

Fetal Heart Arrhythmias and its Fetal and Neonatal Outcomes

Objective

The vast majority of fetal cardiac arrhythmias are non-malignant. However, some can lead to hydrops fetalis and perinatal mortality (PM). There are insufficient studies on the fetal cardiac arrhythmia in our society. On the other hand, arrhythmias make families anxious. Therefore, this study aims to investigate the outcome of this arrhythmia during pregnancy and neonatal periods and to mitigate families concerns on the arrhythmia through providing them with sufficient information and instructions.

Materials and methods

This descriptive-analytic study included 81 pregnant mothers of babies with fetal cardiac arrhythmia discovered in routine monitoring. All cases were subjected to fetal echocardiography and questionnaires were filled. Collected data was analyzed in SPSS 20 ($P < 0.05$).

Results

This study assessed fetal period until 28 days after the day of labor. fetal cardiac arrhythmia was confirmed in 37 cases through echocardiography where the most prevalent arrhythmia was extrasystol arrhythmia with 27 cases (72.97%), 24 of which received intrauterine treatment. However, 2 cases with congenital heart disease experienced heart failure and hydrops fetalis and died in neonatal period and 92.59% of cases survived. The type of arrhythmia in 8 cases were bradycardia, 5 cases sinusoidal bradycardia, and 3 cases atrioventricular block, respectively. However, 7 cases had congenital heart problem, 4 of which suffered heart failure. PM was seen in 6 cases. Tachycardia arrhythmia was seen in two cases (5.4%) with no heart failure or hydrops fetalis. One case died of preterm delivery.

Discussion

Congenital cardiac disease is considered as an important risk factor generating side effects in fetal and neonatal periods. As pregnancy progressed, the frequency of different kinds of arrhythmia decreased and most of them, especially extrasystol arrhythmia, were converted to sinusoidal rhythms.

Keywords: fetal cardiac arrhythmia, fetal echocardiography, hydrops fetalis, perinatal mortality