

PRESS NOTE

World's First Successful Fetal Heart Procedure Combining Balloon Dilatation and Left Ventricular Device Closure

Hyderabad, 3rd January, 2025:

In a ground-breaking medical achievement, a multidisciplinary team of doctors at Rainbow Children's Heart Institute, an exclusive pediatric heart centre has successfully performed a fetal balloon aortic valvuloplasty on a 27-week-old fetus, a life-saving intervention on a fetus diagnosed with critical aortic stenosis. What makes this feat unprecedented is that the puncture site was closed using a device, a pioneering approach that is believed to be the first of its kind globally. The procedure was led by Dr. Koneti Nageswara Rao, Chief Pediatric Cardiologist, Dr. Shweta Bakhru, Pediatric Cardiologist, and Dr. Sri Phani Bhargavi Dhulipudi, Pediatric Cardiologist alongside a multidisciplinary team comprising fetal medicine specialists, pediatric cardiologists, interventional cardiologists, and obstetricians, supported by state-of-the-art technology and infrastructure at Rainbow Children's Heart Institute.

The procedure was carried out with the utmost precision on the fetus after advanced imaging revealed severe narrowing of the aortic valve, posing a threat to the baby's heart function and overall survival. The innovative use of a device to seal the puncture site following the intervention sets a new benchmark in fetal cardiac care.

Fetal aortic valve stenosis may lead to fetal death or hypoplastic left heart syndrome. Fetal balloon aortic valvuloplasty is commonly performed with a success rate of around 70%. Generally, a smaller needle and a medium-sized balloon are used during the procedure. But as the baby developed complications leading to blood leak from the heart, we opted for a bigger needle and bigger balloon. The needle was inserted through the mother's abdomen and uterus into the fetus's heart under ultrasound guidance. A balloon catheter was then advanced through the aortic valve to relieve the obstruction and restore blood flow. For the first time, the team employed a closure device to seal the puncture site, ensuring the safety of the fetus during and after the procedure.

The procedure was a resounding success, with the fetus showing significant improvement in cardiac function. After a healthy delivery, the baby was closely monitored and recently discharged in good health, marking a milestone in fetal cardiology and interventional medicine. This pioneering procedure opens new horizons in fetal interventions, offering hope to families worldwide dealing with severe fetal cardiac conditions. It showcases the potential for advanced interventional techniques to improve outcomes for conditions previously considered untreatable in utero. Rainbow Children's Heart Institute is proud to lead this world-first and remains committed to advancing medical science for the benefit of patients globally.

On this success, ***Dr. Koneti Nageswara Rao, Chief Pediatric Cardiologist, Rainbow Children's Heart Institute***, stated, "This achievement is a testament to our commitment to pushing the boundaries of fetal therapy. The successful use of a closure device in such a delicate and high-risk scenario demonstrates the power of innovation and teamwork in saving lives even before birth."

Dr. Ramesh Kancharla, Chairman and Managing Director of Rainbow Children's Hospital, praised the team at Rainbow Children's Heart Institute for accomplishing a landmark pediatric cardiac procedure. He commended their dedication, expertise, and commitment to excellence, expressing his firm belief that innovative approaches like these will drive significant advancements in pediatric care in the future.

About Rainbow Children's Heart Institute:

Rainbow Children's Heart Institute is an exclusive heart centre, to provide the most comprehensive treatment for children with congenital and other cardiac issues. Backed by the expertise of Rainbow Children's Hospital and driven by a formidable team of cardiac experts, RCHI offers only the best for your child.

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