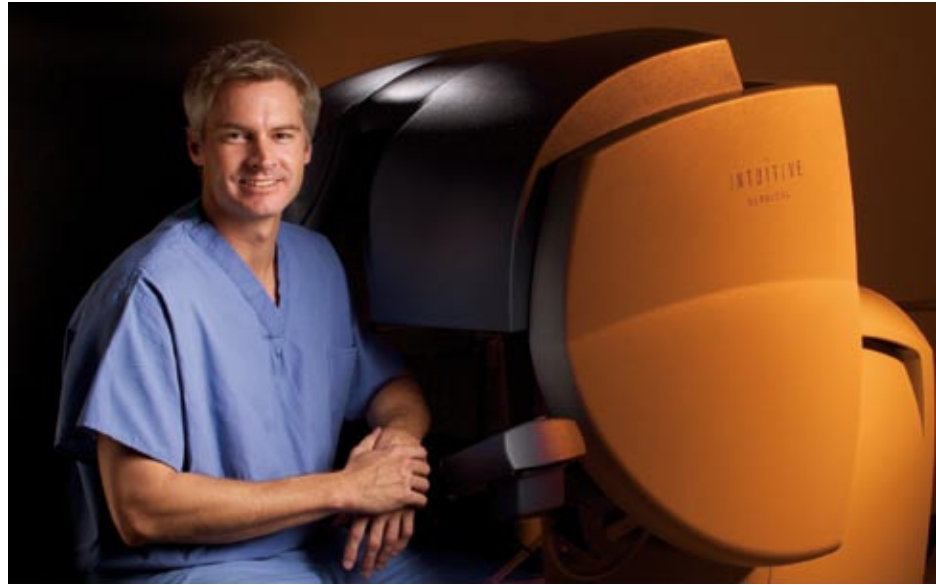


INTUITIVE
SURGICAL®



da Vinci® Myomectomy

Robotic-assisted Myomectomy: A Retrospective Study

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Background

Laparoscopic myomectomy is one of the more challenging surgical procedures. The ability to precisely enucleate leiomyomata and repair the uterus with multilayer suture closure is crucial.

For many surgeons, this is thought to affect conversion rates to laparotomy, which are reported to be as high as 28.7% and may play a role in cases of uterine rupture. Despite laparoscopic benefits such as shorter postoperative recovery, the majority of these operations are performed through laparotomy.

The *da Vinci*® Surgical System addresses the limitations of conventional laparoscopic technology by providing fully articulated instruments, high-resolution 3D vision and an ergonomic interface. These features may allow more surgeons to perform laparoscopic myomectomy with greater ease and excellent clinical outcomes.

Objectives

Demonstrate the feasibility and effectiveness of a robotic-assisted myomectomy using the *da Vinci* Surgical System.

Methods

This retrospective study was conducted on an intent-to-treat basis and includes the first 35 candidates for robotic-assisted myomectomy to be performed at the University of Michigan Medical Center.

Results

Thirty-one of 35 candidates successfully underwent robotic-assisted myomectomy. Three of 35 patients were converted to laparotomy: one due to reaction to vasopressin and two due to an inability to enucleate the myoma. A fourth was found to have adenomatous adenomyosis instead of leiomyoma.

The majority of myomas removed measured more than five centimeters in diameter. Myomas were distributed in all areas of the uterus.

Operative variable	Data (n=35)
Age (yrs)	33.4 (range 24-45)
Myomas removed	1.6 (1-5)
Myoma weight, g	223.2 ± 244.1 (95% CI 135.8- 310.6)
Myoma diameter, cm	7.9 cm ± 3.5 (95% CI 6.63-9.13)
Blood loss, mL	169 ± 198.7 (95% CI 99.1-238.4)
Blood transfusions	0
Operating time, min	230.8 ± 83 (95% CI 201.6-260.0)
Length of stay, days (range)	1.0 (0-5)

Conclusions

Although the majority of myomas removed were large, blood loss and conversion rates remained low. The *da Vinci* System enabled a precise, three-layer suture reconstruction of the uterus. Operating times continued to decrease with experience.

Based on our experience, robotic-assisted myomectomy with the *da Vinci* Surgical System represents a new option for the management of leiomyomata.

References:

Advincula A, Song A, Burke W, Reynolds RK. Preliminary experience with robot-assisted laparoscopic myomectomy. *J Am Assoc Gyn Lap* 11(4): 511-518.

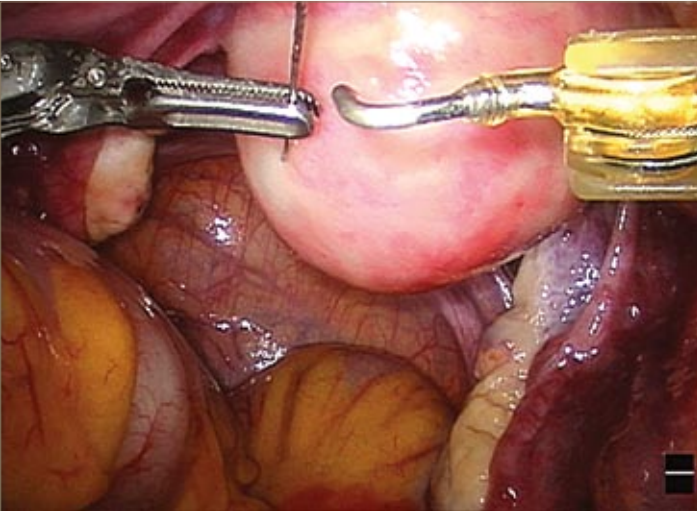
da Vinci® Myomectomy

da Vinci Myomectomy represents the most advanced surgical technique for the treatment of uterine fibroids.

High Resolution 3D Vision • *EndoWrist*® Instrumentation • Intuitive Motion

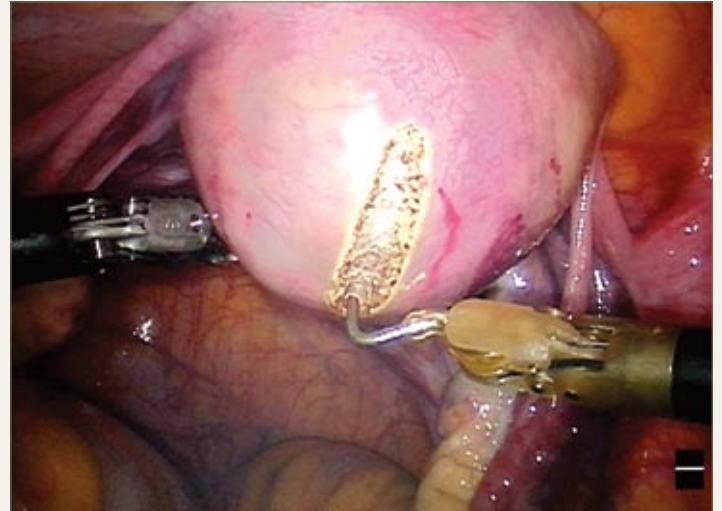
- › Enables precise, three-layer suture reconstruction of the uterus
- › Enhanced capability for meticulous dissection and enucleation of large myomas (> 5 cm)
- › Superior visualization of tissue planes

Key Procedure Steps: da Vinci® Myomectomy



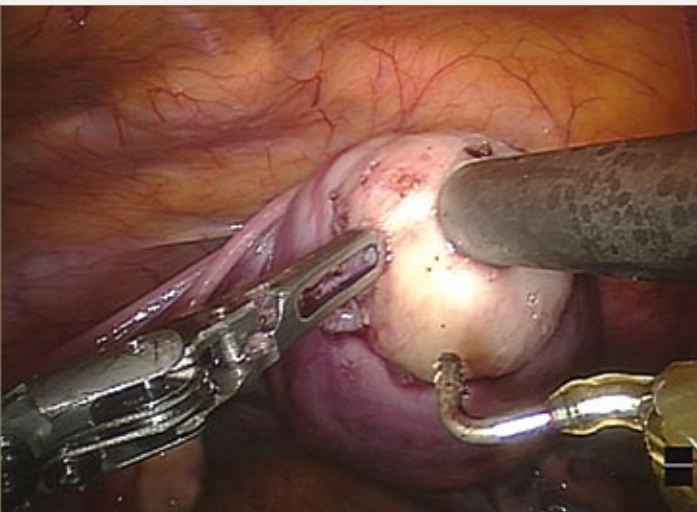
Vasopressin injection

- › Area overlying the myoma injected with dilute vasopressin



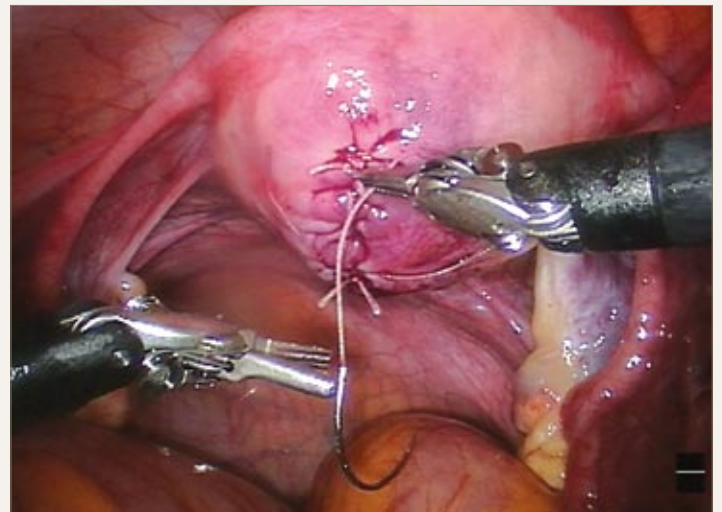
Incising the myometrium

- › *EndoWrist* Permanent Hook Cautery Instrument used to incise the serosa overlying the myomas



Enucleation

- › *EndoWrist* Forceps and *EndoWrist* Permanent Hook Cautery Instrument used to bluntly enucleate the myoma



Suture reconstruction of uterine defect

- › Three-layer suture reconstruction of the uterine defect achieved with *EndoWrist* DeBakey Forceps and the *EndoWrist* Large Needle Driver

NEW! EndoWrist Hot Shears™

The world's first fully wristed cautery scissors

- > A more precise operation
 - > Blunt dissection
 - > Fine cutting
 - > Localized coagulation
- > Faster procedure times
 - > Fewer instrument exchanges



NEW! EndoWrist Cobra Grasper

- > 4 x 2 interlocking teeth
 - > Aggressive grasping
 - > Secure retraction
- > 60° jaw opening
 - > Greater tissue purchase
- > Horizontally serrated inner jaws
 - > Delicate needle and suture handling

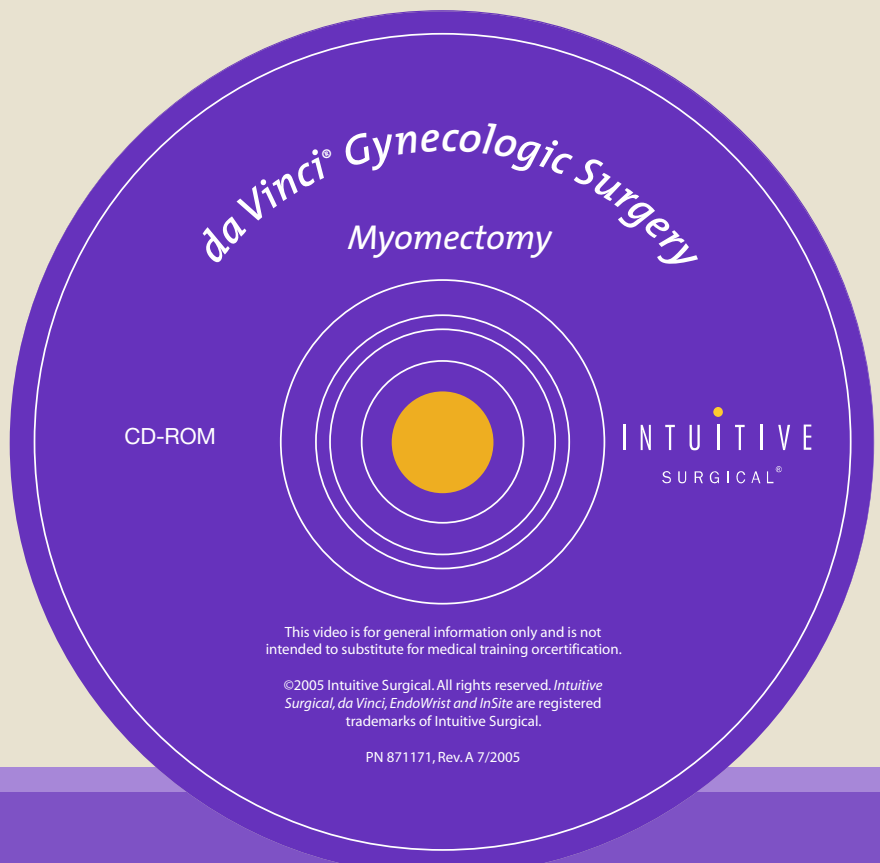


“Regardless of the location of the myoma in the uterus, all defects were able to be closed with a multilayered technique. We believe that with robot-assisted laparoscopy, location and size of myomas as well as closure of the uterine defect need not be limiting factors for successful completion of a totally laparoscopic myomectomy...”

Overall, robot-assisted laparoscopic myomectomy is a promising new technique that may overcome many of the surgical limitations of conventional laparoscopy.”

Advincula A, Song A, Burke W, Reynolds RK. Preliminary experience with robot-assisted laparoscopic myomectomy. J Am Assoc Gyn Lap 11(4): 511-518.

➤➤ Review the CD-ROM for an interactive overview of *da Vinci*® Myomectomy

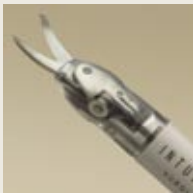


da Vinci® Myomectomy

EndoWrist® Instruments Optimized for da Vinci® Myomectomy

EndoWrist® Instruments provide enhanced dexterity, precision and control

- > 7 degrees of freedom
- > 90 degrees of articulation
- > Intuitive motion and fingertip control
- > Motion scaling and tremor reduction



Hot Shears™

Monopolar Curved Scissors
Product Code 400179
Product Code 400180, Tip cover



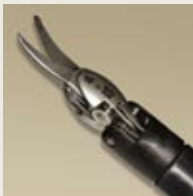
Cobra Grasper

Product Code 400190



Permanent Cautery Hook

Product Code 400183



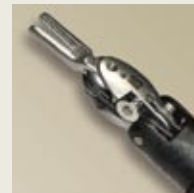
Curved Scissors

Product Code 400178



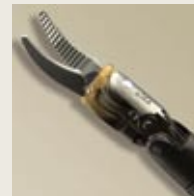
Large Needle Driver

Product Code 400006



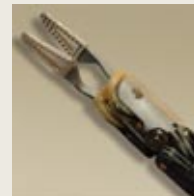
DeBakey Forceps

Product Code 400036



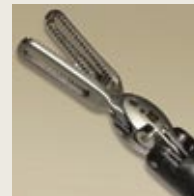
Maryland Bipolar Forceps

Product Code 400172



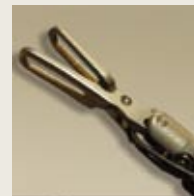
PreCise™ Bipolar Forceps

Product Code 400110



Cadiere Forceps

Product Code 400049



ProGrasp™ Forceps

Product Code 400093



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