

**Prenatal restriction of foramen ovale: important information for obstetrician, neonatologist, pediatric cardiologist or cardiac surgeon?**

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Neonate with an isolated ductal dependent congenital heart defect is usually a candidate for cardiac surgery or intervention, regardless of the prenatal diagnosis. However, in some cases, fetal echocardiography results provide important information and the priority of these selected cases, should be known to pediatric cardiac surgeons, before the neonate's clinical deterioration.

**Material and methods:**

Based on our computer database in our unit in the years 2012-2014 we selected fetuses who had an isolated congenital heart defect and restriction of the foramen ovale defined as its diameter of 4 mm or less, with left – right shunt across foramen ovale, V max > 70 cm/sec along with a typical harsh sound during fetal auscultation during echocardiography and reversal flow in pulmonary veins

Total of 18 cases were selected (0,76 %). One case resulted in termination of the pregnancy and in one case (in twin pregnancy) in premature delivery, giving a total of 16 cases after prenatal diagnosis in our center and delivery with postnatal management in our institution

**Results:**

There were 10 non-survivors and 6 survivors, In the group of non-survivors there were 5 cases of HLHS and in the group of survivors 4.

The only significant difference between survivors and non-survivors pertained to the fraction of newborns operated on up to 11 days, which was significantly higher among the survivors (5/6 vs. 2/8, p=0.031). Our data from this research has crucial value which might help pediatric cardiologists and pediatric cardiac surgeons choose the candidates for early cardiac surgery and information from prenatal echocardiography about restriction of the foramen ovale should be taken into consideration as valuable information for the whole team of specialists, suggesting priority for cardiac surgery.

**Conclusions:**

1) In the event of prenatal restriction of the foramen ovale early surgery by day 10 had a statistically better outcome in terms of survival compared to cases that underwent surgery at a later period at our Institute.

2) Information from prenatal echocardiography regarding restriction of the foramen ovale should be taken into consideration as valuable information suggesting priority for early cardiac surgery