

**Fetal Atrioventricular Block: Management and Outcome from A Single Institution**

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**Introduction:** Fetal atrioventricular (AV) block carries significant mortality and morbidity. It is related to isoimmune process and may lead to a functional-structural cardiac conduction and myocardial abnormality.

**Aim:** In this study we aimed to review our 16 years experience of fetuses presented with maternal lupus related cardiac complications.

**Methods and Results**

18 fetuses were diagnosed with atrioventricular block from 2001 to 2017. Of these, only 1 was terminated with hypoplastic left heart syndrome(HLHS) before 20 weeks of gestation. 2 cases had died in fetal period; 1 had hydrops and the other had severe aortic stenosis with atrioventricular septal defect(AVSD). 83,3% were delivered live. 7/15 (46,6%) live births were premature deliveries (29 to 35 weeks). 3 of 15 patients died due to prematurity or respiratory causes associated with congenital heart disease (CHD) in the neonatal period. Of 18 patients; 5 (%27,7) were associated with major structural heart defect(1 left atrial isomerism and AVSD; 1 corrected transposition of great arteries; 1 AVSD and HLHS; 1 AVSD+severe aortic stenosis and 1 Ventricular septal defect-VSD). 4/5 fetuses with CHD (except the one with VSD) died ( 2/5 after birth and the others in fetal period). 7 of the remaining fetuses with normal heart structures had maternal anti-Ro antibodies. 7 fetuses (5 /7 with maternal antibodies) had received dexamethasone+salbutamol therapy of which one had heart failure and the other had hydrops and the rest had significant bradycardia. AV block resolved in 1 of these 7 fetuses. In two seronegative patients the fetal heart block resolved without treatment. 10 fetuses with permanent AV block were alive during follow up and 7 of them (70%) had been implanted PM (5 were transvenous; 2 (<1 year old) were epicardial). The presence of prematurity, CHD, hydrops are the risk factors for mortality. As the group that treated with steroids were more symptomatic; the mortality rate was higher than the cases without treatment (42,8% versus 20%).

**Conclusions:** This study shows us that fetal AV block causes significant mortality when associated with structural heart disease and prematurity. Immunosuppressive agents or betamimetics do not change the dismal outcome in such cases.