Understanding the spectrum of multiport and single-site robotics for hysterectomy

This striking educational video kicks off an exclusive surgical tips and techniques series from Arnold Advincula, MD

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We present this video with the objective of demonstrating a hysterectomy performed using the robotic single-site approach in juxtaposition with a robotic multiport hysterectomy. In the video, and briefly here, we review the benefits, disadvantages, and challenges of robotic single-site hysterectomy.

The advantages of single-site robotic hysterectomy include:

- possible improved aesthetics for the patient
- allowance for surgeon independence while minimizing the need for a bedside assistant
- automatic reassignment of the robotic arm controls
- circumvention of certain limitations seen in laparoscopic single-site procedures.

The disadvantages of single-site robotic hysterectomy include:

- instrumentation is nonwristed and less robust than that of multiport instrumentation
- decreased degrees of freedom
- longer suturing time
- restricted assistant port use
- decreased applicability to a wide range of procedures, as the surgical approach is limited to less complex and smaller pathology.

In general, each step of the single-port procedure has been found to be equivalent in time to a multiport approach to robotic-assisted hysterectomy—except for the step of vaginal cuff closure. Since the initial experience, aside from overcoming the learning curve of a new surgical approach, various techniques have been modified in order to surmount this challenge, such as closing the vaginal cuff vertically, using a cutting needle versus a tapered needle, addition of a "plus one" wristed multiport robotic arm, or replacing the single-site robotic needle driver with a multiport 5-mm needle driver.

Nevertheless, widespread adoption of single-site robotic gynecologic surgery still requires further technological improvements, and further research and experience is needed to determine its role, benefits, and applications in gynecologic surgery.

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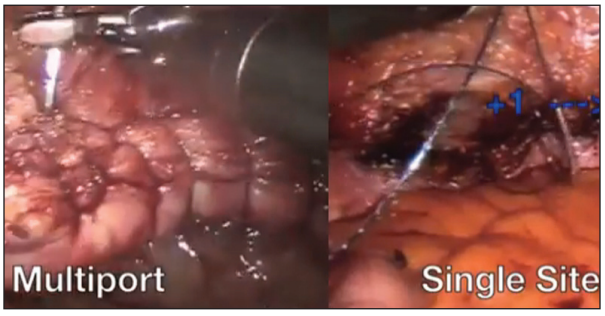

▲ To view the video

Visit Arnold Advincula's Surgical Techniques Video Channel in the Video Library at **obgmanagement.com** or use the QR code at right ››››

Will you be joining me at the AAGL Global Congress on Minimally Invasive Gynecology in Vancouver this November? Single-site robotic surgery will be addressed in luncheons with the experts, a postgraduate course, and a surgical tutorial. Visit www.aagl.org /globalcongress for more information.

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