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Editorial Comment for the paper entitled “Robotic simple prostatectomy is safe and effective technique for benign prostatic hyperplasia: Our single center initial results for 42 patients”

Ali Atan 

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Dear Editor,

I congratulate the authors for their valuable study titled “Robotic simple prostatectomy is safe and effective technique for benign prostatic hyperplasia: Our single center initial results for 42 patients.” After technologic improvements and the development of new endoscopic systems, surgical approaches have changed dramatically in recent years. It has become an obligation to adapt to developing technologies for the surgeons. One of the branches of surgery in which this change and adaptation is the fastest and most prominent is urology. As urologists, we have been experiencing this change clearly in the last 20 years. After the introduction of robotic surgery into daily urology practice, there is an increasing trend in many countries to perform a robot-assisted surgery in all of the cases. There is even an exaggerated incentive to conduct robotic surgery. Open simple prostatectomy (OSP) is one of those overly encouraged surgeries. Although robot-assisted surgery is suitable and reasonable for some urological surgeries, we should provide an answer to the question whether or not robotic surgery is really necessary for all types of urological surgery.

This trend is also visibly present in Turkey. Although there are some advantages of RASP such as less blood transfusion rate, shorter catheter time, and decreased length of stay in hospital, I would like to draw attention to some other important issues regarding RASP:

(1) *Impact on residency training in urology:* Conventional surgical methods still need to be taught during the residency training period in our country because not all of the technologies available in the academic health centers where residency training is given are available everywhere else in our country. It is not possible for every patient with urological problem to reach an academic health center and be treated there. For this reason, urologists who will work in nonacademic hospitals without these technologies should learn conventional methods during their residency period. However, the increasing number of robotic surgeries caused a serious decrease in the number of conventional surgeries that should be observed and even performed in specialist training. It will not be surprising that this situation would eventually lead to an unavoidable decrease in skills and qualifications during the urology residency training in our country. This is also true for many countries in Europe and the USA. Carrion et al.¹ studied current status of urology surgical training in Europe. This study showed that 64% of graduating urologists will work outside of an academic institution, where those technologies would not be accessible. In AUA guideline amendment, McVary et al.² stated that OSP remains the suggested choice for prostates over 80 cc in peripheral rural centers that have a limited access to minimal invasive technologies.

(2) *Efficiency:* OSP has become a rare surgery due to the development of new medical treatments and endoscopic treatment options, and easier access of patients to urologists. In our department, OSP has been performed only in 6% of the patients who underwent surgery for BPH in the last 5 years (unpublished data). Even if it is a rarely performed surgery, OSP is still a method with very successful outcomes when performed in suitable patients. According to the recent EAU guideline, selection of surgical procedure for BPH is closely related to prostate volume. Postoperative early and long-term

Department of Urology, School of Medicine, Gazi University, Ankara, Turkey

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Corresponding Author:
Ali Atan
E-mail:
aliatanpitt@hotmail.com

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outcomes and the possible complications after OSP are well-known. In this guideline, it is also reported that mortality rate after OSP has decreased significantly during the past two decades, and the estimated transfusion rate is about 7-14%.³ In light of these results, OSP should be considered as a method that has passed the test of time. Long-term outcomes for RASP are not yet available.

(3) *Cost*: In this study, the authors mentioned that four robotic arms were used. Price of one robotic arm in our hospital at the moment is around 400-450 USD. The cost of OSP in Turkey is less than the cost of one robotic arm. It begets the question if such high costs are worth the almost identical efficiency rates. What exactly is the situation when an expansive cost analysis is made specifically for Turkey?

(4) *Duration of surgery*: In the present study, mean operation time is 112 minutes. This is a very reasonable time according to previous international literatures. Therefore, I congratulate the authors for their very impressive outcomes. As mentioned in the present study by the authors, the duration of surgery is longer than OSP. In a recent systematic review paper, operation time for RASP was 164.1 minutes.⁴ Lee et al.⁵ found that the mean operation time for RASP was 169 minutes. Most of the patients who need prostatic surgery for BPH are advanced aged patients and have some comorbidities. Thus, the length of the operation time is a significant factor that may cause some serious problems in these patients. While OSP can be performed in less than 1 hour by experienced hands, it should be questioned whether it is necessary to take the risk of the complications associated with longer operation time to achieve similar efficacy.

(5) *Intraperitoneal approach*: OSP is a completely extraperitoneal procedure. However, RASP is performed intraperitoneally. What is the rationale behind performing the intraperitoneal surgery, while there is a surgical procedure that can be performed extraperitoneally with similar efficacy?

(6) *Who or whose benefit from these technologies?* Surgical procedures, during which advanced technologies like robotic surgery are utilized, are naturally expected to result in substantial gains and benefits for the patients, the physicians who conduct the operation, health institutions in which these doctors are employed, the country, and the company marketing the utilized technologies. For the patients, the expected gain of using these technologies is a treatment period that is free or cheaper than the price of previously used methods and more successful in both short and long term. For the physicians, the expected outcome is to conduct the medical procedure more successfully compared to older methods and benefit economically from using the said technology. For the health institutions and the country, the expectance is to gain prestige and make monetary profits. Most importantly, for the company marketing the technology, the only expected gain is selling more of the product and achieving greater economic profits. Based on all these expectations, I strongly believe it

is of the utmost importance that meticulous evaluations and economic analyses must be conducted in order to identify who benefits the most from the use of robot-assisted urological surgeries including RASP in Turkey.

In conclusion, although the positive aspects of RASP have been proficiently outlined by the authors in their paper, negative aspects of RASP including residency training, accessibility to the technology, cost, and duration of the surgery should also be considered. These negative aspects are still significant problems in our country. Therefore, we should keep in mind that it is necessary to provide surgical training for OSP in our country even if the number of cases requiring OSP in BPH patients has decreased. I believe it is more suitable to choose the appropriate method considering the advantages and disadvantages of all methods according to the conditions of our country.

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