

2007 World Robotic Gyn Symposium: the dawn of a new age in minimally invasive gynecologic surgery

Arnold P. Advincula

Received: 10 July 2007 / Accepted: 10 July 2007 / Published online: 10 August 2007
© Springer London 2007

Technical advancements have clearly brought about improvements to modern day minimally invasive surgery. This technology has continued to grow by leaps and bounds in all areas of laparoscopy including robotics. Historically, gynecologists have been early adopters and pioneers in the area robotic surgery with utilization of early robotic platforms such as AESOP and Zeus (both Computer Motion, Goleta, CA, USA). Since then, newer surgical platforms such as the daVinci surgical system (Intuitive Surgical, Sunnyvale, CA, USA) have been introduced. Since FDA approval for gynecology in April 2005, the role of robotics in gynecologic surgery has grown and resulted in an evolution and paradigm shift.

On 13–14 April 2007, the first world robotic symposium dedicated solely to gynecology was held in Ann Arbor, Michigan. This event brought to the University of Michigan over 140 participants from throughout the United States and as far away as Asia and Europe. The faculty comprised leading experts who represented the various subspecialty aspects of gynecologic surgery with a combined robotic surgery experience of over 2,000 cases. In addition to cutting edge lectures on various surgical techniques and outcomes, there were three live telesurgeries featured, and breakout sessions. The following overview will touch upon some of the highlights from this groundbreaking event.

Although the gamut of robot-assisted gynecologic surgery was addressed over the two-day symposium, it became

immediately apparent that one of the biggest areas of impact was oncology. Javier F. Magrina, MD from the Mayo Clinic, Scottsdale, started things off with an impressive review of 563 patients treated robotically between February 2003 and December 2006. As Director of Gynecologic Oncology, Dr Magrina demonstrated the advantages of robot-assisted laparoscopic radical hysterectomy. Surgical outcomes such as operative time, estimated blood loss, and lymph node count were either equal to or better than conventional laparoscopy and laparotomy. This was further supported by data on both cervical and endometrial cancer staging from John Boguess, MD who also demonstrated the technique of robot-assisted laparoscopic radical hysterectomy in a live telesurgery from the University of North Carolina at Chapel Hill. Finally, Ricardo Estape, MD from Miami discussed how to maximize the impact of robotics on your surgical practice and Robert Morris, MD from Wayne State University showed how lateral thinking enabled his team to perform a robot-assisted radical trachelectomy. Although five-year survival data were absent, these presentations pointed towards a promising future in oncologic surgery.

Reproductive surgical applications were also highlighted at this symposium. I was able to share my six years of experience with robot-assisted laparoscopic myomectomy for the management of symptomatic leiomyomata along with Michael Pitter, MD from Newark Beth Israel Medical Center. Technical approaches to various pathological presentations were emphasized along with available short-term outcomes. In addition to fibroid management, robotic applications in advanced endometriosis, tubal reversal, and ovarian conservation surgery (cystectomy and transposition) were discussed. Altogether, the area of reproductive surgery represented numerous possibilities. This was complemented by the introduction of a relatively new but burgeoning

A. P. Advincula (✉)
Department of Obstetrics and Gynecology,
University of Michigan Medical Center,
L 4000 Women's Hospital,
1500 East Medical Center Drive,
Ann Arbor, MI 48109, USA
e-mail: aadvincu@umich.edu

application of robotics in the area of urogynecology. Anthony Visco, MD from Duke University Medical Center presented a concise yet detailed rationale and surgical approach to robot-assisted laparoscopic sacrocolpopexy for the management of vaginal vault prolapse. This was followed by Patrick Culligan, MD of Morristown, New Jersey who demonstrated the procedure in a live telesurgery.

An extremely important aspect of this symposium was presentations by two community-based generalists—Drs John Kirk of Napa Valley, California and Thomas Payne of the Ochsner Medical Center in Baton Rouge, Louisiana. With only three years of experience or less between these two surgeons, they had collectively amassed close to 500 successfully completed robotic cases with a conversion rate to laparotomy of less than 5%. Not only were they successful at converting hysterectomy to a minimally invasive approach but were also able to do so in a community-based setting as opposed to a university environment. Javier Magrina, MD further highlighted the advantages of robot-assisted laparoscopic hysterectomy in a complex benign case televised from Scottsdale, Arizona. The successful adoption of robotics by various practice backgrounds

became very clear by the end of the two-day symposium and was only further underscored by the strong attendance of course participants at the coding and reimbursement workshop run by Kathryn Barry, a health policy specialist.

As course director of this symposium, it was exciting to see this event come together on so many different levels. The excitement and enthusiasm, which permeated the air carried over to another special event and that was the distribution of the inaugural issue of the *Journal of Robotic Surgery* to the course attendees. As a Co-editor of this multi-disciplinary robotics journal, this represented not only the culmination of hard work from so many individuals including our Editor-in-Chief, Vipul Patel, MD but also made a statement as to the future of minimally invasive surgery.

In summary, this symposium represents only the tip of the iceberg of things to come. Robotic surgery is clearly here to stay and as technology improves, the future is only brighter. I am excited to be a part of this evolution in minimally invasive gynecologic surgery and cannot wait to see what the next world robotic symposium will bring.