Are hospital claims about the robotic approach to gynecologic surgery based on reliable data—or mostly hype?

Many claims reflect marketing rather than data, according to this analysis of content from hospital Web sites. Not only was little content based on high-quality data, but alternative approaches were frequently overlooked.

FAST TRACK

Robot brand names were featured in 32.3% of Web sites, and manufacturer-based images and text in 64.1% and 24.0% of sites, respectively

Schiavone MB, Kuo EC, Naumann RW, et al. The commercialization of robotic surgery: unsubstantiated marketing of gynecologic surgery by hospitals. Am J Obstet Gynecol. 2012;207(3):174.e1–e7.

EXPERT COMMENTARY
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Although robotic gynecologic surgery has been approved by the US Food and Drug Administration, evidence of its effectiveness is limited. Of the studies that have been conducted, many found no benefit or only slight benefit for the robot, compared with laparoscopic surgery. Nevertheless, the use of the robot in gynecologic surgery has spread rapidly, accounting for more than 200,000 operations in 2009.

In the United States, many patients derive information on the robot from hospital Web sites. In this study, Schiavone and colleagues analyzed the content of these sites for quality and accuracy of information.

Details of the study

Investigators focused on hospitals that had more than 200 beds, settling on 432 institutions in New York, Pennsylvania, Illinois, Georgia, and California. Of these hospitals, 192 (44.4%) featured information about robotic gynecologic surgery on their Web sites.

Manufacturer-based images and text and robot brand names were found in 64.1%, 24.0%, and 32.3% of Web sites, respectively. Of the 192 hospitals with information about the robot on their Web sites, more than 75% reported that robotic surgery is associated with less pain (88.0% of Web sites), a shorter recovery (91.2%), and less blood loss (76.0%). A reduced incidence of scarring (75.0% of Web sites) and infection (58.3%) were also mentioned frequently.

Robotic surgery was described as better overall or as the most effective surgical approach in 41.2% and 26.0% of Web sites, respectively. However, fewer than 50% of Web sites identified the comparison group (laparoscopic or open surgery). The percentage of sites that featured evidence-based data, the cost of the robotic approach, and operative times was 14.6%, 3.7%, and 2.7%, respectively.

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WHAT THIS EVIDENCE MEANS FOR PRACTICE

When a patient asks about robotic surgery, it may be useful to first point out that laparoscopic (nonrobotic) surgery is minimally invasive, avoiding large abdominal incisions. Reviewing risks and benefits of robotic versus alternative approaches, based on solid evidence from well-conducted trials, allows the patient to make a well-informed decision as she pursues surgical treatment.

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Randomized trials paint a different picture

Results from randomized trials of gynecologic surgery have indicated that the benefits of the robotic approach are limited, whereas cost and operative times are increased. For example, in a single-center, blinded, randomized trial of 78 patients undergoing sacrocolpopexy for vaginal prolapse, Paraiso and colleagues found a longer operating time for robotic surgery (a difference of 67 minutes between robotic and laparoscopic sacrocolpopexy; 95% confidence interval [CI], 43–89; P <.001), as well as greater postoperative pain (necessitating use of nonsteroidal anti-inflammatory drugs for a median of 20 days vs 11 days; P <.005) and higher cost (a difference of $1,936; 95% CI, $417–$3,454; P = .008). The groups had equivalent outcomes 1 year after surgery.[1]

In a randomized, controlled trial of 95 women undergoing hysterectomy, the robotic approach was associated with a longer mean operative time than the laparoscopic approach (106 vs 75 minutes), but produced similar results in other measures (blood loss, complications, analgesic use, and return to activity).[2]

Although most patients trust the health information provided by hospitals, this study indicates that much of the Web-based information on robotic gynecologic surgery is not backed by sound evidence and is influenced by the manufacturer. This approach to promoting the robot drives up the cost of health care and misleads patients.

References

1. Paraiso MF, Jelovsek JE, Frick A, Chen CC, Barber MD. Laparoscopic compared with robotic sacrocolpopexy for vaginal prolapse: a randomized controlled trial. Obstet Gynecol. 2011;118(5):1005–1013.
2. Sarlos D, Kots L, Stevanovic N, von Felton S, Schaer G. Robotic compared with conventional laparoscopic hysterectomy: a randomized controlled trial. Obstet Gynecol. 2012;120(3):604–611.

FAST TRACK

Only 14.6% of Web sites featured evidence-based data about the robot