in high-BMI patients. Robotic surgery exhibited a reduced incidence of postoperative complications compared to open surgery. These findings underscore its potential in optimising patient care in this population.

ID 102

OPTIMISING SURGICAL SAFETY IN ROBOTIC-ASSISTED GYNAECOLOGICAL ONCOLOGY: INSIGHTS FROM COMPREHENSIVE COMPLICATIONS ANALYSIS AND AUDIT IMPLEMENTATION

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Background
The management of surgical complications in gynaecological oncology is pivotal due to its frequency and potential impact on patient outcomes. With the rising utilisation of robotic-assisted techniques in gynaecological surgeries, understanding the specific nuances and challenges associated with robotic approaches becomes imperative.

This study aims to identify independent factors associated with surgical complications specifically in robotic-assisted gynaecological surgeries and to implement an internal audit system tailored to this modality.

Methods
From May '21 to October '23, all surgical complications were recorded in a prospective database focusing exclusively on robotic-assisted gynaecological surgeries. Complications were categorised according to the Clavien-Dindo classification system. A monthly morbidity/mortality review was conducted to internally audit all complications. Baseline characteristics, surgical records, and postoperative data were comprehensively analysed. Since March 2023, a monthly award, termed Most Valuable Gynaecologist (MVG), was instituted to recognize the top contributor to complication reporting. External audits were performed during this period to ensure data integrity.

Results
In the study period, 55 patients undergoing robotic-assisted gynaecological surgeries experienced surgical events, which were meticulously recorded and analysed. Among all patients analysed, only one experienced an intraoperative complication, constituting 1.8% of the total surgical events recorded. The most frequently encountered complications included vault hematoma (27.3%), urinary tract infection (18.2%), and abdominal dehiscence (3.6%).

The median time to symptom onset for Clavien-Dindo I-II complications was 2 days, whereas for Clavien-Dindo III-V complications, it was 10 days. Multivariate analysis revealed that significant independent risk factors for Clavien-Dindo III-IV complications included previous history of radiotherapy (p=0.046) and a high Aletti score (p=0.025).

Post-implementation of the MVG initiative, there was a notable increase in reported complications, highlighting the efficacy of motivational reward systems in enhancing complication reporting rates. An external audit identified a decline in the risk-adjusted complications index since 2021.

Conclusions
Previous history of radiotherapy and a high Aletti score emerged as an independent predictor of Clavien-Dindo III-V complications in robotic-assisted gynaecological surgeries. The introduction of a motivational reward system significantly augmented complication reporting rates. Internal and external audits played a pivotal role in identifying areas for improvement and contributing to the overall reduction of complications in robotic-assisted gynaecological surgeries.

ID 103

NOSE TECHNIQUE IN THE SURGICAL TREATMENT OF COLORECTAL ENDOMETRIOSIS

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Background
The purpose of this study was to determine the most optimal surgical tactics and evaluate the effectiveness of the NOSE technique in the treatment of colorectal endometriosis, both by classical laparoscopic access and using the DaVinci robotic unit.

Methods
A prospective study was conducted, including the experience of colorectal resection using the NOSE technique in 56 patients with infiltrative endometriosis of the intestine for the period from 2021 to 2023.

Results
All patients were operated on using a minimally invasive approach: in 33 cases, the treatment was performed by laparoscopic access, and in 23 cases, by robot-assisted access. In all surgeries using the NOSE technique since 2023 (17 cases), control of bacteriological seeding is performed by sampling cultures and subsequent bacteriological examination. At the stage of isolating the pararectal cuff, (1) a control culture and (2) a culture at the final stage of the operation (after the Michelin test) were taken. Based on our data, it can be concluded that the presence of a bacterial agent is independent of the treatment technique and relatively consistent across both approaches. The antibiotic therapy used is adequate for either method of colorectal resection. The data is presented in the table (1) below.

Bacterial Agent	1 Culture	2 Culture
NOSE n=17	NOSE n=17	
Staphylococcus Epidermidis	2 (11,8%)	1(5,8 %)
Staphylococcus haemolyticus	1 (5,8 %)	0
Staphylococcus warneri	1(5,8 %)	0
Staphylococcus faecalis	1(5,8 %)	0
Enterococcus durans/hirae	0	2 (11,8%)
Pseudomonas aeruginosa	0	1(5,8 %)

Conclusions

The NOSE technology eliminates the extra-abdominal stage of the operation, thereby reducing the duration of surgical treatment from 153.4 (54.61) to 90 (80; 150) minutes in the laparoscopic group and from 172.5 (33.35) to 131 (100;160) minutes in the robotic group, eliminates complications associated with mini-laparotomy incisions, and has a better cosmetic effect. The use of fully intracorporeal anastomosis significantly reduces the cost of laparoscopic surgery without compromising its reliability.

ID 104

TIME MACHINE FOR GYNECOLOGICAL INTENSIVE SURGERY DAYS WITH A SINGLE ROBOTIC CONSOLE: THE VALUE OF THE SURGICAL TEAM AND ROBOTIC TECHNOLOGY IN MAXIMISING EFFICIENCY

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Background / Aim

Robotic technology has revolutionised gynaecological surgery by improving efficiency, control, and precision. This presentation highlights how robotic surgery reduces patient wait times and benefits surgical teams. It investigates if one robotic platform can do up to six challenging gynaecological procedures in a day. Robotic aid improves surgical results and efficiency by shortening operating times and streamlining workflow.

Methods

This study meticulously analysed every step from patient placement in the operating room until removal. We collected all data, used statistical models, and compared values.

Results

More specifically, anaesthesia is induced on average 10.1 minutes after the patient enters the operation room. Intubation to operational field sterilisation takes 7.9 minutes. The average time to infusion for ICG is 5.5 minutes. An average uterine manipulation takes 1.5 minutes, whereas drapering and placing the Foley catheter takes 5.5 minutes.

Starting the process with accessing the peritoneal cavity and placing the camera takes an average of 4.2 minutes. The average Da Vinci docking time is 3.65 minutes (219.9 sec). A variety of surgeries occur daily. The typical hysterectomy takes 43.85 minutes, specimen delivery 7.14 minutes, and vaginal cuff suturing 5.4 minutes. Robot undocking, hemostasis, and peritoneal lavage take 25.5 minutes on average after the surgery. Finally, skin suturing takes 3.6 minutes.

An average of 15.1 minutes passes between extubation and exiting the operation room. The average case turnover was 12.87 minutes. The average surgery time (robotic platform docked) is 68.5 minutes, and each patient spends 90.7 minutes in the theatre. There were no problems or laparotomy conversion. We employed a three-arm approach with camera port, fenestrated bipolar forceps, and monopolar curved scissors. The monopolar curved scissors were replaced by a needle driver to stitch the vaginal cuff. Instead of the fourth arm, we used an atraumatic laparoscopic grasper with assisting port.

Conclusions

Robotics improves patient and team comfort and speeds up surgery. The poster shows how a well-trained operating team reduces delays, making robotic surgery comparable as laparoscopy for daily use. Surgical skills and cooperation are equally vital on difficult days.

Observing a linearity in each surgical "step" shows that the surgical team performed consistently throughout the day, even after fatigue from the first to final procedure. These main points demonstrate the importance of robotic technology in improving surgical results and workflow efficiency in gynaecology. More surgical time studies are needed to safely employ the robot in regular practice and on busy days with several gynaecological operations.

ID 105

NEW ROLE OF INDOCYANINE GREEN IN BENIGN GYNAECOLOGY ROBOTIC SURGERY

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Background/Aim

To show the use of indocyanine green (ICG) in different benign gynaecology surgery and to demonstrate its potential benefits in different conditions.

Methods

Since its approval back in 1956, ICG has been used in different surgical settings. ICG is a tricarboyanine dye that fluoresces in the near-infrared spectrum and allows light excitation of structures up to several millimeters' depth with high contrast. Its ability to bind to plasma proteins has been used to visualise in real time the perfusion of tissues.

There have already been studies demonstrating its use in evaluating the vascularization in intestinal anastomosis after bowel resection in endometriosis patients as well as in evaluating ureteral vascularization after ureterolysis in these patients. However, limited data regarding other benign gynaecological procedures is limited to case reports.

Results

In the following video clips we want to show the use of ICG in the following situations:

- Identification of peritoneal endometriosis and underlying their limits.
- Assess bladder wall integrity after resection of endometriotic nodule at this level.
- Assessing uterine cavity integrity after multiple myomectomy.
- Assessing tubal permeability.

Conclusions

ICG use in benign gynaecological procedures was limited to endometriosis surgery, but in the last years, new data shows promising indications of ICG in this field to offer our patients safer and more precise procedures.

ID 106

GYNAECOLOGICAL ROBOTIC SURGERY IN YOUNG JAPANESE OB&GYN DOCTORS -COMPARISON OF POTENTIAL SIMILARITIES BETWEEN JAPAN AND EUROPE-

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Background

Robotic surgery has gained widespread acceptance as a surgical method in the gynaecological field. It has now been covered by national insurance since 2018 and is increasingly getting popular in Japan. Robotic surgery is gradually supplanting laparoscopic surgery, particularly in the gynaecological oncology field. However, its practice remains largely confined to experienced consultants. We recently surveyed gynaecological robotic surgery in Japan.

In collaboration with the Young European Advocates of Robotic Surgery (YEARS), we compared the Japanese and European practices to identify potential similarities for seeking improvements in robotic surgery education.

Methods

We conducted an online survey for robotic surgery to obstetrics and gynaecologic doctors in Japan from September to November 2023. We compared data which were collected from similar questionnaires to the YEARS survey that was carried out in early 2023.

Results

In the Japanese survey, 295 young obstetrics and gynaecologic doctors (with up to 12 years of experience) participated, while 81 respondents (with ≤ 4 years post-fellowship) took part in the YEARS survey. It revealed that approximately 25% of respondents in Japan had no robotic device in their facilities or had not yet started robotic surgery, similar to that of Europe (22%). Moreover, only 25% of doctors in the latter half of their fellowship (7-12 years) had the opportunity to perform robotic surgery in Japan.

Despite this, around 70% of Japanese respondents expressed a desire for increased involvement in robotic surgery, mirroring the desire seen in the European survey where 82% of doctors aspired to be main surgeons or engage in more operations. On the other hand, nearly all young Japanese doctors perceived hospital policies and medical economics as obstacles to achieving the widespread establishment of robotic surgery.

To address these challenges, 80% of young Japanese doctors believed that an online education system would be beneficial for enhancing robotic skills, although, it is still on the way to reaching a satisfying level both in quantity and quality compared to Europe.

Conclusions

The survey revealed that young Japanese doctors share a positive attitude towards robotic similar to the European survey. However, they face limited opportunities for initiating robotic surgery and training. Further comprehensive surveys are necessary for deeper comparisons between European and Asian contexts. We believe the collaboration and knowledge-sharing in this field have the potential to advance the global adoption of gynaecological robotic surgery.

ID 107

ROBOTIC SURGERY FOR SEVERE ENDOMETRIOSIS – A COMPARATIVE COST BENEFIT ANALYSIS WITH CONVENTIONAL LAPAROSCOPY

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Background

While robot-assisted laparoscopic surgery (RA) for severe endometriosis has been shown to be as least as effective as conventional laparoscopy (CL), it is thought that RA to be more time consuming and costly than CL. Our aim is to compare the theatre time and average income per case between two methods of endometriosis resection for RA and CL respectively.

Patients with stage 3 or 4 endometriosis who received surgical excision of rectovaginal endometriosis requiring dissection of the pararectal space were included in this study.

Methods

We retrospectively analysed the operating time and the payment tariffs incurred in 340 female patients diagnosed with stage 3 or 4 endometriosis who underwent surgical excision of rectovaginal endometriosis via CL and RA at a BSGE accredited endometriosis centre in Colchester, UK. The patients were operated on by 3 different surgeons over 8 years between 2015 to 2023.

Results

225 patients underwent CL between 2015 to 2023 and 115 patients underwent RA between 2021 to 2023.
The average operating time was 3.39 hours for CL and 2.52 hours for RA cases. RA cases were 0.8 hours shorter than laparoscopic cases on average ($p<0.0001$).

The average tariff paid per procedure was £4832.45 for conventional laparoscopy and £6269.11 for robotic cases.
The average income per minute of operating time was £23.76 per minute of operating time for CL and £41.46 per minute of operating time for RA.

Conclusions

The length of theatre time was shorter for robotic cases despite the inter-surgeon differences. RA cases allowed increased theatre efficiency for resection of endometriosis for patients with grade 3/4 endometriosis and allowed for better average income generation per case. While numbers are small in this analysis, we have found that robotic surgery for severe endometriosis can offset initial and ongoing outlay costs by delivering better theatre utilisation, income generation, reducing length of stay and reducing operating times. We suggest further large scale prospective randomised studies are performed to confirm our initial findings.

ID 108

UTERINE TRANSPLANTATION: PELVIC VASCULAR DISSECTION FOR UTERINE GRAFT

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Background/Aim

Uterus transplantation (UTx) to treat absolute uterine factor infertility (AUFI) is an emerging alternative to surrogacy and adoption in order to achieve gestational and genetic motherhood. Performing the uterine explant surgery is one of the most complex gynaecological surgeries due to the complex vascular anatomy of the uterus. In the following video we show the anatomical landmarks for the uterine explant.

Methods

In this video we show the dissection of the right pelvic anatomy in order to perform the hysterectomy for a uterine transplant. The donor is a 39-year-old healthy woman and the recipient was her sister, who was diagnosed from Rokitansky Syndrome at 17 years of age. The donor surgery was performed entirely by robotic surgery (DaVinci Xi, Intuitive Survival Inc.).

Results

The vascular pedicles, both arterial and venous, were of high quality and the transplant could be achieved. The difficulty of this procedure is the extension of the vascular dissection in order to obtain the right size and amounts of pedicles.

Conclusions

The main difficulty in uterine transplantation donor surgery is to obtain the right vascular pedicles. Robotic-assisted surgery provides a better, clear and more precise visualisation of the pelvic anatomy allowing an accurate vascular dissection of the pelvis.

ID 109

CYTOREDUCTION AND PARTIAL CYSTECTOMY IN ADVANCED ENDOMETRIAL CANCER PERFORMEDBY ROBOTIC ASSISTED SURGERY

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Background

Optimal cytoreduction in patients with advanced endometrial cancer (AEC) continues to be a fundamental pillar in their treatment. Our aim is to present a surgically complex case managed through minimally invasive robot-assisted techniques.

Methods

A 79-year-old patient diagnosed with high-grade endometrial cancer (HGEC), non-specific molecular profile. As a relevant medical history, she underwent left nephrectomy in childhood due to pyelonephritis.

MRI shows a voluminous tumour measuring 75 mm in diameter, involving the entire uterine body, infiltrating more than 50%, and affecting the right parametrium with suspected bladder wall involvement. PET/CT reveals intense hypermetabolism in the uterus. The mass contacts loops of small intestine and the bladder at the right ureterovesical junction, making infiltration indeterminate. Intense focal uptake in the lower third of the vagina bilaterally,

particularly on the right side, suggestive of metastasis. A 6.5 mm lymph node with mild hypermetabolism in the right external iliac territory, which does not rule out infiltration.

Before initiating surgery, cystoscopy was employed to perform intravesical instillation of ICG and placement of a double-J catheter in the right ureter. Subsequently, a robotic-assisted approach was utilised to perform hysterectomy, bilateral salpingo-oophorectomy, right parametrectomy, resection of bladder implant, and bilateral pelvic lymphadenectomy. Via vaginal, excision of implants in the lower third of the vagina was performed.

Results

The patient was discharged three days after surgery. Three weeks later, the double-J catheter was removed. The pathology results confirmed HGEC in the uterus up to the serosa, bladder mucosa, vaginal implant, right parametrium, and involvement of 3 out of 12 right pelvic lymph nodes. This resulted in stage IVA (FIGO 2023).

Conclusions

Complete cytoreduction performed by robotic-assisted surgery is feasible and should be considered in selected patients diagnosed with AEC. The advantage over open surgery is that we achieve a shorter hospital stay, better postoperative recovery and allows for an earlier start of adjuvant treatment.

ID 110

EMERGENCY SCENARIOS IN ROBOTICALLY ASSISTED SURGERY: WHAT IS YOUR ROLE?

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Introduction

Robotically assisted surgical approach in gynaecology procedures has increased exponentially providing better patient outcome related to minimal blood loss, early discharge, and minimal pain. Health care providers are too familiar of the approach but when asked of their role in emergency scenario such as urgent conversion to open and de docking of the robotic tool, there is a lack of anticipation and standard operating procedure. Proficient knowledge and skills of healthcare provider requires critical review of roles and responsibilities for a coordinated response to ensure patient safety.

Aim

To evaluate health care providers' awareness of their role and responsibilities to minimise risks and delay when robotically assisted procedures require urgent conversion to laparotomy and de docking related to patients' condition or technology problem such as power failure.

Methods

Review of theatre experience on the management of emergency scenarios assessing the awareness and ability of individual roles and responsibilities comparing to a systematic review of literature of current practice in the clinical setting to decide the gap in practice.

Results

There is a paucity of knowledge and coordinated response of health care providers' on their specific roles and responsibilities in an emergency scenarios in robotically assisted gynaecological procedures in relation to knowledge, efficiency and consistency when conversion to laparotomy is needed and there is a delay in dealing with irrecoverable faults related to lack of knowledge and efficiency.

Conclusions

Established emergency standard operating procedures and monthly simulation training is vital. Additionally, designation of roles and responsibilities before starting a case is essential for a coordinated response as a team for patient safety. Anticipation and preparation are pivotal to minimise risk in a highly technical theatre environment.

ID 111

EVALUATION OF PERI-OPERATIVE OUTCOMES BETWEEN LAPAROSCOPY AND ROBOTIC ASSISTED PROCEDURES IN ENDOMETRIAL CANCER: RETROSPECTIVE COHORT STUDY

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Background/Aim

The aim of this study is to assess the perioperative outcomes of laparoscopic surgery for endometrial cancer in comparison to those achieved through robotic-assisted surgery.

The introduction of robotic surgery occurred in 2020 and was fully established by 2022 within our cancer centre. In contrary to this, laparoscopic surgery has been a long-standing practice at UCLH, where 71% of endometrial cancer surgeries were conducted laparoscopically in 2019.

Methods

Retrospective analysis of patient demogarphics, specimen characteristics and perioperative outcomes following laparoscopic surgery for endometrial cancer undertaken over twelve-month period 04/2019-03/2020 (group 1) and compared to robotic-assisted procedures from 04/2022-03/2023 (group 2).

Uterine measurements were collected from histopathology reports in three dimensions, uterine length (fundus to ectocervix), width (transverse dimension, cornu to cornu) and depth (anteroposterior dimension); from which uterine volume was also calculated.

Results

In total 96 patients (group 1) had laparoscopic surgery for endometrial cancer the year examined and 59 (group 2) underwent robotic assisted procedures in 2022.
Apart from hysterectomy, procedures performed were sentinel-node sampling 62/96(64.5%) VS 50/59(84.7%); omentectomy 17/96(17.7%) vs 13/59(22.0%); para-aortic lymphadenectomy 0% vs 2/59(3.4%) in groups 1 and 2 respectively.

Patient characteristics did not differ between the two groups: mean age 64.7 vs 62.9years; Body Mass Index 31.8 vs 33.2; and American Association of Anaesthesiology score 2.3 vs 2.4, in group 1 and 2 respectively. In group 1, 16/96(16.6%) were morbidly obese (BMI>40) compared to 14/59(23.7%) in group 2. Conversion rate in group 2 was significant lower compared to group 1 (0% vs 7.3%, p=0.04). Comparing uterine size, there is significant statistical difference in the mean uterine volume between groups: 213.4 vs 351cm3 (p<0,01) for group 1 and 2 respectively. Otherwise, estimated blood loss (130.9mls vs 136.4mls, p=0.84), length of stay (2.71 vs 2.42days, p=0.75) and Clavien-Dindo III-IV complications (1/96 vs 1/59, p=1) did not differ between group 1 and 2.

Conclusions

The above findings indicate that although patients undergoing robotic surgery generally had larger uterine volume and a higher proportion of morbid obesity, the robotic approach proved to be feasible and safe without additional complications. Most importantly, it exhibited substantially lower rates of conversion to open surgery.

ID 112

ROBOTICALLY ASSISTED LAPAROSCOPIC HYSTERECTOMY IN A FIBROMATOUS UTERUS

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Aim

To describe our techique for robotically assisted laparoscopic hysterectomy in fibromatous uteruses.

Methods

A 50 year old patient with a fibromatous uterus presented with metrorragic cycles unresponsive to medical therapies. Transvaginal ultrasound examination showed numerous uterine fibroids, the biggest measuring 25 cm.
After counselling, considering her perimenopausal stage, the patient decided to proceed with robotically assisted laparoscopic hysteroadnexectomy.

Main outcomes

Robotically assisted laparoscopic hysterectomy and relief of symptoms.

Intervention

Hysterectomy in increased in size uteruses would need various expediments, in order to avoid complications and have a successful outcome. For example, the laparoscopic incisions need to be done 1-2 cm higher than in the standard procedures. After hysterectomy (with or without adnexectomy) is performed, the surgical specimen should be put in a Endobag, to avoid any contamination of the field. If necessary for the removal of the uterus through the vagina, the morcellation of the piece must be performed inside the Endobag.

Results

The operating time was 120 minutes. the post operative recovery was regular and uneventful. At the six weeks post-operative check-up the patient showed a significant improvement in her quality of life.

Conclusions

Patients with symptomatic fibromatous uteruses should have adequate counselling about the best treatment option (therapy vs surgery). When the chosen treatment is surgical, robotically assisted laparoscopic hysterectomy is a safe and effective procedure.

ID 113

ROBOTIC VERSUS LAPAROSCOPIC APPROACH IN THE TRANSPERITONEAL PARAAORTIC LYMPHADENECTOMY IN LOCALLY ADVANCED CERVICAL CANCER

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Aim

To compare the perioperative outcomes of robotic-assisted (RAL) and laparoscopic (LPL) transperitoneal infrarenal paraaortic lymphadenectomy for locally advanced cervical cancer.

Material and methods

A prospective non-randomized study was carried out in the Hospital Clinico San Carlos. Madrid, a tertiary centre for women's health. A total of 93 patients diagnosed with locally advanced cervical carcinoma (FIGO 2018 >Ib2) operated by the same surgical team and surgical technique were analysed. A comparison analysis of perioperative outcomes and complications was performed.

Results

Out of the 93 patients selected, 53 women (57%) were operated by RAL and 40 (43%) by LPL. There were no differences between robotic-assisted and laparoscopy for age, BMI, comorbidities, ASA

score, parity, or presurgical hemoglobin. No significant differences were found in the skin-to-skin operating time (97.5 min for RAL vs. 102.6 min for LPL), the number of aortic nodes (10.2 vs. 9.2 nodes respectively), blood loss (71.0 vs 78.2 ml respectively), hospitalisation stay (2.1 vs. 2.8 days respectively) or overall complications rate (5.7% vs. 10.0% respectively): intraoperative (3.8% vs. 2.5%) and postoperative (1.9% vs. 7.5% respectively).

Conclusions

Robotic-assisted and laparoscopy transperitoneal paraaortic lymphadenectomy in locally advanced cervical cancer paraaortic provide similar perioperative outcomes.

ID 114

ROBOTIC-ASSISTED SURGERY FOR GYNAECOLOGICAL MALIGNANCY: THE EFFECT OF BODY MASS INDEX ON PERIOPERATIVE OUTCOMES

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Aim

Aim of this study is to compare peri-operative outcomes following robotic-assisted surgery for gynaecological malignancy among non-obese, obese and morbid obese patients within our cancer centre. Since the introduction of robotic surgery in our department in 2020, there has been a gradual increase in the number of referrals for robotic surgery among patients with elevated Body Mass Index (BMI). As a department, we have steadily achieved competency in high BMI cases following the implementation of this specialised service.

Methods

Retrospective review of all robotic-assisted procedures within our department from February 2022-January 2024. Patient demographics, and peri-operative outcomes were compared in three groups: BMI < 30 kg/m2 (group1), BMI: 30 kg/m2 - 39.9 kg/m2 (group2) and, BMI ≥ 40 kg/m2 (group3).

Results

In total, 55/144 (38.1%) were in group-1, 46/144 (31.9%) in group-2 and 43/144 (29.9%) in group-3. ASA (American Society of Anaesthesiology), an indirect measure of co-morbidities score, was significantly different in groups 1,2 and 3 (2.26, 2.41, 2.79; p=<0.01). No differences were found in age or procedures undertaken between the groups.

Procedures included simple hysterectomy 134 (93.7%), sentinel node sampling 78 (54.1%), omentectomy 27 (18.7%), para-aortic lymphadenectomy 6 (4.1%), cervical stump excision 2 (1.4%) and parametrectomy 1 (0.7%).

There were no statistical difference in estimated blood loss (120, 137, 159 ml; p=0.28), conversion to laparotomy (n=1, 0, 1; Fisher exact test p=0.75), or Clavien-Dindo class III-IV complications (n=1, 1, 2; p=0.69) in groups 1, 2 and 3 respectively. Statistically significant difference was found in mean length of stay being 2.5, 1.7 and 3.9 days respectively in groups 1, 2 and 3 (p=0.03).

Conclusions

Our assessment concludes that robotic-assisted surgery for the treatment of gynaecological malignancies can be both safe and effective in morbidly obese patients, with no substantial increase in perioperative complications or conversion to laparotomy. The increased length of stay in the morbidly obese group may be an indirect measure of their frailty.

ID 115

EVALUATION OF PERI-OPERATIVE OUTCOMES FOLLOWING ELECTIVE HIGH DEPENDENCY UNIT ADMISSIONS FOR ROBOTIC-ASSISTED SURGERY FOR GYNAECOLOGICAL MALIGNANCIES

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Aim

In 2020, our hospital introduced robotic surgery for gynaecological oncology, and since then, the complexity of minimal access surgeries conducted has progressively increased. Pre operative assessment considers patient comorbidities, performance status, and guides the decision for elective admission to the High Dependency Unit (HDU), irrespective of the surgical approach.

Our aim was to assess the outcomes of patients that were electively admitted to HDU following elective robotic-assisted surgery in gynaecological oncology.

Methods

Prospective study of all patients electively admitted to HDU following robotic-assisted surgery for gynaecological malignancy, from February 2022-January 2024 were included. Demographics, intraoperative events, and post-operative outcomes were analysed using descriptive statistics.

Results

In total 46/144 (32%) were electively admitted to HDU post-operatively. Patient characteristics were as follows: mean age 68.5 (SD-12.3), mean BMI 41.3 kg/m2 (SD-11.3), mean ASA (American Society of Anaesthesiology) score 2.96 (SD-0.29). Procedures included simple hysterectomy (40/46), sentinel node dissection (25/46), omentectomy (7/46) parametrectomy (1/46), cervical stump excision (1/46), vaginectomy (1/46), para-aortic lymphadenectomy (1/46).

The average length of stay (LOS) in HDU was 1.26 days and overall LOS was 3.8 days. Additional support was required for 10/46 (22%) patients; of whom 3/46 (7%) required HDU-level care. Specific requirements included: hypothermia support (1/10), intravenous fluids (1/10), insulin sliding-scale (3/10), correction of ketoacidosis (2/10), high-flow oxygen (2/10), and reintubation (1/10).

Conclusions

Our results indicate that despite the high-risk patient profile with mean ASA score 2.96, and mean BMI 41.3 kg/m2, only 7% required level 2/3 support. This highlights the low morbidity linked with robotic-assisted surgery for gynaecological malignancies, prompting consideration of whether alternative criteria should be used to determine decision of elective admission to HDU for patients undertaking robot assisted procedures. We propose to increase the threshold for elective HDU admission, with close evaluation to ensure that low peri-operative morbidity is maintained.

ID 116

ROBOTIC-ASSISTED LAPAROSCOPY (RAL) VERSUS CONVENTIONAL LAPAROSCOPIC SURGERY (CL) FOR SEVERE ENDOMETRIOSIS IN A BSGE ACCREDITED ENDOMETRIOSIS CENTRE - ANALYSIS OF 10 YEARS DATASET

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Background/Aim

Our aim is to compare quality outcomes for robotic-assisted laparoscopy (RAL) versus conventional laparoscopic surgery (CL) in the excision of severe rectovaginal endometriosis. All surgery was performed in a single BSGE-accredited Endometriosis Centre (UK). The robotic programme for benign gynaecology was launched in our Hospital in 2021.

Methods

We studied women who underwent RAL or CL for the excision of endometriosis, requiring dissection of the pararectal space (severe endometriosis), from August 2014 to March 2024.
Data on Quality of Life (QoL) were collected prospectively. Patients were asked to complete standard questionnaires on symptoms, and QoL preoperatively, at 6 months, 12 months, and 24 months after surgery.

EuroQoL Visual Analogue Scale (EQ-VAS) was used as a self-reported quantitative measure of the patient's overall health outcome from 0 to 100. Surgical data were collected retrospectively. Data analysis used descriptive statistics and non-parametric tests (Mann-Whitney U test) for comparison between groups.

Results

384 patients underwent surgery for severe endometriosis from August 2014 to March 2024 in our centre, with/without rectal shave, disc excision, anterior resection, total hysterectomy, unilateral/bilateral salpingo-oophorectomy. 241 patients had CL and 143 patients had RAL performed by three different specialist endometriosis surgeons.

The median operative time was significantly shorter in the RAL group in comparison to the CL group (151 vs 196 minutes respectively, p-value <0.001). Similarly, the median hospital stay was shorter in the RAL group (27 vs 40.5 hours, p-value <0.001).

Complication rates were low for both groups. 8 cases in the CL group required conversion to laparotomy and none in RAL group. Six-month follow-up data were available for 201 patients in the CL group and 73 patients in the RAL group. The median EQ-VAS score at baseline was significantly lower in the RAL group in comparison to the CL group (35/100 and 45/100 respectively, p-value <0.001%).

Conclusions

In our preliminary experience, operative time and length of stay outcomes significantly favoured RAL over CL for treating severe endometriosis. Although the QoL scores were comparable between groups at follow-up, they had improved more in the RAL group. Larger randomised trials are needed to confirm these preliminary findings and explore further benefits of RAL.

ID 117

ULTRASOUND-GUIDED ROBOTIC REPAIR OF ATYPICAL EPITHELIOID TROPHOBLASTIC LESION PRESENTING AS A FISTULA WITH PSEUDOCYST FROM THE NICHE: A VIDEO CASE REPORT

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Background

Robotic intraoperative ultrasound (RIOUS) involves real-time ultrasound imaging to visualise internal structures and guide surgical manoeuvres. This technique enhances the precision and accuracy of robotic procedures by providing trans sectional images of organs and lesions in the surgical field. We report a rare case of a robotic repair of post-caesarean niche presenting as a pseudocyst at the preoperative ultrasound. RIOUS was used to achieve optimal resection of the lesion and repair of the caesarean scar defect.

Methods

A 33-year-old woman with a previous uncomplicated C-section, followed by an intra-uterine-device placement, presented with

dysmenorrhea. Ultrasound showed a 50x40x20mm defect of the anterior uterine wall compatible with a niche. Attached and in continuity with that, anterior to the caesarean scar, there was a 45 mm diameter pseudocyst, with low-level echogenic content and no pericapsular blood flow. Based on clinical presentation, ultrasound images and patient's pregnancy desire, a robot-assisted resection with niche repair was scheduled.

Results

The Da Vinci® Xi was used. As shown, the pseudocyst on the anterior uterine surface, was adherent to the broad ligament, the vesico-uterine fold, and the anterior abdominal wall. The cyst and the surrounding scar tissue were resected and the freshened edges were closed in two barbed-suture layers. An intraoperative ultrasound was performed using the Tile pro™ technology, assuring a complete excision of the lesion and an adequate repair of the uterine wall.

Given the low mitotic activity, the lack of invasion, the intermediate Ki-67 index and the presence of only a focal zone of fibrinoid necrosis, the observations aligned with a cystic variant of atypical placental site nodule (APSN), also described in literature with the term atypical epithelioid trophoblastic tumour (ETT).

Conclusions

We reported a case of a post caesarean cyst and fistula formation with atypical ETT features successfully treated robotically. According to previous studies, intraoperative ultrasound guidance for identifying resection margins by differentiating between healthy and neoplastic tissues has proven particularly useful in oncological diseases.

In our case, the use of RIOUS proved to be a valuable tool in confirming complete resection of the lesion, which was later identified as a gestational trophoblastic disease (GTD) lesion, exhibiting intermediate characteristics between placental site nodule (PSN) and the more aggressive ETT.

ID 118

VIDEO DEMONSTRATION OF ROBOTIC SURGERY FOR SEVERE ENDOMETRIOSIS

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Introduction

Endometriosis is a chronic inflammatory condition in women of reproductive age group associated with debilitating pelvic pain and infertility. Surgical management of advanced-stage endometriosis requires complex pelvic dissection, which increases operating time, complications and rate of conversion to laparotomy and hence benefit most from a robotic approach over standard laparoscopic approach. Robotic surgery has technical advantages over laparoscopy such as 3D vision, tremor filtration, intuitive hand movements and better surgical ergonomics, with similar perioperative outcomes. This surgical film aims to present a step-by-step approach for robotic surgery for severe endometriosis.

Description

A 35-year-old multiparous lady was diagnosed with a left Ovarian Endometrioma on MRI during evaluation for severe dysmenorrhea and dyspareunia. Here is an account of the steps of surgery

- Adhesiolysis
- Creation of retroperitoneal spaces
- Ureterolysis
- Transection of infundibulopelvic and round ligament
- Bladder mobilisation
- Division of Uterine artery
- Excision of endometriotic deposits in POD, Uterosacral ligaments
- Development of Rectovaginal space and rectum dissection
- Colpotomy over a vaginal manipulator
- Specimen retrieval per vaginum
- Vault closure
- Rectal air leak test

Conclusions

Minimally invasive surgery is the standard of care for complex endometriosis. Robotic-assisted surgery, attempts to overcome the disadvantages of conventional laparoscopy while providing all its benefits like faster postoperative recovery, shorter hospital stay, cosmetic benefits, decreased blood loss and fewer complications, by offering improved dexterity, intraoperative visualisation, faster learning curve and reduced surgeon fatigue. This video demonstrates the feasibility of this promising technique and its relevance to future endometriosis surgeries.

ID 119

GYNAECOLOGICAL SURGERY WITH THE DEXTER ROBOTIC SYSTEM - "BEST OF" ROBOTICS AND LAPAROSCOPY?

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Aim

This video aims to demonstrate the surgical approach to robotic-assisted hysterectomy (RAH) using the Dexter Robotic System™ in the context of the system's design and capabilities. The Dexter system is a multi-port robotic platform with an open, sterile surgeon console.

Methods

Thisvideo presents a RAH performed on a patient diagnosed with endometrial cancer using the Dexter Robotic System™. The integration in the OR with our existing laparoscopic surgical set-up as well as intraoperative steps are presented.

Results

The video provides a view of RAH procedure using Dexter.

It illustrates various surgical steps, such as sentinel node removal, visualised with ICG fluorescence imaging, bilateral salpingo-oophorectomy, hysterectomy and vaginal suturing, along with the robot setup and surgeon's movement in the OR. Maintaining surgeon's sterility throughout the procedure enabled seamless transitions between the patient table and the surgeon console.

Conclusions

The Dexter system introduces a novel approach to robotic-assisted hysterectomy, offering the surgeon simplicity of use and flexibility in choice of surgical access and instrumentation.

ID 120

THE PROGNOSTIC NUTRITIONAL INDEX (PNI) AND HAEMOGLOBIN ALBUMEN LYMPHOCYTE PLATELET (HALP) INDEX AS PROGNOSTIC MARKERS IN WOMEN HAVING ROBOTIC HYSTERECTOMY FOR ENDOMETRIAL CANCER

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Aim

To assess the nutritional indices Onodera's Prognostic Nutritional Index (PNI) and the Haemoglobin Albumen Lymphocyte Platelet (HALP) index as prognostic markers in women having robotic hysterectomy for endometrial cancer.

Patients and methods

Women undergoing robotic hysterectomy for endometrial cancer were assessed. Pre-surgical PNI and HALP scores were computed for participants and analysed by selecting cut-off values based on previous publications. Both were assessed for disease-free and overall survival using the Kaplan-Meier method with a log-rank test in addition to a multivariable Cox proportional regression.

Results

A total of 716 women, with a median age of 67 years (interquartile range (IQR), 58, 75) and BMI of 31kg/m2 (IQR 26, 37) were included in the analysis. The median follow-up was 1151 days (IQR 387, 1862). Low-grade lesions were present in most (54.7% grade1 or 2), in addition to early-stage (68.3% stage I), and endometrioid histological subtype (64.1%).

Primary treatment included a robotic hysterectomy with a full lymphadenectomy in 192 cases (26.8%) and a sentinel lymph node dissection in 451 cases (63.0%). No lymph node dissection was performed in 73 (10.2%) of cases. The Davinci S was used in 81 cases (11.3%), the DaVinci Si in 95 cases (13.3%), and the XI in 540 cases (75.4%). A low PNI (less than 45) was not associated with decrease disease free or overall survival. A low HALP score (less than 25) was associated with a decreased overall survival in both univariate and multivariate analyses (HR 2.12, 95%CI 1.38 – 3.26, P = 0.001). However, there was no association between a HALP score and disease free survival.

Conclusions

A HALP score of less than 25 is an independent prognostic indicator for poor overall (but not disease-free) survival in women having robotic hysterectomy for endometrial cancer. This data differs slightly to another study and this will be discussed.

ID 121

ROBOTIC GYNAECOLOGICAL SURGERY WITH THE DEXTER ROBOTIC SYSTEM: A PROSPECTIVE MULTI-CENTRIC STUDY

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Aim

Robotic-assisted hysterectomy (RAH) is becoming increasingly favored as a treatment option for many patients, and there is a growing need for more flexible and simple robotic systems. The Dexter Robotic System™ is a modular robotic platform comprising two patient carts, with a robotic instrument arm each, a robotic endoscope arm compatible with any 3D endoscopic system, and an open, sterile surgeon console.

Designed for simplicity and ergonomic ease during the robotic procedures, it also guarantees a quick access to the patient for performing certain surgical steps laparoscopically or supporting the assistant. This multicentric, multinational study aimed to confirm the safety and clinical performance of RAH using the new Dexter system in patients with benign or low-risk malignant diseases.

Methods

This prospective study assessed the incidence of serious perioperative events (Clavien-Dindo grades III-V) up to 30 days postoperatively as well as the procedural success of Dexter-assisted hysterectomies. Furthermore, we assessed the duration of operation and docking, estimated blood loss, and postoperative hospital stay.

Results

Thirty-four patients aged 46±8 years and with the average BMI of 25.74±3.99 kg/m2 were recruited from four centers in Switzerland, Germany, and France. In addition to RAH, 76.5% of patients underwent concurrent salpingectomy and 14.7% concurrent salpingo-oophorectomy. The mean skin-to-skin operative and docking times were 139±52 min and 6±2 min, respectively, with a mean estimated blood loss of 121±95 ml. No intraoperative complications or conversions to open surgery occurred. In three patients, the surgeons completed the procedure laparoscopically.

Two postoperative complications of Clavien-Dindo grade IIIb were reported. The mean length of hospital stay was 2.1±1.4 days.

Conclusions

The Dexter Robotic System™ enables a feasible and safe RAH, with the mean operative time and estimated blood loss comparable to conventional minimally invasive techniques. Further research with larger cohorts and longer follow-up periods is needed to demonstrate the full potential of the Dexter system.

ID 122

ROBOTIC VERSUS LAPAROSCOPIC APPROACH IN THE PELVIC AND PARAAORTIC LYMPHADENECTOMY IN ENDOMETRIAL AND OVARIAN CANCER STAGING

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Objective

To compare the perioperative outcomes of robotic-assisted (RAL) and laparoscopic (LPL) pelvic and paraaortic lymphadenectomy for the staging of endometrial and ovarian cancer.

Material and methods

A prospective non-randomised study was carried out in the hospital Clinico San Carlos of Madrid, a tertiary centre for women's health. We include all women diagnosed with endometrial or ovarian carcinoma who underwent staging surgery which included a pelvic and paraaortic lymphadenectomy. All women were operated by the same surgical team and using the same surgical techniques. A comparison analysis of perioperative outcomes and complications was performed.

Results

Out of the 95 patients selected, 69 women (72.6%) were operated by RAL and 26 (27.4%) by LPL, 69 had endometrial cancer, and 65 had ovarian cancer. There were no differences between robotic-assisted and laparoscopy for the type of cancer, age, parity, presurgical hemoglobin, and rate of omentectomy. In the robotic group, the IMC and ASA score 3-4 were significantly higher than in the laparoscopy group (26.7 vs. 24.8 kg/m2, p= 0.048 and 21.7% vs. 3.1%, p=0.038; respectively (resp.)). The hysterectomy rate was similar between both groups (81.2% vs 73.1% resp.).

The time to change from pelvic to superior abdomen field was higher in RAL than in the LPL group (15.8 vs. 10.4 min; p=0.053). There were no differences between the RAL and LPL groups regarding the skin-to-skin operating time (230.1 min vs. 235.6 min, resp.), number of pelvic (16,6 vs 18.1), and paraaortic nodes (9.2 vs. 11.0 resp.), estimated blood loss (146.1 vs. 158.4 ml resp.), and hospital stay (4.4 vs. 3.8 days). Overall complications rate (16.9% vs. 33.3% respectively): intraoperative (3.3% vs. 3.3%) and postoperative (13.6% vs. 30.0% respectively).

Conclusions

Robotic-assisted pelvic and paraaortic lymphadenectomy for the staging of endometrial and ovarian cancer are comparable to the laparoscopic approach. Robotics has a non-significant trend to fewer complications, in a group of women more obese and with worse ASA scores than the laparoscopic group.

ID 123

ROBOT ASSISTED EXCISION OF ISOLATED LOCOREGIONAL RECURRENCE IN ENDOMETRIAL CANCER

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Objective

The management of recurrent endometrial cancer necessitates careful consideration of various factors including the site of recurrence, duration of disease-free interval, patient's overall medical condition, and prior adjuvant treatments. While surgery has traditionally been the preferred option for vault recurrences in previously irradiated pelvis, radiotherapy has been the standard for single-site vault recurrence in patients without prior radiotherapy exposure.

However, with advancements in surgical techniques, surgery is now emerging as a viable option even for single-site vault recurrence in radiotherapy-naive patients. For locally recurrent disease limited to the central pelvis, curative treatment options such as surgery or radiotherapy are available.In patients with isolated vault recurrence and no prior radiotherapy exposure, the National Comprehensive Cancer Network (NCCN) recommends external beam radiotherapy (EBRT) with or without brachytherapy, systemic therapy, or surgery with or without intraoperative radiotherapy and systemic therapy.

Favourable surgical candidates typically exhibit good performance status, a prolonged disease-free interval, and resectable disease with potential for achieving tumour-free margins. This video demonstrates robotic excision of a single locoregional recurrent 3x2 cm vault mass in a 70-year-old woman with stage IA endometrioid adenocarcinoma, 4 years after robotic hysterectomy, bilateral salpingo-oophorectomy, and pelvic lymph node dissection. Biopsy confirmed metastatic adenocarcinoma.

ID 124

THE WELL-BEING OF THE GYNECOLOGICAL SURGEON IMPROVES WITH ROBOT-ASSISTED SURGERY

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Objectives
To demonstrate that robotic surgery benefits the ergonomics of the surgeon and assistant compared to conventional laparoscopy in complex gynaecological surgery using an ergonomics and satisfaction survey.

Methods
Cross-sectional observational study of consecutive gynaecological surgeries, performed with robotic assistance (Da Vinci System) or conventional laparoscopy at the Hospital Clínico San Carlos during the years 2008 and 2022. We selected the procedures which include hysterectomy (HT) plus pelvic lymphadenectomy (LDN) /pelvic-paraaortic LDN or a radical HT type B or C. At the end of the robotic or laparoscopic surgery, a questionnaire was administered to the main surgeon and the assistant to find out their subjective impressions regarding comfort, ergonomics, and satisfaction. The responses were collected using a visual analog scale scoring from 1 (worst condition) to 10 (best condition).

Results
A complete response to the questionnaire was obtained in 225 procedures (183 robotic and 42 laparoscopic), 122 were HT+ pelvic LDN, 64 were HT + pelvic-paraaortic LDN, and 39 were radical HT. The robotic procedures were performed in more obese women (IMC 28.1 vs. 25.6 kg/m2 respectively; p=0.004) and the skin-to-skin time was longer (191.2 vs. 224.4 min respectively; p=0.003) than in the laparoscopic group. The main surgeon perceived the robotic surgery as less tiring, more comfortable, and with less limb and back pain than laparoscopic surgery (p<0.001 in all comparisons).

The surgeon considered that the 3D vision, instrument articulation, and ergonomics offered by robotics were relevant, as well as that robotics was an advance over laparoscopy because of the level of experience or complexity of the procedure. The fatigue of the assistant surgeons was lower in the robotic than in laparoscopic surgery (p<0.001).

Conclusions
Robotic surgery has clear advantages for the surgeon in complex gynaecological surgeries since it increases the degree of satisfaction and comfort, and decreases fatigue and discomfort due to position compared to conventional laparoscopy.

ID 125

LYMPH NODES CYTOREDUCTION PERFORMED BY ROBOTIC- ASSISTED SURGERY

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Introduction
Lymph nodes cytoreduction refers to the surgical removal or reduction of abnormal or cancerous cells in the lymph nodes. The main objective in performing that procedure is to increase the disease-free survival and the overall survival in selected patients with gynaecological cancer.

There is some controversy in the surgical approach, especially in the treatment of advanced ovarian cancer or its recurrence as well as in cervical cancer. We propose that robotic-assisted surgery could help us perform this type of surgeries with good postoperative and oncological results.

Methods
We are carefully selecting patients with gynaecological cancer (endometrial, ovarian, and cervical cancer) who have lymph node involvement and are considerate candidates for a laparoscopic robotic-assisted approach.

Results
In this video we present some cases of women with involvement of diverse lymph nodes areas due to gynaecological cancer, demonstrating the benefits of a robotic-assisted surgery. These benefits include greater precision in movements, avoiding surgeons' hand tremors, immersion in a nearby surgical field, and a complete, high-quality view of the small surgical area being treated. Also shown in the video is the occurrence of a vascular complication and how to approach its repair.

Conclusions
Lymph nodes cytoreduction performed by robotic-assisted surgery is feasible and should be considered in selected patients. The advantage over open surgery is that we achieve a shorter hospital stay, better postoperative recovery, and it allows for an earlier start of adjuvant treatment.

Disclosure
No conflict of interest.

ID 126

ROBOTIC SURGERY AND PERIOPERATIVE MORBIDITY IN ELDERLY WOMEN (≥80 YEARS OLD) WITH INTERMEDIATE AND HIGH-RISK ENDOMETRIAL CANCER

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Introduction/Background
To investigate the feasibility, safety, and short-term outcomes for elderly patients, (age ≥80 years old) undergoing robotic surgery for intermediate and high-risk endometrial cancer.

Methods
Prospective cohort study of all patients ≥80 years old that underwent robotic surgery for the treatment of endometrial cancer of intermediate and high risk, in our centre between 1/1/2015 and 31/12/24.

Results
We reviewed in excess of 1000 cases and identified 97 patients ≥ 80 years old with a mean age of 83 (80-91) years old. They have significant incidence of comorbidities: 81% cardiovascular disease, 28.7% diabetes, 19.7% chronic obstructive pulmonary disease. Mean BMI was 30 (range 18-45). 76.9% of them had previous abdominal surgery and 38.3% of them had a performance status (ECOG) ≥2. 25.3% of them had been treated for another cancer in the past.

All comorbidity characteristics were statistically higher other than BMI, compared to the younger group of our patients in the same period. 79.8% underwent comprehensive Lymph nodal staging (Lymphadenectomies 85%, 27% of then with sentinel lymph node biopsy and 15% by sentinel only) 16.4% had positive lymph node identified and upstaged.

33.3% of them were discharged day 1 post op. Mean and median length of hospital stay was 2 days. There was no difference in the postoperative complication rate in comparison to younger women but in this specific subgroup of the ≥80 years old, we observed a slightly higher incidence of port sites hernias with the SI system. (4% vs 0.4%, p>0.05).

Conclusions
Robotic surgery is feasible with acceptable post-operative morbidity in comparison to younger women, ensuring appropriate oncological staging. Elderly women (≥80 y.o) should be considered suitable for appropriate oncological and surgical staging robotic surgery, with appropriate counselling regarding post-operative complications.

Disclosure
The Christie is an accredited training centre for robotic surgery in Gynaecological Oncology.

ID 127

SITUS INVERSUS TOTALIS AND ROBOTIC ASSISTED LAPAROSCOPIC SACROPEXY

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Background
Situs inversus totalis is a rare congenital abnormality characterised by a mirror-image transposition of both the abdominal and the thoracic organs. Imaging modalities play a crucial role to diagnose and plan invasive interventions. Surgical patients with situs inversus may require more flexibility and creativity from the surgical team.

Methods
The authors present a video of a robotically assisted sacrocolpopexy in a 56 years-old patient with situs inversus totalis. She had a symptomatic multicompartmental grade 3 pelvic organ prolapse. The placement of the doors was done in a horizontal line at the umbilical level and the da Vinci Xi robotic platform was used. The dissection of the pararectal space and the application of the prosthesis were performed in mirror imaging and the use of the robotic platform facilitated the procedure due to the underlying ambidexterity.

Conclusions
The use of the robotic platform can be an asset when performing surgery in patients with situs inversus.

Keywords
situs inversus totalis; minimal invasive surgery; pelvic organ prolapse.

ID 128

SAME DAY DISCHARGE (SDD) PATHWAY FOR GYNAECOLOGICAL ONCOLOGY ROBOTIC SURGERY: SINGLE INSTITUTE EXPERIENCE OF INITIAL IMPLEMENTATION

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Introduction/Background
Same day discharge (SSD) is a well-established management for women undergoing minimal access surgery. The evidence is supporting to its benefits. Implementation of such pathway requires seamless team working and comprehensive pre-operative assessment and consultation, surgical procedures, post-operative care and post discharge follow-up pathways, safe netting and patient support.

Aim
Evaluation of the safety of initial implementation of same day discharge following major gynaecological oncological robotic surgery.

Methods
Prospective data collection of the first 20 cases in our centre. Initial evaluation was that only 10% of our patients cohort would fulfil the agreed eligibility criteria, due to the high risk population being treated in our centre.

Prospective cohort study of all patients who underwent SDD. We excluded from analysis two patients that intended for SDD but had an overnight stay (one due to post anaesthetics nausea/ vomiting and one due to hypertension).

Results
We reviewed 20 cases that successfully completed SDD pathway, with a mean age of 60 (50-71) years old. Patients comorbidities:

30% had mild cardiovascular disease, none had diabetes, 30% had mild / well-controlled chronic obstructive pulmonary disease or asthma. Mean BMI was 40.2 (range 27-55). 85% of them had previous abdominal surgery and all of them had a performance status (ECOG) =0 and ASA=2. 20% of them had been treated for another cancer in the past. All patients underwent total hysterectomies/ bilateral salpingo-oophorectomy, 28.5% of then had omentectomy performed, 65% had sentinel lymph nodes detection and biopsy.

There were no intraoperative complications; no readmissions. One patient experienced persistent vaginal discharge, self resolved (5% grade I-II). There were no grade III-V postoperative complications.

Conclusions

Same day discharge for women undergoing major gynaecological oncological surgery is a safe option, with appropriate pre-operative preparation, patients' education and support and surgical expertise.

Disclosure

The Christie is an accredited training centre for robotic surgery in Gynaecological Oncology.

ID 129

INTRODUCTION OF ROBOTIC SURGERY FOR BENIGN GYNAECOLOGICAL CASES IN A TERTIARY UNIT, AND COMPARISON WITH CONVENTIONAL LAPAROSCOPY AND OPEN SURGERY

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Background/ Aim

There is growing evidence that robotic-assisted surgery in gynaecology is associated with lower complication rates, less blood loss and shorter hospital stay, when compared to open and conventional laparoscopic approach.

The aim of our study was to compare robotic-assisted surgery for benign gynaecological cases with open and laparoscopic surgery, with respect to case complexity, operative time, blood loss, intra-operative and post-operative complications and hospital stay.

Methods

We conducted a retrospective collection of data for all benign gynaecological cases that took place in our unit from July 2023 until February 2024. We excluded Urogynaecological cases and day-case procedures.

A total number of 75 patients was analysed. We also defined the case complexity according to medical co-morbidities, surgical history, size of uterus, number of fibroids, presence of deep endometriosis and categorised the cases accordingly.

Finally, the cases were divided into robotic-assisted, laparoscopic and open for comparison of outcomes.

Results

In the Hysterectomy subset: 52 cases were performed during this period; 13 were robotic, 19 were laparoscopic and 20 were performed as open. In the robotic group 11 cases out of 13 were of medium or high complexity (84.6%), laparoscopically 15 complex cases (78.9%) while in the open cohort 19/20 cases were either moderate or high complexity (95%).

The mean operative time, was similar between robotic and laparoscopic; 161.33 and 163 minute respectively, while open surgery were shorter with a mean of 113.75 mins. Robotic hospital stay averaged 1.5 nights with the laparoscopic group mean of 2.2 nights and Open hysterectomy ranking last with an average of 2.9 nights.

23 myomectomy procedures were performed in the same time period, open myomectomy cases were of very high complexity where the uterine size varied from 18-36 weeks, with median blood loss of 150mls and operative time 90 mins with 3 night stay.

Laparoscopic cases were that of low to high complexity with uterine size maximum up to 20 weeks, Operative time was 144.5 mins with median blood loss of 75mls and 2-night-stay. One had to be converted to open with no readmissions or reoperations. The robotic myomectomy cases were that of medium to high complexity. There were no conversions to open, breach of cavity, readmission or reoperation.

Conclusions

Robotic approach has enabled us to do more complex cases while maintaining 0 complications rate and sending patients home sooner to recover quicker and become reintegrated in their lives earlier.

ID 130

ROBOTIC RADICAL UPPER VAGINECTOMY

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Background and Surgical Procedure

The video features a 63-year-old patient who underwent Robotic Interval Debulking Surgery (IDS) or stage IVB, grade 3 endometrioid adenocarcinoma of tubo-ovarian origin. Preoperative imaging and tumour markers demonstrated a favourable radiological and biochemical response to chemotherapy. The patient had previous hysterectomy at the age of 40 for menorrhagia and the residual pelvic diseases was a vaginal vault mass in a complex with hydro salpinx. She was of a normal BMI, smoker and had no other medical co-morbidities with a PS of 0.

The video demonstrates Robotic Upper Radical Vaginectomy, using

Da Vinci Si platform, performed as part of the IDS surgery. The procedure started by incising the peritoneum on the lateral pelvic sidewall, followed by development of the retroperitoneal space and identification of the ureters retroperitoneally. The infundibulopelvic ligament coagulated, clipped using HEM-O-LOK and cut.

Ureterolysis from the point where the ureter crosses the common iliac artery to the ureteric tunnel performed. The pararectal and paravesical spaces were developed and the uterine artery and vein were identified at their origin from the anterior branch of the internal iliac artery and vein, coagulated, clipped using HEM-O-LOK, and cut. The ureter is further mobilised and separated from its attachment to its entrance into the bladder.

The bladder is dissected and mobilised inferiorly. Posteriorly, the rectovaginal was developed, and circumferential vaginal incision was performed. The mass attached to the upper vagina was delivered vaginally, and the vault was closed using V-lock sutures.

ID 131

METHODICAL APPROACH TO DEEP INFILTRATIVE ENDOMETRIOSIS: SOSURE TECHNIQUE

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Aim

Advanced deep Infiltrative endometriosis is associated with extensive adhesions and distortion of anatomy. We present a methodical approach to operating such cases so as to secure vital organs and complete the surgery safely.

Methods

This video is a step by step demonstration of a case of stage 4 deep infiltrative endometriosis conservative surgery with rectal disc resection. Surgery is performed using the da vinci Xi.SOSURE technique is a methodical approach to this complex surgery. Sigmoid mobilisation, ovarian mobilisation, suspension of uterus and ovaries, ureterolysis, rectosigmoid Para rectal space dissection, excision of all endometriosis.

This video shows a young 28 year old with DIE involving the rectum 2 cm nodule, ovarian endometrioma, uterosacral nodule 2.5 cm, superficial bladder endometriosis. Excision of endometriosis was done at all sites with rectal disc resection for the rectal nodule. The patient was also discovered to have endometriosis in the left pelvic lymph node which was resected.

Results

Patient recovered well immediate post op and is pain free on one year follow-up.

Conclusions

Endometriosis is an enigmatic disease and DIE involves ureters and bowel, these need a structured approach for dissection for a safe outcome.

ID 132

CERVICAL RE-INJECTION OF INDOCYANINE GREEN TO IMPROVE SENTINEL LYMPH NODE DETECTION IN SEVERELY OBESE ENDOMETRIAL CANCER PATIENTS

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Introduction

Obesity is strongly correlated with lymphatic dysfunction, which may contribute to sentinel lymph node (SLN) mapping failure in multiple ways even if recent studies have shown conflicting data.
Some recent evidences have shown the possibility of performing a second reinjection of indocyanine green in case of mapping failure, therefore the primary endpoint of this study is to evaluate if severe obesity affects the detection rate of a second re-injection and the empty nodes rates in patient with endometrial cancer (EC) who underwent robotic-assisted surgical staging.

Methods

We retrospectively identified EC patients undergoing robotic-assisted staging with SLN biopsy at European Institute of Oncology (IEO) of Milan, from January 2015 to May 2023. Patient undergoing open surgical conversion and advanced stages (FIGO 2009 stage II-IV]) at diagnosis were excluded. According to our SLN protocol, in case of either unilateral or no SLN detection, we performed an ipsilateral or bilateral cervical re-injection of ICG.

Results

562 patients were included in the analysis, 470 with a BMI<35 and 92 with a BMI >=35.
After the first injection of Indocianine green 80 (17%) in BMI<35 and 22 (23,9%) in BMI>=35 group reported a uni or bi-lateral SLN mapping failure (p=0,22). After anatomopathological evaluation empty nodes rates was 19 (4%) in BMI <35 and 6 (6,5%) in BMI>=35 (p=0,27).

After the second re-injection in case of mono or bilateral mapping, the failure of SLN detection was 27% in BMI<35 and 62% in BMI>=35 (p=0,094).

Conclusions

This study shows that although there is a higher rate of sentinel node failure at both first and second re-injection and a higher rate of empty nodes in the group of patients with severe obesity, there is no statistically significant association. This underlines the importance of performing a second re-injection even in this group of patients in case of a first failure, also considering the greater difficulty in performing a systematic lymphadenectomy. The robotic approach can facilitate accurate dissection and opening of anatomical spaces,

avoiding the interruption of lymphatic pathways and limiting the detection of empty nodes, although randomised studies are needed.

ID 133

PRELIMINARY POST-MARKETING EXPERIENCE WITH THE LEVALAP™ 1.0: SUCCESS AND COMPLICATION RATE OF LAPAROSCOPIC ACCESS

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Background/ Aim

Over 13 million laparoscopic procedures are performed globally yearly, a volume that is expected to increase. Likewise, the rate of abdominal access-related complications will also likely continue to rise. The LevaLap™ 1.0 Laparoscopic Access Device (Core Access Surgical Technologies, Atlanta, GA, USA) is intended to promote safer access into the abdomen during Veress needle insufflation. We report on the preliminary results of a post-marketing study assessing initial experience with the use of the LevaLap™ 1.0 during gynaecological laparoscopic surgery.

Methods

A prospective multicenter cohort study including subjects ≥18 years old and undergoing a laparoscopic gyn procedure. Exclusion criteria were pregnancy, surgery over the access site within the prior 10 days, abdominal hernia, contraindication to the use of a Veress needle and/or laparoscopy, morbid obesity (BMI >30 kg/m2), and inability/unwillingness to sign the informed consent or provide verbal non-refusal. Patients were followed for two weeks post-procedure.

Results

We report on the initial 137 patients assessed; mean age: 44.0±14.8 yrs. and mean BMI: 24.8±3.9 kg/m2; indications included uterine (33.1%), endometriosis (23.3%), adnexal (20.9%), and infertility (11.0%) related procedures; Verres needle insertion was trans-umbilical, peri-umbilical and Palmer's point in 116 (84.7%), 20 (14.6%), and 1 (0.7%), resp. In 131 patients (95.6%; 95% CI: 90.7%-98.4%) pneumoperitoneum was achieved at the 1st attempt using the device. A 2nd attempt led to successful access in 4 additional cases (difficulty in accessing the abdomen at 1st attempt was felt to be related to adhesions in 3 cases and 'technique-related' in 1). In two cases, abdominal access failed after multiple attempts; in one patient, significant abdominal adiposity with skin laxity kept obstructing the device suction port and in the other failure was noted to be 'technique-related'.

Only one device-related AE was reported: a circular redness at the site of the device application on the skin in one patient, which resolved without further intervention. No serious AEs or device deficiencies were observed during the access procedures or follow-up in any patient.

Conclusions

The preliminary results of the post-marketing study indicate that the use of the LevaLap™ 1.0 resulted in successful abdominal access using the Veress needle in 95.6% of patients at 1st attempt and 98.5% within the first two attempts. The use of the LevaLap™ 1.0 facilitates abdominal access when using the Veress needle for insufflation with minimal risk of AEs.