

New procedure at UMC replaces pulmonary valve, avoids open-heart surgery

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Veronica Smith with her husband, Derek, and their daughter. (Photo courtesy of Arizona Health Sciences Center)

(PhysOrg.com) -- Veronica Smith, 26, of Sierra Vista was the first person in Arizona to receive a new pulmonary valve without having open-heart surgery. The procedure took place at University Medical Center.

Last month, 26-year old Veronica Smith of Sierra Vista was the first person in Arizona to receive a new pulmonary valve without having open-heart surgery.

Smith was born with a [congenital heart defect](#) (tetralogy of Fallot) and already had undergone a previous heart surgery to replace the pulmonary valve in her heart.

The new procedure, known as the Melody Transcatheter Pulmonary Valve, or TPV, Therapy, was performed at University Medical Center by pediatric interventional cardiologists Dr. Ricardo Samson and Dr. G. Michael Nichols from the UA department of pediatrics and the UMC catheterization lab team.

Because the procedure was relatively non-invasive, Smith experienced only some minor leg

pain and tiredness. She felt back to normal just a week later. "I feel like I have a whole new heart," she says.

Smith's husband, Derek, was stationed in Afghanistan at the time his wife's procedure was scheduled. UA pediatric cardiologist Dr. Scott Klewer worked with the military to coordinate Derek's return to the U.S. to be with Veronica for the TPV Therapy.

The Melody TPV Therapy was approved by the U.S. [Food and Drug Administration](#) in 2010 as the first replacement pulmonary valve that can be implanted without open-heart [surgery](#). It treats narrowed or leaking [pulmonary valve](#) conduits. A conduit is a surgically implanted tissue valve placed between the right ventricle and pulmonary artery to establish [blood flow](#) between the [heart](#) and the lungs.

"Over time, the conduit wears out and needs to be replaced approximately every seven to 10 years," Samson explains.

"For our pediatric patients who have their first conduit placed by the time they are 10 years old, they are looking at many surgeries during their lifetime," he says. "By having the Melody TPV valve placed by catheterization rather than by operation, they know this will save them from open-heart surgeries in the future."

Two additional patients are scheduled to undergo this ground-breaking procedure in June.

Provided by University of Arizona

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