**IDIOPATHIC PERICARDIAL EFFUSION AND CARDIAC TAMPONADE IN CHILDREN WITH TRISOMY 21**

**C.B. Johnson**, A. Qasim, M.A. Aly, A.M. Aly

University of Texas Medical Branch, Galveston, TX, USA

**Introduction:** The association of Trisomy 21 with pericardial effusion is well documented, especially in patients with hypothyroidism and malignancy.

**Case 1:** A 3-year-old female with Trisomy 21 who has been followed up for a secundum ASD developed a progressive pericardial effusion for one year. She was empirically treated with oral non-steroidal anti-inflammatory medications without any improvement. Extensive work up for inflammatory, autoimmune processes, or malignancy was unremarkable. T4 and TSH were also normal. ECHO remained remarkable for a large (9-15 mm) pericardial effusion, which was deemed to be idiopathic. The patient remained clinically stable and is being monitored closely.

**Case 2:** A 2-year-old female with Trisomy 21 who was initially seen at 2 weeks of age and was then lost to follow-up presented with irritability and progressive respiratory distress, especially in supine position. Physical exam was remarkable for grunting, intercostal retractions, and distant heart sounds. An EKG showed diffuse ST elevation. ECHO showed a large pericardial effusion (17-22 mm) with a remarkable diastolic collapse of the right atrium and ventricle consistent with cardiac tamponade (figure). Pericardiocentesis was performed with the drainage of 80 cc of clear fluid. Extensive studies were negative as the previous case. The patient is clinically stable and has a small (3-5 mm) pericardial effusion.

**Conclusion:** Idiopathic large pericardial effusion and even tamponade may be associated with Trisomy 21.

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