

# Physician breaks ground in robotic cervical surgery

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Performing surgery on a pregnant patient is a delicate matter. Risks to both mother and baby must be carefully weighed in every decision a surgeon makes. Recently, at the University of Texas Medical Branch at Galveston, a surgeon performed a groundbreaking robotic laparoscopic procedure on a 35-year-old pregnant patient whose cervix was too short to sustain a pregnancy.

Dr. Sami Kilic, chief of minimally invasive gynecology and research at UTMB, is the first surgeon in the world reported to have used robotically assisted, ultrasound-guided laparoscopic [surgery](#) to successfully tighten a [pregnant patient's](#) incompetent cervix. The procedure is explained in a new paper now online in the Journal of Minimally Invasive Gynecology. Kilic performed the surgery in December 2011 at UTMB's John Sealy Hospital.

When performed traditionally, abdominal cerclage surgery requires a large incision and a long period of recovery. Kilic's new procedure left the patient with only three tiny abdominal scars.

"The recovery was amazing," said Orejuela. "Two days later I was able to sit on the floor at home and play with my toddler."

Stitches to the cervix during surgery must be precise; a suture placed a hair's breadth the wrong way can puncture either the amniotic sac or a major blood vessel in the mother. With the dual visualization screen of the da Vinci Si robotic surgical system, Kilic was able to view a real-

time ultrasound image on one screen and the operative field via scope camera on another screen, side by side, at the same time he performed the surgery. This two-screen system offers unsurpassed visualization in a laparoscopic surgical situation.

Kilic is an international pioneer in gynecologic robotic surgical techniques and training protocols who was hired by UTMB five years ago to spearhead a state-of-the-art robotic [surgery training](#) program. He is an editor of the first textbook on robotic gynecological surgery, to be published by DeGruyter Publishing in the summer of 2013. He performs and teaches robotic surgical procedures at UTMB and travels extensively to operate and share his techniques with others across the world. He leads UTMB's national gynecologic [robotic surgery](#) simulation training center and is in the process of creating international standards for training medical students and physicians.

Kilic's robotic cerclage surgery last summer lasted two hours. Orejuela, the patient, was discharged home the next day after a one-night stay in the hospital. An ultrasound performed two weeks later confirmed the cerclage had been placed properly. Orejuela proceeded to have an otherwise uncomplicated pregnancy, going into labor at 36 weeks. She delivered a healthy baby girl, Lucia Muñoz, 6 pounds, 11.5 ounces, by Caesarean section. It was her second child.

Her first child, Tomas, was born after she had undergone a traditional abdominal cerclage early in the pregnancy. It took a long time for her to recover. The surgical incision that severed her abdominal muscles had a major impact on her ability to carry out daily activities for many weeks following the surgery, and the residual tenderness at the incision site lasted for months.

"It was not a pleasant experience," she said.

But with Dr. Kilic's new technique, Orejuela, a veteran of seven major surgeries, said she had the easiest recovery she had ever experienced.

"His skills as a surgeon are amazing. This was by far the easiest recovery," she said.

Provided by University of Texas Medical Branch at Galveston

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