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Case Report

Esophageal Atresia with Tracheoesophageal Fistula in a Neonate of Mother with Polyhydramnios

Parul Sinha[1], Lubna Inam[2], H.P.Gupta[3], Uma Gupta[3]

[1]Assistant Professor, [2]Junior Resident, [3]Professor
Dept of Obstetrics & Gynecology, Era's Lucknow Medical College, Lucknow, U.P, India

Corresponding Author: Parul Sinha

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ABSTRACT

Esophageal atresia is a relatively uncommon congenital malformation occurring in one in 2500- 3000 live birth. We are reporting a case of type 1 esophageal atresia found in a new born of a mother with polyhydramnios. The mother was unbooked and uninvestigated. The anomaly was diagnosed at birth as an incidental finding due to excessive salivation from baby`s mouth. The baby was operated. The tracheo-esophageal fistula ligated and oesophagostomy and gastrostomy were done. Mother was trained regarding feeding and suctioning. Baby was discharge on 20th day of life in good general condition with proper advice and counseling to the parents for regular follow-up.

Keywords: Esophageal Atresia, Polyhydramnios, Tracheoesophageal fistula, neonate

INTRODUCTION

Esophageal atresia encompasses a group of congenital anomalies comprising of an interruption of the continuity of the esophagus with or without a persistent communication with the trachea. In 86% of the cases there is a distal tracheoesophageal fistula, in 7 % there is no fistulous connection while in 4 % there is a tracheoesophageal fistula without atresia. Esophageal atresia occurs in 1 in 2500 live births. [(1)] The likelihood of an atresia is increased by the presence of polyhydramnios. A nasogastric tube should be passed at birth in all infants born to a mother with polyhydramnios as well as to infants who are excessively mucusy soon after delivery to establish or refute the diagnosis. In esophageal atresia tube will not progress beyond 10 cm from the mouth. (Confirmation is by plain x ray of the chest and abdomen)

CASE REPORT

My patient unbooked and uninvestigated, 21 year old Primigravida at 39 weeks of pregnancy was admitted with chief complaints of labour pains for one day and leaking for 4 hours. Her vitals were stable. On per abdomen examination liqour was found to be increased and fetal heart sound was not properly localized by stethoscope. So her USG was done which showed, polyhydramnios and FH rate was 136bts/m, regular. Mother had normal vaginal delivery after 16 hours. Excessive amount of liquor was present. Baby didn't cry immediately after birth, so it was handed

over to the pediatricians. Baby had excessive oral secretions. As a routine procedure, oronasal suction was done. Stimulus was given to the baby after which the baby cried. Then nasogastric tube was inserted but it recoiled, showing that there was some obstruction in its passage. The baby was immediately shifted to NICU for further examination and investigations. In the NICU baby was fully examined to look for any other associated congenital anomaly. Baby's cardiovascular system and respiratory system appeared to be functioning normally. Anorectal examination appeared to be normal. No visible skeletal anomaly was found. Baby's weight was 3.1 kg and it passed stools and urine within 24hours.USG abdomen, X-Ray chest AP view and X-ray thoracolumbar region were done. Baby`s chest x-ray (straight radiography) demonstrated that nasogastric tube was stopped at the level of 5^{th} dorsal vertebra and there was air in the stomach-ray thoracolumbar region and USG ABDOMEN were found to be normal. The family history of the patient did not show any congenital anomaly. So, the baby was diagnosed as a case of esophageal atresia with tracheoesophageal fistula. The baby was kept nil oral, on intravenous fluids .The baby was operated on second day of life. Right sided posterolateral thoracotomy was done and mediastinum was explored. Long gap was present between proximal and distal pouch of esophagus with tracheoesophageal fistula connecting distal pouch with trachea. So the diagnosis of type 1 esophageal atresia was confirmed. Tracheoesophageal fistula was ligated. Esophagostomy with gastrostomy was done .The baby was kept on I.V fluids. On the third postoperative day, the baby developed pneumonitis and right sided hydrothorax. The baby could not maintain saturation so it was shifted to ventilator. Baby was weaned from the ventilator after one week. After weaning from the ventilator, gastrostomy feeding was started. Baby remained in NICU for 20 days and was having proper feeds through the gastrostomy tube. Mother was trained regarding feeding and suctioning. Baby was discharge on twentieth day of life in good general condition with proper advice and counseling to the parents for regular follow-up. The pediatric surgeons had planned to reassess the baby after 4 months to look for the length of gap between the proximal and distal pouches and accordingly do the anastomotic surgery.

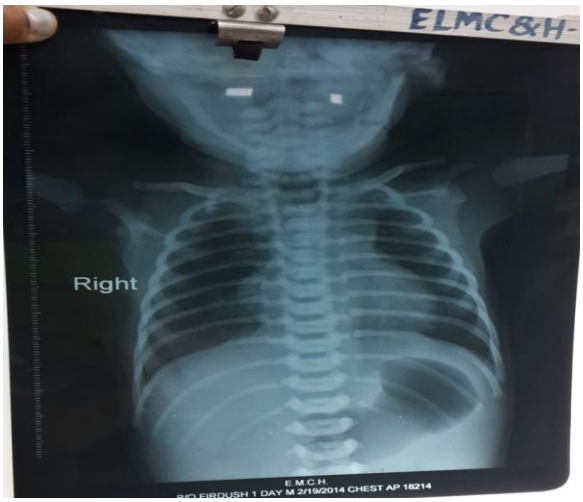

Figure 1 -X-ray showing coiling of the nasogatric tube

DISCUSSION

Esophageal atresia is a relatively uncommon congenital malformation occurring in one in 2500- 3000 live birth. The overwhelming majority of cases of esophageal atresia are sporadic/ non-syndromic, although a small number within this non – familial group are associated with chromosomal abnormalities. Familial / syndromic cases of esophageal atresia are extremely rare; representing less than 1% of the total. Esophageal atresia is 2 to 3 times more common in twins. [(1)] The diagnosis of esophageal atresia may be suspected prenatally by the finding of a small or absent fetal stomach bubble on ultrasound performed at the 18^{th} week of gestation. Overall the sensitivity of ultrasonography is 42 % but in combination with

polyhydramnios the positive predictive value is 56%.[2] Available methods of improving prenatal diagnostic rate include ultrasound examination of the fetal neck to view the blind ending upper pouch and to observe fetal swallowing and magnetic resonance imaging.[3] The newborn infant of a mother with polyhydramnios should always have a nasogastric tube passed soon after delivery to exclude esophageal atresia. Infants with esophageal atresia are unable to swallow saliva and are noted to have excessive salivation requiring repeated suctioning. At this stage, and certainly before the first feed, a stiff wide bore (10-12 French gauge) catheter should be passed through the mouth into the esophagus. In esophageal atresia the catheter will not pass beyond 9-10 cms from the lower alveolar ridge. A plain x ray of the chest and abdomen will show tip of the catheter arrested in the superior mediastinum (T2 – T4) while gas in the stomach and intestine signifies the presence of a distal tracheo esophageal fistula. In our case the baby`s X ray shows similar finding (figure 1).In sporadic cases of esophageal atresia, the likely cause is an insult that occurs during the narrow gestational window of tracheoesophageal organogenesis. Most studies suggest that the primary defect is the persistence of an undivided foregut, either as a result of failure of tracheal growth [4] or failure of the already specified trachea to physically separate from the esophagus. [5] According to the Spitz classification [6] for survival in esophageal atresia: Baby with birth weight over 1500 g with no major cardiac anomaly has the best prognosis and this baby belongs to this group.

CONCLUSION

This case is an eye opener for those obstetricians who fail to advise a routine anomaly scan of the pregnant female at 18 to 20 weeks of gestation.

REFERENCES

1. Oxford J , Glasson M, Beasley's , Shi E , Myers N ,Cass D : Oesophageal atresia in twins . Pediatr Surg Int 2000, 16 (8) : 541-545
2. Stringer MD, McKenna KM, Goldstein RB, Filly RA, Adzick NS, Harrison MR: Prenatal Diagnosis of OesophagealAtresia. J Paediatr Surg 1995, 30(9):1258-1263
3. Langer Jc , Hussain H , Khan A , Minkes RK , Gray D , Siegel M ,Ryan G: Prenatal Diagnosis of oesophageal atresia using sonography and magnetic resonance imaging . J Paediatr Surg 2001, 36(5):804-807.
4. Ioannides AS 'HendersonDJ, Spitz L, CoppAJ: Role of Sonic hedgehog in the development of trachea and oesophagus. J Paediatr Surg 2003, 38 (1):29-36; discussion 29-36.
5. Ioannides AS, ChaudhryB, Henderson DJ, Spitz L, Copp AJ; Dorsoventral patterning in oesophageal atresia with tracheooesophagial fistula: Evidence from a new mouse model. J Paediatr Surg 2002, 37 (2):185-191.
6. SpitzL, KielyEM, Morekroft JA, Drake DP: Oesophagealatresia: at- risk groups for the 1990s. J Pediatr Surg 1994, 29 (6): 723 – 725.

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