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Foramen Ovale Restriction – Alive: A Case Report

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***Abstract*: We report a case of Foramen ovale restriction with severe RV dysfunction echoed at 7 months of gestation. We followed the case regularly as the parents were not willing for fetal intervention. There was no fetal hydrops and we allowed the parents to continue pregnancy till full term and delivered the baby normally. Post-delivery echo showed Severe RV dysfunction with gross dilatation. We started sildenafil and Dobutamine. On day 5 of life RV function gradually improved and the baby was discharged on day 10 of life.**

***Keywords*: Foramen ovale, right ventricular dysfunction, right ventricular dilatation.**

1. Aim

- To see natural history of Foramen ovale restriction.
- When to intervene in Foramen ovale restriction.

2. Introduction

The foramen ovale is an important communication between the two sides of the heart prenatally, allowing the left ventricle to carry its share of the prenatal circulation and providing flow for growth of left ventricular structures. Restriction of the foramen ovale appears to be a serious disorder of the fetus and can be associated with fetal hydrops, arrhythmias, and other signs of major fetal compromise. Intrauterine foramen ovale (FO) restriction in association with congenital heart disease (CHD) carries a poor prognosis. However, in the absence of CHD, the clinical importance of restrictive FO in the fetus is not well understood. Identifying an obstructed foramen ovale in the fetus warrants the further search for additional cardiac and extracardiac anomalies, which may alter the prognosis. Delivery should be induced, if possible, in cases of foramen ovale obstruction with signs of cardiac decompensation. The incidence of foramen ovale restriction or closure is greater in fetuses with congenital heart defects (CHDs) and obligate atrial shunting and/or left atrial hypertension. Foramen ovale restriction or closure in fetuses with CHD can cause distress in utero or at birth. We suggest performing serial ultrasound. The future for these patients may be more optimistic as fetal intervention procedures are developed and mastered. Premature obstruction of the foramen ovale is a rare but serious clinical entity. Obstruction can be associated with right ventricular failure, fetal hydrops, tricuspid regurgitation, left heart obstructive defects and supraventricular tachycardia. In most cases, the diagnosis is made at the postmortem examination.

The etiology is unknown. Delivery should be induced if possible, in cases of foramen ovale obstruction with signs of cardiac decompensation.

3. Methods

The case was referred to our institute by gynecologist as the level II USG showed massive RA, RV dilatation at 7 months of pregnancy. GE Vivid T8 machine was used and Fetal echo was performed using curvilinear probe.

RA, RV was dilated and dysfunctional. LA, LV was normal for the gestational age. Great vessels were normally related. PFO was 2mm. Ductal and Aortic arches were normal. TR was Moderate.

Serial fetal echos were done every fortnightly as the parents didn't want any fetal intervention. Plan was to do emergency delivery once hydrops develops.

The baby got delivered normally.

Post-delivery echo showed Severe RV dysfunction with gross dilatation. We started sildenafil and Dobutamine. On day 5 of life RV function gradually improved and the baby was discharged on day 10 of life.

4. Conclusion

We should intervene only when its necessary. In our case I tried to impress parents for intrauterine balloon atrial septostomy for a safe outcome. The gynecologist were pressing for early induction. However, the parents didn't agree and left the baby for Natural history of restrictive foramen ovale.

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