Complications in Robotics: Hype or Real?

Over the last several months, multiple newspapers and media outlets have reported on the complications of robotic surgery. There also have been advertisements about robotic complications by attorneys looking for clients, including the “Bad Robot Surgery” site.

However, over the last seven years, not one report has been published that shows that robotic surgery has a higher overall complication rate than either laparoscopic or open surgery. What the literature does show is that many more open surgeries have been converted to minimally invasive surgery, and that robotic surgery has a lower complication rate than open surgery by a factor of 10.

The many outspoken anti-robotic surgeons throughout the country are adding to the confusion. Recently, the president of the American College of Obstetrics and Gynecology, who is not a robotic surgeon, made a formal, negative statement about robotics without discussing it with the College or experts in the field. This is the same type of backlash we had when we started doing laparoscopy, and clearly laparoscopy is still here and doing well.

During the initial learning curve of robotics, some complications can occur from losing sight of an instrument or not tying a knot hard enough; but even in the learning curve documentation, the overall complication rate is still lower than in open surgery. Moreover, once the learning curve is passed, the complex cases can be done with a significantly lower complication rate. Any surgery can have a complication, and robotics is no different. Every patient is counseled before any surgery about known complications of the upcoming procedure. So, the bad press about robotic surgery was baffling to me until I started getting calls from area attorneys with multiple robotic questions.

In this surgeon’s opinion, it seems that the current literature is not important to the media or to attorneys. What is important is that a company with a lot of money, high stock ratings and a deep pocket can possibly be pulled into any complication lawsuit available to the attorneys. As a disclosure, I do not own stock in the company and have nothing to gain or lose, but there is not a single paper that corroborates all the current hype about robotic surgery complications.

Ricardo Estape, M.D.
Medical Director
Center for Robotic Surgery

Robotic surgeons Rafael Perez, M.D. (left), and Jorge Rabaza, M.D., discuss a case.

TAKE A HANDS-ON APPROACH
Arrange a case observation or simulator training by calling 786-662-8877.

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MARK YOUR CALENDAR FOR THE MIAMI ROBOTICS SYMPOSIUM
Physicians with the Center for Robotic Surgery at Baptist Health South Florida are on the forefront of a new kind of surgical technique: single-incision gynecological surgery.

Ricardo Estape, M.D., medical director, performed the first single-incision robotic hysterectomy in South Florida at South Miami Hospital in May. And he is helping advance the surgical capabilities of this technology for increased use in the future.

Dr. Estape was one of the first five surgeons in the country selected by the equipment’s manufacturer to perform the procedure.

**SURGERY YIELDS EXCELLENT COSMETIC RESULTS**

“Single-incision robotic hysterectomy is unique in that the entire procedure is performed through a 2.5-centimeter incision hidden in the natural folds of the umbilicus,” Dr. Estape explained. “It essentially provides the same patient benefits as traditional laparoscopic hysterectomy. However, the primary benefit of the single-incision approach is aesthetics. The surgery leaves no visible scar.”

The new robotic technology allows a port to be placed in the small opening in the umbilicus. The doctor inserts the robot’s camera and two armlike instruments into the patient’s abdomen through this single port.

**ASSESSING BENEFITS AND LIMITATIONS**

The FDA has approved the use of this instrumentation to treat benign conditions requiring a hysterectomy and removal of the ovaries and fallopian tubes. Though Dr. Estape is one of the most experienced surgeons using this specific technology, he is taking a very cautious approach.

“Although this is cutting-edge technology, it has limitations. The technology for single-incision robotic hysterectomy does not involve wristed instruments, which limits surgical movements and narrows the field of work,” he said. “The technology can yield excellent results in the appropriate patient, but its surgical capabilities are still reduced compared with traditional laparoscopic technology. It primarily benefits patients in whom cosmetic results are a primary focus.”

**EXPERTISE HELPING IMPROVE SURGICAL APPROACH**

Dr. Estape, who has performed thousands of robotic gynecologic surgeries at Baptist Health, is working with engineers who build the robotic system to advance this technology and rectify these limitations. This collaboration involves demonstrating the challenges of surgery for engineers in their laboratory and in the operating room as well as discussing future needs. Dr. Estape hopes this partnership will improve and expand the use of the surgery.

“Single-incision hysterectomy has a very promising future,” said Dr. Estape. “It has garnered incredible interest from both physicians and patients. While the technology right now has some limitations, it will most likely be everything we need it to be in the near future.”
GALLBLADDER REMOVAL:
COSMETIC BENEFITS WITHOUT COMPROMISING SAFETY

For patients in need of gallbladder removal, or cholecystectomy, physicians at Baptist Health South Florida’s Center for Robotic Surgery offer the most advanced approach available—single-site robotic surgery.

Baptist Health was one of the first in the nation to perform the procedure after the technique received FDA approval in December 2011. Since then, hundreds of patients have undergone single-site robotic gallbladder surgery at Baptist Health hospitals with exceptional results.

“The approach provides many advantages over traditional laparoscopic surgery and is far more advanced than single-site gallbladder surgery without the robotics,” explained Jorge Rabaza, M.D., chief of surgery at South Miami Hospital. “The surgery is safe and effective and provides excellent results.”

IMPROVING ON TRADITIONAL LAPAROSCOPY

In contrast to traditional laparoscopic surgery, which uses four ports, single-site robotic gallbladder removal involves one entry point, which is hidden in the folds of the umbilicus. The approach reduces pain and improves cosmetic outcomes.

“To the surgeon, performing single-site robotic gallbladder removal is very intuitive,” Dr. Rabaza said. “It looks and feels like regular laparoscopic surgery, which we’ve been performing for decades, but offers additional patient benefits.”

ADVANTAGES OF SINGLE-SITE ROBOTICS

Although some surgery centers offer single-site gallbladder surgery using laparoscopic techniques, the procedure has led to complications, such as damage to nearby organs. Single-site robotic surgery, however, provides clear advantages.

“Single-site robotic cholecystectomy provides surgeons excellent visualization. And the robotic arms are able to maneuver in critical ways that human hands are unable to,” explained Anthony Gonzalez, M.D., chief of surgery and minimally invasive and robotic surgery at Baptist Hospital. “The approach allows us to provide the cosmetic benefits of single-incision surgery without compromising safety. This is a critical difference between single-site robotic cholecystectomy compared to laparoscopic single-site surgery for gallbladder removal.”

In addition, more types of patients are candidates for single-site gallbladder removal using robotics rather than laparoscopy. Such patients include those who are obese, have had abdominal surgery and/or have abdominal inflammation. In the past, many of these patients were not candidates for single-site laparoscopy because their medical conditions prevented the level of visualization necessary to perform the surgery effectively.

EXCEPTIONAL EXPERTISE

Although single-site robotic surgery is still evolving, Baptist Health surgeons remain at the forefront of the technology and are helping to advance and refine the approach.

“This approach will be used as a platform for many advanced procedures in the future,” said Dr. Gonzalez, who alone has performed more than 250 single-site robotic gallbladder surgeries and instructs other surgeons in the technique. “Not only do we offer the surgery, but we also continue to study it as a national research site. We are pleased to offer this expertise.”

Dr. Gonzalez extracts a gallbladder through a single-incision procedure. Inset: Dissection of critical structures during cholecystectomy.
Stay Informed

Find previous articles about robotic surgery online. The Center’s newsletter for physicians features expert surgeons discussing the latest advancements and benefits of robotic procedures.

To view archived issues, visit the For Physicians section at BaptistHealth.net/Robotics.

Watch Robotics in Action

Baptist Health Center for Robotic Surgery surgeons performed live single-incision cholecystectomy and hysterectomy procedures on September 12, and you can view them on the Web.

Watch the procedures and hear our physicians describe their techniques and explain the cases. This webcast and other recent live procedures, including a lobectomy to treat early-stage lung cancer, gastric bypass and prostatectomy, are available at bhsf.broadcastmed.net.

Mark Your Calendar for the Miami Robotics Symposium

This April in Miami, world-renowned experts in minimally invasive robotic surgery will present their approaches to surgical cases in a multidisciplinary symposium. The event will highlight the advances in robotic surgery with sessions on gynecology, gynecologic oncology, urology and thoracic, bariatric and colorectal surgery. Attendees will learn strategies for launching and growing a successful robotics program—from a single-robot center to a multirobot, world-leading institution.

The symposium also offers a track geared specifically to allied health professionals.