



INTERHOSPITAL NEONATAL TRANSPORTS, BALLOON PULMONARY VALVULOPLASTY, RETURN TO NEONATAL INTENSIVE CARE UNIT

Farshad Jafari,¹ Hamid Reza Ghaemi,² Alireza Golbabaie,³ Vajihe Marsousi³

¹ Iran University of Medical Sciences; Rajaie Cardiovascular, Medical and Research Center, ² Iran University of Medical Sciences; Rajaie Cardiovascular Medical and Research Center, ³ Tehran University of Medical Sciences; Department of Perinatology and Fetal Cardiology, Shariati Hospital

Correspondence: Farshad Jafari, Farshadjafari@rhc.ac.ir , farshadjafari@gmail.com

History and physical:

Our case was a premature infant (GA = 32) with birth weight of 1300 gram and result of twin cesarean delivery. There was history of twin-twin transfusion syndrome (TTTS) that underwent fetoscopy laser therapy. In fetal echocardiography there was severe right atrial enlargement, severe TR and severe pulmonary valve stenosis. After birth there was severe PS but cardiac intervention was not possible in the hospital where the infant was hospitalized. On the other hand, in the hospital where the balloon valvuloplasty was to be performed, there was not enough experience to care for premature infants with very low birth weight. Therefore, the necessary arrangements were made to transfer the patient to the destination hospital. The infant returned to the neonatal intensive care unit at the hospital of origin only 4 hours after the successful balloon valvuloplasty.

Imaging:

Fetal echocardiography at 22 weeks and neonatal echocardiography at 2 weeks showed severe pulmonary valve stenosis with a gradient of 100 mm Hg (Figure 1). In angiography there was valve doming with post stenotic dilation (Figure 2).

Indication for intervention:

In echocardiography there was severe RVE, RVH and there was 100 mm pressure gradient across pulmonary valve.

Intervention:

Balloon pulmonary valvuloplasty was performed with balloon TOKAI 6*20 (movie) when the neonate had 15 days old. The RV pressure decreased from 130 mm to 70 mm. There was dynamic

sub valvar PS that resolve with Propranolol and the pressure gradient at last echocardiography (3 month after procedure) was 30 mg.

Learning points of the procedure:

That is a good idea to safely transport very low birth weight neonates to the cardiac center and then return them after a cardiac intervention.

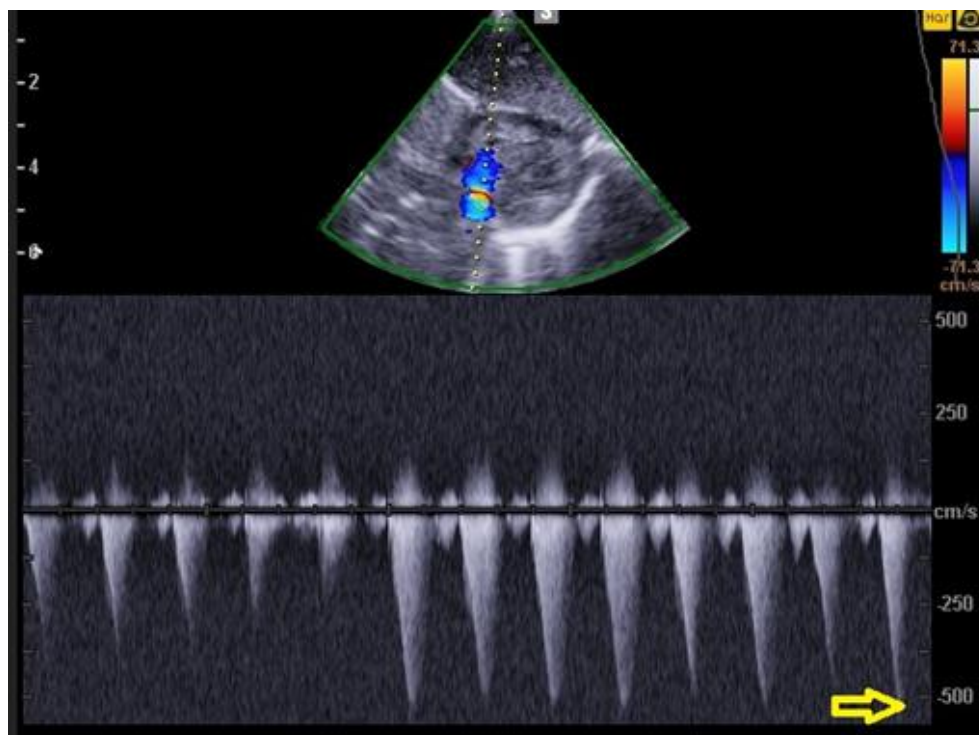


Figure 1: transthoracic echocardiography shows severe pulmonary valve stenosis

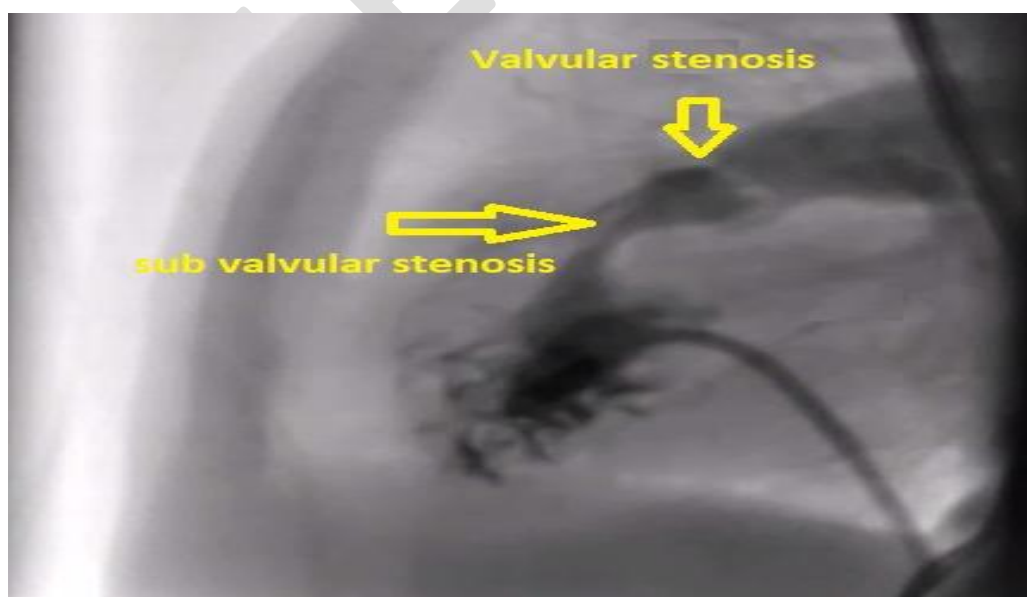


Figure 2: angiocardiography shows severe valvular and sub valvular pulmonary stenosis.