Chirurgia (2023) 118: 5-7
No. 1, January - February

http://dx.doi.org/10.21614/chirurgia.2836

From the Editor

Catalin Copaescu

Department of General Surgery, Ponderas Academic Hospital, Bucharest, Romania

Corresponding author:
Catalin Copaescu, MD PhD
Associated Professor of Surgery
Ponderas Academic Hospital
Nicolae Caramfil Street, no. 85 A
district 1, Bucharest, Romania
E-mail: catalin.copaescu@ponderas-ah.ro

Robotic assisted surgery (RAS) was perceived as the rising star of the minimally invasive surgery (MIS) since its early stages but, its penetration into the general use of surgery was very slow at the beginning. Over the first two decades of its existence, RAS struggled to be accepted as a valid alternative for standard MIS. Despite the promoted benefits offered by the computer-assisted telemanipulation, the main limitations were related to the financial burden of the technology, while the real advantages over "classic" laparoscopy were modest. While medical institutions were not happy to support a wider use of RAS, a question related to the surgical expertise and indirectly to the better patients' outcomes was raised. Is RAS improving the skills of an average surgeon to be as good as the MIS experts and reaching a higher level for her/his surgical outcomes? As the answer is very complex, and it is related to so many factors, the debate was always marked by many controverses and no conclusions. Often, during those times, an enthusiastic surgeon attracted by robotic technology, happened to be invited to get trained more for laparoscopic skills, rather than encouraged to spending resources for inconsistent benefits for the patients. Moreover, one could often hear during the surgical conferences arrogant quotes such as "a fool with a tool is still a fool" (Grady Booch).

Meanwhile, after failing to get thought the main door of cardiovascular surgery, RAS proved to be a perfect match for the urologic pathology. Robotic assisted radical prostatectomy (RARP) has become the glory of RAS.

In time, the rapid evolution of medical technologies and of the surgical experience as well, have changed the perception of robotic-assisted surgery. The better understanding of the specific advantages and limitations of both RAS and advanced laparoscopy or video-assisted thoracoscopic surgery (VATS)

have dramatically influenced the surgical approach's selection. Moreover, the exclusive competition between robotic assisted surgery and the "classic" video-assisted surgery approach has turned into a more constructive way of supporting the development of advanced MIS.

Now a days, after three decades of RAS evolution, its advantages such as 3D high-quality view of the operative field, the increased number of freedom degrees, the elimination of fulcrum effect of laparoscopy or the better control of the surgeon's fatigue have become more relevant for the institutions and patients' outcomes.

Aside to the fact the robotic assisted surgery is standard of care for major urologic operations (radical prostatectomy, nephrectomies, nephron-sparing neoplastic resections, or radical cystectomies), RAS is now widely penetrating into many fields of surgery. Colorectal, pancreatic, upper GI surgery, gynecological procedures, abdominal wall repair, thoracic or mediastinal operations are currently demonstrating advantages of robotic-assisted surgery for certain pathologies. Today, integrated stapling technology, fluorescence, ultrasound, or advanced wireless capabilities are standard for robotic platforms. As more features such as artificial intelligence (AI) are expected to be integrated into these platforms and more companies are involved into the RAS market, the use of computer-assisted telemanipulation is expected to be involved more into surgical practice and surgical education.

The development of robotic surgery in Romania had a particular history, mostly related to the financial support for this technology. A successful public-funded robotic surgery program was launched in 2007, under the leadership of Professor Irinel Popescu. The program was initiated in Fundeni Hospital (1) and it was latter extended to several other public hospitals countrywide. As a consequence, general surgery and urology made important steps for the development of RAS in the region, marking the first stage of robotic surgery in Romania. As the public-funded program was over in 2013, a decline of RAS usage was immediately noted. The interest for robotic-assisted surgery raised again after 2017, but only in the private settings. Now a days, in Romania, robotic assisted surgery is almost exclusively performed in private hospitals, being applied for general surgery, urology, gynecology, thoraco-mediastinal and pediatric surgery.

The Romanian Association for Endoscopic Surgery (RAES) has a chapter dedicated to robotic technologies named "Romanian Robotic Surgery Club" (RRSC). RRSC is organizing an annual meeting since 2019 and it is actively involved in the education and development of RAS in Romania and in the region.

Over the time, Chirurgia has promptly published articles on robotic assisted surgery, highlighting the surgical technique or the teams' experiences on RAS, such as its' use for colorectal surgery, pancreatic, adrenal, revisional bariatric surgery, thoracoscopic operations and many others.

The actual issue of Chirurgia is entirely dedicated to robotic assisted surgery. It is proposing a very interesting collection of ten articles reflecting various applications of robotic assisted surgery for colorectal, urological, gynecological, and thoraco-mediastinal pathologies. Beside this, the articles are referring to surgical experiences in using different platforms, naming here DaVinci but other technologies as well (Versius - CMR Surgical).

The readers interested in colorectal surgery may find may get in touch with the difficulties of making the first steps in a robotic surgery program (in two hospitals located in Bulgaria and Romania) or may find important technical details about the robotic-assisted right colectomy with total mesocolic excision in an article signed by the experienced team of Luigi Boni (Italy). Furthermore, one may identity the interesting results of the reviews over the use of technology for controversial situations, such as simultaneous robotic surgery approach for colorectal and metastatic lesions.

Those looking for the state of the art in

robotic surgery in Achalasia may find an interesting article submitted by Giuseppe Palomba (Naples, Italy).

For the gynaecologists and not only, this issue consists a retrospective study looking to the advantages of RAS for performing gynaecological operations in obese patients (Christos Iavazzo et al, Greece) and the results of using robotic surgery for the standardization of hysterectomy in patients with deep infiltrating endometriosis proposed by a surgical team from Romania (Elvira Bratila et al).

The urologists may find outstanding information related to robotic radical cystectomy and urinary diversion surgery signed by the experienced team of Nicolae Crisan (Cluj, Romania).

Nevertheless, progress is ignited by the effort of medical teams determined to push the application of technology toward limits not yet reached. For new robotic-assisted surgery procedures there is a need of time to demonstrate their benefits, to discover and correct the inadvertent use, to prevent complications, to design and develop protocols ready to be widely applied. A sequence of this process is reflected in the pages of this issue as the readers may find two articles dedicated to the use of robotic-assisted surgery for rare situation. The two articles, "Robotic Approach for Median Arcuate Ligament Relief: A Case Report and Literature Review" and "Robotic resection of ectopic thyroid tissue of the mediastinum - case report and literature review" are signed by the surgical team of Ponderas Academic Hospital (Bucharest, Romania).

I am grateful to Chirurgia's Editorial Board for this opportunity to coordinate an issue dedicated to robotic assisted surgery!

Although financial and socioeconomic inequalities are playing a role in the limitations of the use of robotic technology we hope that our common effort and dedication may contribute to the further development of more accurate surgery.

Reference

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