



Minimal Invasive Myomectomy with Morcellation for Giant Myoma: A Challenge or a Questionable Approach?

Christos Iavazzo¹, Ioannis D. Gkegkes^{2,3}

¹Department of Gynaecological Oncology, Metaxa Cancer Hospital, Piraeus, Greece, ²Athens Colorectal Laboratory, Athens, Greece, ³Department of Colorectal Surgery, Royal Devon and Exeter NHS Foundation Trust, Exeter, UK

This study aimed to discuss the possible role of morcellation for a giant myoma in the minimal invasive approach. Current literature, including U.S. Food and Drug Administration guidelines, was reviewed. We found that safety of morcellation for a giant myoma is questionable. The risk and benefits of morcellation as well as alternative treatment options should be discussed with each individual patient.

Key Words: Laparoscopy, Morcellation, Myoma, Robotic, Safety

With great deal of interest we read the article entitled: “The Largest Uterine Leiomyoma Removed by Robotic-Assisted Laparoscopy in the Late Reproductive Age: A Case Report” by Jeong et al. [1].

The authors present their technically demanding myomectomy in a perimenopausal patient with a 28 cm subserosal fibroid by using excellent new technology including da Vinci XiTM, RUMI[®] uterine manipulator, Tropan Single port RUS-300[®], StratafixTM barbed suture and an electric morcellator (Morcel Power PlusTM).

We agree that there is a decreasing trend towards hysterectomy and in favor of myomectomy in patients with fibroids but with what criteria of patient’s age, need for fertility preservation, size of fibroid and risk of malignancy [2]. We disagree that a myomectomy via minimal invasive approach could become best practice for a 50-year-old perimenopausal patient. The standard of care we consider to be total abdominal hysterectomy with bilateral salpingo-oophorectomy (although bilateral oophorectomy in a 50-year-old woman who has not yet menopause might be questioned) [3] as there are technical difficulties regarding safe cleavage, removal and repair of myometrial defect and further-

more the benefits of open approach overcome the risks of minimal invasive approach especially if we exclude cosmesis and enhanced recovery.

As already mentioned in the article since 2014, U.S. Food and Drug Administration (FDA) issued the warning against power morcellation of fibroids due to the risk of tumor dissemination in the scenario of unsuspected leiomyosarcoma. More specifically, laparoscopic morcellators are contraindicated for removal of uterine tissue containing suspected fibroids in patients who are post-menopausal or over 50 years of age, or candidates for en bloc tissue removal through the vagina or via a mini-laparotomy incision. The risk of occult cancer, including uterine sarcoma, increases with age, particularly in women over 50 years of age. After reviewing additional studies, FDA highlighted in 2017 that 1 in 225 to 1 in 580 women who undergo hysterectomy or myomectomy may have uterine sarcoma [4].

Some of the main concerns include delayed diagnosis because of misinterpretation of the initial pathologic specimen, seeding of sarcoma cells throughout the abdominal cavity and upstaging secondary to peritoneal spread [5]. At this case scenario, reoperation for

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Address for Correspondence: Ioannis D. Gkegkes, Department of Colorectal Surgery, Royal Devon and Exeter NHS Foundation Trust, Barrack Rd, Exeter EX2 5DW, UK

Tel: 44-7444251353, E-mail: ioannisgkegkes@gmail.com, ORCID: <https://orcid.org/0000-0001-8637-5679>

completion staging is considered essential and around 15% could be upstaged because of findings of disseminated peritoneal sarcomatosis [6]. The prognosis of patients with peritoneal sarcomatosis even after systemic chemotherapy is generally poor with a reported median survival of 6–15 months and the recurrence rate even after complete resection can be high reaching 40%–60% [7].

Power morcellation within an endoscopic bag could be suggested; however, there is still a risk of contamination during the myomectomy itself. More specifically, FDA recommended that minimal invasive power morcellation for myomectomy or hysterectomy can be performed only with a tissue containment system only in appropriately selected patients.

The authors have used several factors to preoperatively exclude malignancy including patient's body mass index, neutrophil to lymphocyte ratio, presumed subserosal myoma that was separated from the endometrium on magnetic resonance imaging, tumor markers (e.g., CA 125 or lactate dehydrogenase [LDH]). However, at the moment there is no method that can definitively differentiate sarcomas preoperatively in patients who are going to be operated with a preliminary diagnosis of uterine fibroid [8].

This was a successfully performed challenging operation that could be considered as the exception of the rule and could be performed by experienced surgeons in robotic approach and after informed consent of the patient regarding the possible treatment alternatives, benefits and possible risk of contamination especially when fertility preservation is not considered of high importance as in a case of a perimenopausal patient [9].

Once again, we would like to thank the authors for their well-presented case report.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

REFERENCES

1. Jeong HG, Lee MJ, Lee JR, Jee BC, Kim SK. The largest uterine leiomyoma removed by robotic-assisted laparoscopy in the late reproductive age: a case report. *J Menopausal Med* 2021; 27: 37-41.
2. Wallace K, Zhang S, Thomas L, Stewart EA, Nicholson WK, Weigienka GR, et al. Comparative effectiveness of hysterectomy versus myomectomy on one-year health-related quality of life in women with uterine fibroids. *Fertil Steril* 2020; 113: 618-26.
3. Cusimano MC, Moineddin R, Chiu M, Ferguson SE, Aktar S, Liu N, et al. Practice variation in bilateral salpingo-oophorectomy at benign abdominal hysterectomy: a population-based study. *Am J Obstet Gynecol* 2021; 224: 585.e1-585.e30.
4. U.S. Food and Drug Administration. Laparoscopic Uterine Power Morcellation in Hysterectomy and Myomectomy: FDA Safety Communication. Silver Spring (MD): U.S. Food and Drug Administration, 2014 [cited 2017 Jul 6]. Available from: <http://way-back.archive-it.org/7993/20170722043342/https://www.fda.gov/MedicalDevices/Safety/AlertsandNotices/ucm554139.htm>.
5. Aksoy H, Aydin T, Özdamar Ö, Karadağ ÖI, Aksoy U. Successful use of laparoscopic myomectomy to remove a giant uterine myoma: a case report. *J Med Case Rep* 2015; 9: 286.
6. Einstein MH, Barakat RR, Chi DS, Sonoda Y, Alektiar KM, Hensley ML, et al. Management of uterine malignancy found incidentally after supracervical hysterectomy or uterine morcellation for presumed benign disease. *Int J Gynecol Cancer* 2008; 18: 1065-70.
7. Karamveri C, Pallas N, Kyziridis D, Hristakis C, Kyriakopoulos V, Kalakonas A, et al. Cytoreductive surgery in combination with HIPEC in the treatment of peritoneal sarcomatosis. *Indian J Surg Oncol* 2019; 10: 40-5.
8. Taşkın S, Varlı B, Yalçın İ, Ortaç F, Taşkıran Ç, Güngör M. Morcellation in gynecology: short review and suggestions from Turkish Society of Minimally Invasive Gynecologic Oncology. *J Turk Ger Gynecol Assoc* 2021; 22: 53-7.
9. American College of Obstetricians and Gynecologists' Committee on Gynecologic Practice. Uterine morcellation for presumed leiomyomas: ACOG committee opinion, number 822. *Obstet Gynecol* 2021; 137: e63-74.