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Content

Gynecology and obstetrics surgery.....	3
1. Review.....	3
Current status on robotic assisted myomectomy.....	3
2. Case Report.....	4
Laparo-endoscopic single site hysterectomy in renal transplant women using conventional laparoscopic instruments.....	4
3. Technical Note.....	4
Endoscopic-assisted ICG (EASI) technique for sentinel lymph node biopsy in breast cancer.....	4
4. Original Article.....	5
Single-port laparoscopic myomectomy in the virgin womb - a retrospective analysis of 31 consecutive cases.....	5
5. Original Article.....	6
Endometrioma surgery and possibilities of early disease control.....	6
6. Technical Note.....	8
Single-port three-dimensional endoscopic subcutaneous mastectomy for gynaecomastia: an aesthetically superior and novel approach.....	8

Gynecology and obstetrics surgery

1. Review

Current status on robotic assisted myomectomy

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Cite this article: Kiss I, Svobodova P, Karasek L, Svoboda B. Current status on robotic assisted myomectomy. *Mini-invasive Surg* 2021;5:55.

<http://dx.doi.org/10.20517/2574-1225.2021.70>

Abstract

Uterine leiomyomas are common benign solid tumors of the uterus. While the presence of fibroids is rarely life threatening, they are associated with symptoms affecting quality of life and fertility. Myomectomy is a standard fertility-sparing surgery which should be considered for women suffering from fibroid-related symptoms who do not desire hysterectomy or any alternative treatment option. While open surgery is thought to be reserved for large and numerous myomas, mini-invasive methods as laparoscopy and robot-assisted surgery have evolved in the hands of experienced surgeons to also deal with these more complex cases. Robotic myomectomy has its advantages in lower blood loss, fewer complications, and shorter hospital stay over open surgery, whereas the comparison outcomes with laparoscopic myomectomy are still uncertain. Advantages of the wristed instruments, three-dimensional vision along with the incorporation of correct surgical techniques could emphasize the benefits of the robotic assisted approach in large and numerous myoma cases. Careful and detailed assessment should precede the surgery to recognize risks and steps to reduce operation time, which tends to be the most presented drawback of robotic myomectomy. As the tendency of robot-assisted surgeries is growing, many authors share their experience or publish comparison studies with other surgical methods. Our article describes the current status concerning robotic myomectomy, reviewing publications from the past five years

(2016-2021).

2. Case Report

Laparo-endoscopic single site hysterectomy in renal transplant women using conventional laparoscopic instruments

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Cite this article: Goh WA, Tan EMX, Nadarajah R. Laparo-endoscopic single site hysterectomy in renal transplant women using conventional laparoscopic instruments. *Mini-invasive Surg* 2021;5:30.

<http://dx.doi.org/10.20517/2574-1225.2021.42>

Abstract

Kidney transplant recipients are at a higher risk of developing cancers as compared to the general population. This is of concern when it comes to gynaecological pathologies because the transplanted kidney lies in the pelvic region, in close proximity to the diseased organ. The successful use of laparo-endoscopic single site surgery with conventional laparoscopic instruments for total hysterectomy and bilateral salpingo-oophorectomy in three patients with prior renal transplantation is reported.

3. Technical Note

Endoscopic-assisted ICG (EASI) technique for sentinel lymph node biopsy in breast cancer

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Cite this article: Mok CW, Hing JXJ, Shetty SS, Tan SM. Endoscopic-assisted ICG (EASI) technique for sentinel lymph node biopsy in breast cancer. *Mini-invasive Surg* 2020;4:26. <http://dx.doi.org/10.20517/2574-1225.2020.04>

Abstract

Sentinel lymph node biopsy is currently the standard of care for axillary staging in early breast cancer patients with no clinical or radiological evidence of axillary lymph node involvement. Novel techniques studied in recent years include the use of indocyanine green (ICG) fluorescence imaging, which was reported in a recent network meta-analysis to be comparable to standard dual modality in terms of false negative as well as detection rate. However, there have been no standardized operative methods leading to the underutilization of this modality in clinical practice. In addition, technical limitations such as the difficulty in tracing ICG flow in obese patients further restrict the use of ICG fluorescence in sentinel lymph node biopsy. In this article, we describe in detail the use of the endoscopic-assisted ICG technique in performing sentinel lymph node biopsy, which addresses limitations associated with conventional use of ICG fluorescence imaging. The technical novelty of this technique lies in the fact that it has not been previously described in the literature and it allows for the identification of sentinel lymph nodes with minimal incision and tissue disruption as well.

4. Original Article

Single-port laparoscopic myomectomy in the virgin womb - a retrospective analysis of 31 consecutive cases

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Cite this article: Tang FH. Single-port laparoscopic myomectomy in the virgin womb - a retrospective analysis of 31 consecutive cases. *Mini-invasive Surg* 2020;4:24.

<http://dx.doi.org/10.20517/2574-1225.2019.60>

Abstract

Aim: We aimed to evaluate the feasibility of single-port laparoscopic myomectomy in the virgin womb.

Methods: A retrospective chart review of 31 consecutive cases between November 2017 and October 2019 performed by a single surgeon was performed.

Results: The mean age of patient was 50.10 ± 7.79 years old. The mean BMI was 23.55 ± 4.36 kg/m². The mean number of myoma in single patient was 3.84 ± 2.45 pieces. The mean maximum diameter of myoma in single patient was 11.24 ± 3.27 cm. The mean operation time was 182.32 ± 52.39 min. The mean blood loss was 231.77 ± 238.90 mL. The Visual Analogue Score (VAS) of pain when immediately arriving at the ward after operation was 2.32 ± 1.60 . The VAS after 24 h dropped to 1.23 ± 1.43 . In total, 119 myomas were removed in our study. There were 15 (48.4%) women with more than four myomas. Fifteen (48.4%) women had more than two myomas that were > 5 cm. There were 58 (48.74%) intramural myomas, with mean diameter of 6.72 ± 4.41 cm. Fifty-two (43.70%) subserous type myoma were removed with mean diameter 2.58 ± 3.35 cm. Posterior myoma accounted for five (4.20%) pieces with mean diameter of 9.30 ± 4.49 cm. The broad ligament type myoma accounted for four pieces (3.36%), and the mean diameter was 3.74 ± 1.87 cm. There were 51 (42.9%) myomas > 5 cm in diameter. Among the different types of myoma, there were 36 (62.1%) intramural type and 6 (11.5%) subserous type, and all posterior and broad ligament type were > 5 cm in diameter. The blood loss and operation time showed no relationship to myoma number. There were differences in blood loss ($P = 0.0359$) and operation time ($P = 0.0537$) based on the maximum diameter of myoma. No learning curve was noted in the cumulative sum control chart analysis of the 31 consecutive cases.

Conclusion: In our 31 consecutive cases, the operation time, blood loss, and postoperative VAS score were all comparable to the previously published literature for single-port laparoscopic myomectomy. It is feasible for virgin women with symptomatic myoma to receive single-port laparoscopic myomectomy.

5. Original Article

Endometrioma surgery and possibilities of early disease control

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Cite this article: Tanos V, Sowah E. Endometrioma surgery and possibilities of early disease control. *Mini-invasive Surg* 2020;4:39.

<http://dx.doi.org/10.20517/2574-1225.2019.59>

Abstract

Aim: The purpose of this study is to investigate the efficacy of surgical management in ovarian endometrioma for early disease control and long-term fertility preservation in adolescents and women of very young age. A history of cyclic pains in adolescents is highly associated with endometriosis. Sonography enables the diagnosis of small endometriomas 1-2 cm in diameter. Although it is obvious that the risk of damage to normal ovarian tissue is diminished when operating and removing a 2 cm endometrioma, it is not approved since there are currently no tools available to identify at-risk patients. Additionally, performing laparoscopic surgery with 5 mm instruments in patients with small endometriomas will likely cause more harm than benefit.

Methods: A literature review was performed using key words for endometrioma surgery, in vitro fertilization (IVF), implantation rate, pregnancy rate and adolescents. The pros and cons of surgical removal prior to assisted reproductive therapy (ART), outcomes of endometrioma surgical treatment before IVF, and current recommendations for endometrioma removal were investigated.

Results: The total patient population from articles supporting removal of endometrioma before assisted reproductive therapy and evidence against were 30,741 and 9983 respectively. However, the only study reporting a statistically significant result found an 8.2% implantation rate for the surgical removal group vs. 12% in the direct-to-IVF group, and 14.9% pregnancy rate in the surgical removal group vs. 24.9% in the direct-to-IVF group. Damage to ovarian reserve and function due to surgery is exacerbated by large cyst size, stripping of the pseudocapsule and older age. Larger endometrioma, ablation of the endometrioma base and younger age are

associated with higher recurrence rate.

Conclusion: The patient's age, in addition to the size and type of endometrioma, can direct and indicate the timing of surgical management. Bilateral endometriomas and those larger than 7 cm are associated with more damage to ovarian reserve due to disease and surgery, as compared with unilateral lesions and those smaller than 7 cm. High-risk adolescents and very young women seeking fertility treatment can thus benefit from an early diagnosis of endometrioma. Treatment by trans vaginal hydro-laparoscopy of selected cases can probably be suggested for the treatment of small endometriomas, since 5fr instruments are used following microsurgery principles. Therefore, an early diagnosis of endometrioma, especially in young patients, must be encouraged, improved and standardized, through stepwise clinical reasoning and diagnostic testing.

6. Technical Note

Single-port three-dimensional endoscopic subcutaneous mastectomy for gynaecomastia: an aesthetically superior and novel approach

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Cite this article: Mok CW, Hing JXJ, Tan SM. Single-port three-dimensional endoscopic subcutaneous mastectomy for gynaecomastia: an aesthetically superior and novel approach. *Mini-invasive Surg* 2019;3:40.

<http://dx.doi.org/10.20517/2574-1225.2019.39>

Abstract

Gynaecomastia is a benign clinical condition that can occur in men of all ages, attributed by the proliferation of glandular tissue. Most patients are asymptomatic while symptoms ranging from mild discomfort to severe pain can present in patients with gynaecomastia. In addition to these, this condition may affect the psychological well-being of patients leading to a need for further treatment. Medical treatment of primary gynaecomastia in the form of anti-oestrogen therapy has not been proven to



be effective and there is no consensus regarding the drug of choice or optimal duration of treatment. Surgical treatment is usually the standard treatment in primary gynaecomastia. There have been various techniques described in the literature with the aim of restoring a pleasant chest shape with limited scar on incision. Most of the techniques however involve the use of a peri-areolar or a Wise pattern incision, which can be obvious, especially in patients with a tendency to scar badly. The authors describe a novel approach, whereby a single-port endoscopic subcutaneous mastectomy using the three-dimensional endoscopic system with incision placed along the anterior axillary line was performed for a patient with gynaecomastia and thereby conferring excellent aesthetic outcomes.