Robotic surgery—what you need to know

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While robots once were thought of as part of a far-off future, the use of robotic and other advanced technology now is part of everyday life. But when it comes to robotic surgery, some people may find it unnerving or intimidating. A surgeon at Baylor College of Medicine describes the basics of robotic surgery and dispels common myths.

"Robotic surgery is minimally invasive surgery that is performed with the assistance of a robotic arm," said Dr. Michele Loor, assistant professor in the Michael E. DeBakey Department of Surgery in the division of general surgery at Baylor. "The surgeon makes several small incisions and places ports, which allow for passage of a camera and instruments. Unlike laparoscopic surgery, these instruments and camera are mounted on robotic arms that can be controlled by the surgeon from a remote console."

Robotic surgery can be used for many types of surgeries, including prostate, gynecologic and cardiothoracic cases. General surgeons are able to do gall bladder surgery, hernia surgery, cancer operations and colon surgery using a robot.

"The robot provides excellent visualization, greater degrees of freedom and very precise movements," said Loor, who performs surgery at Baylor St. Luke's Medical Center and uses robotic procedures to perform hernia repairs, including groin, abdominal wall and recurrent hernias.

These benefits allow surgeons to perform more complex procedures than they might with laparoscopic surgery. In addition, robotic surgery often leads to a shorter stay in the hospital, less postoperative pain and quicker return to activities than open surgery.

A common myth about robotic surgery is that the surgeon is performing the procedure from a different room. However, Loor said that the surgeon always is in the room and the console that is used to control the robot is just a few feet away from the patient. In addition, there is an assistant at the bedside with the patient at all times, as are members of the anesthesia team and a circulating nurse.

Another myth that Loor clarified is that the procedure is programmed. In reality, the surgeon directly controls each movement of the robotic arms and instruments in real time.

"Each movement that the surgeon makes with his or her hands at the console is simultaneously carried out by the robotic controls," Loor said.

The risks of this type of surgery are similar to any other type of surgery. However, a robotic approach to surgery is not always the best for the patient. If a case cannot be completed with the robot, it may require an open incision to be made. Loor advises that patients carefully review the type of surgery and previous surgical history with the surgeon at the time of consultation.

Provided by Baylor College of Medicine