Reviewer's report

Title: Challenges In The Pre and Postnatal Diagnosis Of Mediastinal Cystic Hygroma : A Case Report

Version: 4  Date: 8 January 2008

Reviewer: Alan E Donnenfeld

I am familiar with the literature and believe that this case meets one of the 7 criteria for evaluation in the journal: Unexpected or unusual presentations of a disease

Has the case been reported coherently?: Yes

Is the case report authentic?: Yes

Is this case worth reporting?: Yes

Is the case report persuasive?: Yes

Does the case report have explanatory value?: Yes

Does the case report have diagnostic value?: Yes

Will the case report make a difference to clinical practice?: Yes

Comments to authors:

This manuscript, involving the prenatal findings and postnatal diagnosis of a mediastinal cystic hygroma, is an interesting and well-written case report. The principal value lies in considering cystic hygroma in the differential of a prenatal or neonatal thoracic mass. The authors do a good job in discussing the differential diagnosis and management options after delivery.

On several occasions in the manuscript (twice in the abstract, the body of the text in the next-to-last paragraph, and in the concluding paragraph) the comment is made that the location of the mass next to the left phrenic nerve may have accounted for the incorrect prenatal diagnosis of a congenital diaphragmatic hernia (CDH), congenital cystic adenomatoid malformation (CCAM) or teratoma and delayed the correct diagnosis. As the phrenic nerve is not identifiable on prenatal ultrasound imaging, I do not understand how compression of the phrenic nerve could be identified. Possibly, phrenic nerve involvement can cause irregular diaphragmatic movement which is identifiable in a newborn but I am not aware of this finding being reported prenatally, especially because diaphragmatic excursion is intermittent and irregular in fetal life. I would therefore omit any reference to how the prenatal diagnosis was inaccurate because of the mass'
association with the phrenic nerve unless the authors can explain this comment.

I would delete figure 1 (newborn chest X-ray) as it does not display any abnormality.

I would add arrows to figure 2, pointing out the abnormalities described in the figure legends.

I would add an ultrasound image of the fetal chest mass as it was observed prenatally. This would be especially helpful as it could provide an image of a mediastinal cystic hygroma for others to consider when prenatal chest masses are identified.

The authors should note whether the stomach was visualized below the diaphragm on the prenatal ultrasound exam. Presumably, the diagnosis of a CDH was entertained because the fetal mass in the chest was thought to be a herniated stomach or intestinal loop through the diaphragm. If the stomach is visualized in its correct anatomical location in the abdomen, the mass in the left chest is not likely due to a CDH (unless it is an enlarged loop of bowel, which is unusual).

I would add whether color Doppler blood flow was used to evaluate if the fetal chest mass had a vascular component. If blood flow is present, it is useful in narrowing the differential and will help in diagnosing pulmonary sequestration or a vascular tumor such as a hemangioma.

I would make a table of all possible causes of fetal and newborn chest masses (differential diagnosis) instead of listing all the possible disorders in the text.

In the Discussion, third line, a word is missing after "endothelial-lined". The word "mass" should likely be inserted.

In the discussion, I would add that cystic hygromas are reported to occur between 1/6000 - 1/16,000 live births. They can occur anywhere in the body, but 75% involve the posterior neck, 20% involve the axilla, and 1% involve the mediastinum, groin, and retroperitoneum.

Thank you for allowing me to review this interesting case report.

What next?: Accept after minor revisions

Quality of written English: Acceptable