Antenatal Ultrasonographic Diagnosis of Fetal Esophageal Atresia

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Key words : congenital esophageal atresia, fetal esophageal atresia

Introduction

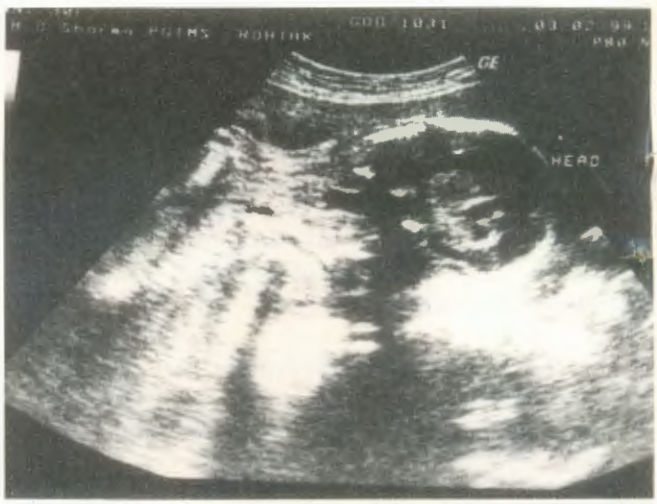
Esophageal atresia is an uncommon prenatal diagnosis due to lack of clinical and sonographic features. Prenatal detection rates range from 8.9-24% in various series[1]. Clinically it presents as maternal hydramnios usually in the third trimester. We report such a case where fetal esophageal atresia was detected on ultrasonography.

Case Report

A 26 year old primigravida presented at 32 weeks of gestation for antenatal care. Her medical and surgical history was unremarkable. On general examination she was healthy. Abdominal examination revealed excess of liqor. Ultrasound study showed amniotic fluid index (AFI) of 27 cms. Evaluation of fetal neck revealed an echolucent dilated blind end of proximal esophagus ending as a pouch (Photograph 1). Fetal stomach was visualized. Provisional diagnosis of fetal esophageal atresia was made. No other fetal anomalies were seen and fetal echo was normal. Regular two weekly sonograms confirmed persistence of radiological fetal neck findings while the baby continued to grow well. At term AFI was 35 cms. A male baby of 2.6 kg was delivered vaginally and shifted to pediatric surgery unit where ligation of tracheo-oesophageal fistula and primary anastomosis were successfully performed on the first day of life.

Discussion

Esophageal atresia arises as a result of failure of tracheo-esophageal septum to separate the primitive foregut into the ventral respiratory portion and the dorsal digestive portion. Its incidence with or without tracheo-esophageal fistula is 1 in 3000-4000 births with slight male preponderance[2]. Inheritance is thought to be multifactorial. There is an obvious need of improving the prenatal diagnosis of this anomaly. The ultrasonographic finding of a blindly ending pouch in fetal neck is highly suggestive of congenital esophageal atresia. Absent stomach bubble and polyhydramnios have a positive predictive value of 56% for esophageal atresia[3]. The anechoic area in fetal neck must be differentiated from other causes such as cervical cystic hygroma, cystic teratoma and thyroglossal cyst[4]. A failure to identify pouch in fetal neck may not exclude congenital esophageal atresia as this may be due to examination prior to 26 weeks, technical difficulties or failure of fetus to swallow during examination. Isolated lesions appear to have a better prognosis.



Photograph 1. Longitudinal scan through fetal neck showing blind proximal esophageal pouch.

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Paper received on 11/3/02 ; accepted on 28/5/02

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