

Innovative Imaging Tool Enables Faster Procedures and Better Outcomes for Male Fertility Microsurgery Patients

A 4K-3D video microscope is enabling surgeons at the University of Miami Miller School of Medicine to perform male fertility microsurgery with less time spent in the operating room and improved patient outcomes.



The ORBEYE video microscope speeds procedures and improves outcomes for patients having male infertility microsurgery.

Last year, Ranjith Ramasamy, M.D., associate professor and director of reproductive urology, and his team were the first in Florida to perform procedures using the ORBEYE video microscope. They now have used the tool for more than 50

microsurgeries ranging from vasectomy reversals to microsurgical varicoelelectomies.

The ORBEYE is a digital video microscope that combines the agility and mobility of the most advanced surgical equipment with the magnification of a microscope. The camera provides the highest resolution 3D imagery at the end of a fully mobile arm that relieves surgeons from hunching over a microscope. It also can zoom to up to 26x magnification, as needed. As a microsurgical team works, the procedure is displayed on a large 4K monitor for easy and immersive observation.

June is Men's Health Month, and Dr. Ramasamy calls the ORBEYE a big step forward for male fertility health. Performing surgery on the testicles and other organs of the reproductive system has always posed challenges, he explained because "the structures of the spermatic cord and within the testicles are very small. In the past, we required a fixed microscope to provide the level of magnification required for the procedure that made longer operations more challenging."

Although a traditional microscope made it easy to see while performing fertility microsurgery, it is not designed to move around. That meant that both the large, unwieldy microscope and the patient had to remain in a fixed position throughout the procedure.

"Some have advocated for a robot to address this ergonomic challenge, but they traditionally have only provided 10x magnification," Dr. Ramasamy said. "The ORBEYE video provides 26x magnification."

He adds that the imaging tool has the potential to transform

microsurgical procedures for many specialties, as well.

“Overall, the operative times using the ORBEYE are shorter, which means the patient’s recovery time is faster, and he gets to go home sooner,” Dr. Ramasamy said.