Procedure replaces heart valve, avoids open-heart surgery

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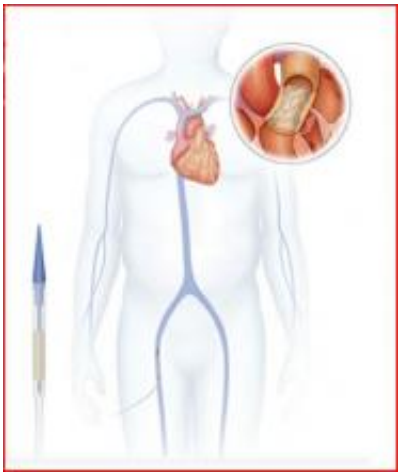

Melody TPV Therapy was approved by the FDA in 2010 as the first replacement pulmonary valve that can be implanted without open-heart surgery.

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This week, 26-year old Veronica Smith was the first person in Arizona to receive a new pulmonary valve without having open-heart surgery.

Smith was born with the congenital heart defect known as tetralogy of Fallot and has undergone a previous heart surgery to replace the

pulmonary valve in her heart.

The procedure, known as the Melody Transcatheter Pulmonary Valve, or TPV Therapy, was performed at the University Medical Center Cardiac Catheterization Laboratory by pediatric interventional cardiologists Dr. Ricardo Samson, Dr. G. Michael Nichols and the UMC catheterization lab team.

Two additional patients will undergo the same procedure in the following days.

The Melody TPV Therapy was approved by the FDA in 2010 as the first replacement pulmonary valve that can be implanted without open-heart surgery.

The therapy 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.

The pulmonary valve directs blood flow from the right ventricle into the pulmonary artery, which splits into two arteries so that the blood from the body can get to both lungs.

Congenital heart defects that most often affect the pulmonary valve and require a conduit include: tetralogy of Fallot, pulmonary artresia, truncus arteriosus, transposition of the great arteries with ventricular septal defect, and double outlet right ventricle.

"Over time, the conduit wears out such that it would need to be replaced approximately every 7-10 years," said Samson.

"For our pediatric patients who have their first conduit placed during

their first decade of life, they are looking at multiple open-heart surgeries over the course of their lifetime. So, by being able to have the Melody TPV valve placed by catheterization rather than by operation, they know this will save them from having numerous surgeries over the course of their lifetime."

Provided by University of Arizona