

## UF urologists use robot to shave time off vasectomy reversal, raise sperm counts

January 6 2010

---

(PhysOrg.com) -- University of Florida urologists have used robot-assisted surgery to cut about 20 minutes off average surgery time for conventional vasectomy reversal using a microscope. Sperm count after surgery is comparable over a year for the two procedures, but the robotic procedure appears to result in a quicker return of sperm count.

“For a couple that’s trying to get pregnant, this is a big deal,” said Dr. Sijo Parekattil, director of [male infertility](#) and microsurgery at UF, who led the study.

The findings, now online and to appear in an upcoming print edition of the *Journal of Endourology*, represent the first head-to-head comparison of robot-assisted vasectomy reversal and the microscope procedure that is widely used.

Many types of surgery are now being aided by robots, and surgeons continue to explore new areas in which they can be used.

“This is state-of-the-art stuff, it’s cutting-edge, and a stepping stone to understanding whether or not we can use this technology on a more widespread basis,” said Dr. Wayne Kuang, director of Male Reproductive Health at University of New Mexico, who was not involved in the study. “It’s a natural progression from back in the days when we just had magnified eyeglasses.”

But robotic vasectomy reversal is not without controversy among specialists who say that using an expensive robot to do something that is

already done well simply with a microscope is a waste of resources.

Most patients pay out of pocket for vasectomy reversal. The robot-assisted procedure can cost more than \$3,000 more than the microscope method.

“The big question is did it improve outcomes — either pregnancy rates or the time spent in surgery?” said professor Dr. Jay Sandlow, vice chair of the department of urology at Medical College of Wisconsin in Milwaukee, who initially had reservations about the robotic procedure but after seeing the preliminary results now says he sees value in the method.

“It certainly looks as if he has done that,” said Sandlow, who was not involved in the study. “He has shown a meaningful decrease in the amount of time it takes to do these robotically compared to the open procedure.”

Since many hospital fees are based on time, cutting operating time might offset some of the extra charges associated with the use of the robot.

Parekattil, who has the rare combination of being fellowship trained in both infertility [microsurgery](#) and robotics, suspects that the time reduction happens because the robot allows for more efficient use of instruments with the use of multiple arms and tools simultaneously.

It is too soon to tell whether pregnancy rates have improved since the mid-2009 conclusion of the one-year study in which 20 men had the robotic procedure and seven had the microscopic one. But two months after surgery, average sperm count in the robotic surgery group was 54 million, compared with 11 million in the microscopic surgery group. Early results show that the difference in sperm count between the two procedures decreases over time, however.

Another potential advantage of the robotic procedure is less discomfort for some surgeons who would otherwise stand or sit with their backs bent for extended periods over a microscope.

The robotic procedure has its limitations. Kuang believes that surgical results of the robot-assisted procedure will prove equivalent to the microscopic method, but might not be as useful for a more complicated reversal that involves clearing a secondary blockage that develops close to the testicles.

That's because in that case the surgeon has to hold the sperm tube during surgery. That is difficult to do robotically because a keen sense of pressure is needed in order to avoid crushing the microscopic tubes involved. But Parekattil has developed techniques to stabilize such small tubules while using the robot.

Despite the study's small sample size, physicians say it is promising, and requires more evaluation and longer follow-up of patients to yield more widely applicable results.

“I don't think there's going to be a huge change in practice,” Sandlow said. “But in academia part of what we do is try to push the envelope and try to see what works and what doesn't — and it's through studies like this that we answer those questions.”

Provided by University of Florida

Citation: UF urologists use robot to shave time off vasectomy reversal, raise sperm counts (2010, January 6) retrieved 25 April 2024 from <https://medicalxpress.com/news/2010-01-uf-urologists-robot-vasectomy-reversal.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private

study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.