A RARE CASE OF FETAL PERICARDIAL EFFUSION

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Abstract: Isolated fetal pericardial effusion is rare with very few cases reported in the literature. Fetal pericardial effusion usually occurs as part of hydrops fetalis and rarely as an isolated presentation. In majority of the cases etiology for fetal pericardial effusion is underlying cardiac disease but in some cases no etiological agent is identified. Fetal pericardial fluid up to 2 mm is considered normal and up to 7 mm collection doesn’t produce any adverse event. We report a case of isolated pericardial effusion diagnosed antenatally and managed subsequently with pericardiocentesis. The etiology of the case remains obscure.

Keyword: fetus, pericardial effusion, hydrops fetalis

Case report:
A 31 Years old primi with regular antenatal checkup was diagnosed to have abnormal fetal cardiac morphology by USG. The antenatal period was otherwise uneventful with mother on clomiphene citrate 2 months prior to conception. She had regular USG follow up in the first and second trimester. The 3rd trimester USG done at private scan Centre revealed asymmetric intra uterine growth retardation with moderate to severe pericardial effusion. The fetus corresponded to 37 weeks gestational age and the antenatal doppler studies were normal. The fetal heart rate was 141 bpm and cardiac contractility was normal. Abdomen, KUB, head, neck, spine, and extremities were normal. The neonate was delivered by LSCS with birth wt of 2.3kg. The baby cried soon after birth with normal transition. The baby was admitted for NICU care for 3 days. The postnatal ECHO showed mild to moderate pericardial effusion with no evidence of pericardial tamponade. The child was discharged on day 7 and advised weekly follow up. The child was asymptomatic and the followup ECHO on day 52 revealed moderate to severe pericardial effusion without tamponade. The child was admitted for observation and the next day ECHO revealed pericardial effusion with tamponade.

In view of pericardial tamponade, pericardiocentesis was followed by window pericardectomy. 75 ml of straw colored pericardial fluid was aspirated and fluid was sent for examination. Biochemical analysis was normal. Culture sensitivity and Gram staining were negative. Post operative period was uneventful and child was discharged on 14th post-operative day. On follow up the child was found to have normal milestones and thriving well. Post operative ECHO was normal.

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<th>PRE OPERATIVE</th>
<th>POST OPERATIVE</th>
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<td>CARDIOMEGALY</td>
<td>NORMAL HEART SIZE</td>
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Pericardial effusion

No pericardial effusion
Discussion:
Isolated pericardial effusion usually follows structural abnormalities of the heart like ventricular diverticulum, rupture of ventricular aneurysm, constriction of ductus arteriosus and pericardial diseases like pericardial teratoma, cystic lymphangioma, pericardial rhabdomyoma and epicardial angiofibroma. Careful fetal monitoring for increase in thickness of the pericardial space has to be done since pericardial tamponade warrants immediate management (1). Fetal cardiac interventions for pericardial effusion are done in cases of supraventricular tachycardia, critical aortic stenosis and pericardial tamponade (2). Therapeutic fetal interventions include dilatation of severely stenotic aortic valves, creation of inter atrial communications in restrictive atrial septal defect, percutaneous implantation of ventricular pacemaker etc. Window pericardectomy was done for the present case in view of pericardial tamponade with successful results. Pericardial effusion associated with other malformation warrants karyotyping (3). Worldwide so far 52 cases have been reported with 1/4th of the cases being trisomy 21. The other commonest cause being maternal parvo virus infection (4). In the present case the etiology could not be established inspite of detailed workup. The prognosis for isolated pericardial effusion with size of pericardial thickness upto 7mm has good prognosis as demonstrated in the present case. Pericardial effusion with cardiac malformation carries poor prognosis while pericardial effusion with hydrops has worst outcome (5).

References: