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LETTER TO THE EDITOR

Obese patients with endometrial cancer: is the robotic approach a challenge or a new era of safer and more cost-effective management of such patients?

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To the Editor,

With a great deal of interest we read the recent article in your journal entitled: "The roles and limitations of robotic surgery for obese endometrial cancer patients: a common challenge in gynecologic oncology" by Shemshedini et al. [1]. We agree with the authors of this fine paper that even the most experienced surgeon in robotic surgery can face challenges in the management of obese patients with endometrial cancer that are related to their multiple perioperative comorbidities and their difficult intraoperative treatment. However, we would like to stress on our belief that robotic approach could be a new era of safer and more cost-effective management of obese patients or even further we would like to mention that obesity in such patients might be considered as an absolute indication for robotic surgery.

The prevalence of obesity in the general population of the western world is increasing dramatically. In the United States, two-thirds of adults are obese or overweight. Endometrial cancer is obesity related. Actually, the majority of such patients are obese (around 70 %) [2]. As the authors mention, LAP2 trial revealed the main advantages in postoperative pain, length of stay, and reduction of complications with improved quality of life postoperatively while patients treated laparoscopically had no difference in recurrence rate, progression-free or overall survival. However, the conversion to open rate could reach 25.8 % while higher BMI was associated with failure to successfully complete laparoscopy.

For those reasons, as the benefits of minimally invasive surgical approaches become clearer, the use of robotics in the endometrial cancer population is becoming more popular among surgeons and patients. Despite the known advantages of robotic surgery, there has been a hesitancy to use this approach in obese patients, because of both patient physiologic limitations and a fear of conversion to open because of lack of experience, technical challenges or anaesthesia-related complications. Recently, a study revealed that none of the conversions to laparotomy were due to inability of the patients to tolerate even the steepest possible Trendelenburg positioning, regardless of the degree of obesity [3].

More specifically, the vast majority of obese patients can successfully tolerate robotic procedures with the support of experienced anaesthetists. Moreover, although staging robotic procedures for endometrial cancer need steeper Trendelenburg, the robot itself can lift the abdominal weight and relieve the patient. Tips and tricks that could improve the robotic approach include careful stabilisation of patients in steep Trendelenburg position to avoid sliding, rapid nasogastric decompression, high port placements, and techniques such as sigmoid colon placation [3].

Robotic approach has been shown to be a safe approach with fewer complications including minimal blood loss, less need for blood transfusion, fewer wound complications or ICU admissions and shorter hospital stay compared to the open technique as well as lower conversion rates compared to laparoscopy [4]. Moreover, complete surgical staging with the assistance of robotic technology could also be feasible [5]. Recently, Backes et al. showed that there is a slightly higher but not statistically significant rate of

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postoperative complications in obese patients (3.6 %) as compared to nonobese patients (2.6 %) treated robotically [6]. Corrado et al. showed that robotic surgery even in super obese patients with endometrial cancer is safe and feasible while an increase in BMI did not change the surgical (intra- and postoperative complications and conversion rates) or oncological outcomes [7]. In the same study, it was found that the frequency of lymph node dissection decreased in patients with higher BMI; however, the number of lymph nodes removed was similar to open and laparoscopic cases.

There are specific advantages of robotic compared to laparoscopic surgery including easier learning curve and less fatigue for the surgeon, that could support the use of da Vinci® robot (Intuitive Surgical Inc., Sunnyvale, CA, USA) for the majority of the patients with endometrial cancer [8]. Chan et al. showed that with respect to hospital charges for endometrial cancer in the morbidly obese patients, the charges were only 10 % higher in robotic compared to laparoscopic or open treated patients [9]. Furthermore, the ease of use and lower complication rates may contribute to lower incremental charges in obese patients. The use of new systems such as da Vinci® Xi system or articulating instruments will further minimise the operative time and cost. For this reason, we would be interested to see a multicentre randomised trial comparing the safety, efficacy and cost of robotic versus laparoscopic versus open approach in obese and super obese patients with endometrial cancer.

We would like once again to thank the authors for the very interesting analysis of their findings.

Compliance with ethical standards

Ethical approval This article does not contain any studies with human participants performed by any of the authors.

Conflict of interest Christos Iavazzo has no conflict of interest. Paraskevi-Evangelia Iavazzo has no conflict of interest. Ioannis D. Gkegkes has no conflict of interest.

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