AUCTORES
Globalize your Research

Journal of Heart and Vasculature

Hayriye Alp *

Open Access

Case Report

Esophageal atresia case report

Hayriye Alp
Necmettin Erbakan University, GETAT CENTER, Konya, Turkey.
Corresponding Author: Hayriye Alp, Necmettin Erbakan University, GETAT CENTER, Konya, Turkey.
Received date: April 01, 2021; Accepted date: April 07, 2021; Published date: April 08, 2021
Citation: Hayriye Alp (2021) Esophageal atresia case report. *J, Heart and Vasculature* 1(2); DOI: 10.31579/JHV-2021/011

Abstract

In the neonatal period, esophageal atresia is suspected in babies with mostly respiratory distress, upon the detection of excessive mucus and saliva from the mouth and nose. As the third child of the 27-year-old mother in the maternity ward of our hospital, the male baby born by cesarean was 2540gr. There was no spontaneous breathing, he returned after positive pressure ventilation, and he had a mild hypotus respiratory distress. 1st minute APGAR was 3, 5th minute apgar was 7. He was consulted with surgery, and informed consent was obtained from his family, and his operation decision was taken on the 10th day, the thorax tube was pulled and breastfeeding started. In the last two decades, survival in babies with esophageal atresia and tracheo-esophagial fistula has increased significantly. Low birth weight, premature, mechanical ventilation requirement, concomitant anomalies and pneumonia pose a high risk.

Keywords; congenital esophageal atresia (OA), tracheo-esophagial fistula (TEF), anesteziözet

Introduction

Congenital esophageal atresia (OA) was first described in 1670 by William Durston in a conjoined twin case [1]. The first case with proximal atresia with its classic definition and tracheo-esophagial fistula (TEF) distally was reported by Thomas Gibson in 1697 [2].

The probability of trisomy 13, 18, 21 in infants with OA is higher than the normal population (6.6%) (11). It has been reported that 85% of cases with isolated AC and 30% of cases with TEF are polyhydroamnios.

Waterston formed risk-based groups with its classification in 1962 (birth weight, pneumonia, concomitant congenital anomaly).Antenatally, it is suspected by the presence of polyhydramnios during the ultrasonographic follow-ups of the mother during pregnancy, the small detection of the stomach of the fetus, the appearance of an enlarged esophageal pouch or the detection of abnormal swallowing movements. Despite this, prenatal USG has only 20-40% diagnosis [3].

In the neonatal period, OA is suspected in babies with mostly respiratory distress, upon the detection of excessive mucus and saliva from the mouth and nose. The vast majority of patients are admitted to the hospital for cough, suffocation and regurgitation after the first feeding. On the other hand, the number of cases diagnosed incidentally in infants who were hospitalized in neonatal intensive care units for prematurity or respiratory distress and whose parenteral nutrition was stopped and parenteral nutrition was started after days of trying to attach a nasogastric catheter. In cases with OA accompanied by TEF, abdominal distension may develop due to the fact that air can pass from the fistula to the stomach and intestines. On the other hand, stomach secretions reach the trachea and lungs using the existing fistula tract, creating chemical pneumonia. Diagnosis is strengthened by the fact that the number 10 nasogastric catheter cannot be advanced to the stomach in cases in which the presence of OA/ TEF is suspected. Definitive diagnosis is made with a pouch graph to be taken.

In the differential diagnosis of OA / TEF, the fact that the catheter does not reach the stomach by nasogastic route alone does not make a definitive diagnosis. It should be kept in mind that the catheter can be caught in these pouches in the pharyngeal pseudodyticicle and laringo-tracheo-esophageal slits [2]. Although it has been reported that 0.5-1.0 ml of reconstituted barium can be used for definitive diagnosis, [3] there is a risk of aspiration.

Pre-operative preparations of babies with OA / TEF increase the chance of postop life. Infants diagnosed in our clinic should be tilted in a semi-fowler position and stomach secretions should not be prevented from reaching the trachea and lungs via fistula, and chemical pneumonia can be prevented. The double lumen (Replogle) catheter to be placed in the esophagus blind pouch provides continuous aspiration at low pressure. It is beneficial to detect VACTERL association by exposing the baby body to the patients who are diagnosed and revealing the extremity and vertebral anomalies. It is necessary to monitor whether patients remove meconium during the preoperative preparation period. If concomitant intestinal atresia is present, preoperative determination allows an abdominal intervention to the patient under anesthesia in the same session.

Case

As the third child of the 27-year-old mother in the maternity ward of our hospital, the male baby born by cesarean was 2540gr. There was no spontaneous breathing, he returned after positive pressure ventilation, and he had a mild hypotus respiratory distress. 1st minute APGAR was 3, 5th minute apgar was 7. When the patient who started the ampicina 2 * 125mg genta (Gentamisin)) 1 * 10mg 200 cc 5% dextrose, who received nasal cpap support followed in the neonatal intensive care unit, was not able to

feed with an orogastric tube (since the probe did not progress), the image compatible with esophageal atresia was observed on barium posh radiography necessary permission obtained from legal representative. He was consulted with surgery, and informed consent was obtained from his family, and his operation decision was taken. Apart from aptt 65.6, his routines were normal venous blood gas ph 7.3 po2 43.5 pco2 45.7. The patient was intubated with 3 numbers and 0.5 demizolam(midazolam), and the wand was operated with 2 risks. The patient with umbilical catheter was given 2 mg rocuronium bromüre 2mcg fentanyl citrate 1,5 mac sevoflurane in maintenance. The operation took 1 hour and 15 minutes. Tracheo-esophageal fistula repair, primary esophagus repair, thorax tube placement were performed. Since the patient had tachycardia, the fluid deficit was resolved with a total of 5cc jelafusine infusion. The patient was sent to the neonatal intensive care unit with a torax tube attached and intubated. On the third post-operative day, cephataximesodyum was initiated for the lung infiltration of the patient, with low albumin depletion and phototherapy for jaundice. A single dose of inhaled adrenaline and ventolin(salbutamol) was given to the stridor of the patient who was exubated on the day of. Targocid(teicoplanin) klacid(claritromisin) for atelectasis added.

On the 10th day, the torax tube was pulled and breastfeeding started, 30cc red blood cell suspension was given because the hematocrit was low.

As the wheezing continued on the 14th day, the asist (asetil sistein), motilium (domperidon) 10mg and zantac (ranitidin)150mg were added for the 15th day reflux of the ventoline (salbutamol) 2.5mg.

On the 17th day echocardiography control, asd, vsd, my were detected and called for control

Discussion

In the last two decades, survival in babies with OA and TEF has increased significantly. low birth weight, premature, the need for mechanical ventilation, concomitant anomalies and pneumonia pose a high risk. The fact that we had a neonatal specialist in our clip and that we had newborn intensive care unit influenced survival at this stage.

Cameron Haight and Towsley successfully performed fistula repair and anastomosis with an extra-pleural approach for the first time in 1941 [3]. Different incidences (one in 800 and 12000 live births) have been reported in publications from different parts of the world for OA and TEF [2]. Therefore, although an exact incidence is not known, it is accepted as one in 3750-4500 live births [6]. Boy / girl ratio varies according to the anomaly type. It was found to be 2.29 in isolated TEF cases, 1.33 in isolated TF cases, and 1.44 in TF and TEF cases [7, 8]. It is more common in the first pregnancy, the mother under the age of 20 and the advanced mother age [3]. If one of the parents was born with PT, the probability of being seen in their children was 3.6% [9]. The probability of a healthy parent's OA to occur in other children after the child who was born with PT is 0.5-2%. The family who has two children with AA has a 20% chance of being seen in the third child. MR is more common in single or double twins than in the normal population [10].

The probability of trisomy 13, 18, 21 in infants with OA is higher than the normal population (6.6%) [11]. It has been reported that 85% of cases with isolated AC and 30% of cases with TEF are polyhydroamnios. There are additional anomalies in 30-70% of infants with OA [2, 3]. These are congenital heart diseases, urinary system anomalies, gastrointestinal system anomalies, neurological and skeletal system anomalies.Major anomalies are vital anomalies that require immediate intervention. For example: some of the cardiac anomalies, like all intestinal atresias. Cardiac anomaly, which is a complex of major anomalies, constitutes the most important cause of death in patients with OA [3]. Among the cardiac anomalies, the most common is ventricular septal defect. The association of VACTERL (V: vertebra, A: Anal atresia, C: Cardiac, TE: Tracheo-esophageal fistula and esophageal atresia, R: renal anomaly, L: Extremity anomaly) is an association named with initials. It is not a syndrome. Because the gene revealing the association of these anomalies could not be detected. It is too coincidental that its components are seen together in the same case. Therefore, it is called togetherness. It is known that 20-25% of the patients with OA / TEF have VACTERL association [3].

Conclusion

In the last two decades, survival in babies with OA and TEF has increased significantly. Low birth weight, premature, the need for mechanical ventilation, concomitant anomalies and pneumonia pose a high risk. The fact that we had a neonatal specialist in our clip and that we had newborn intensive care unit influenced survival at this stage.

The problem can be noticed in the early period and operated as soon as possible and can be cured with appropriate neonatal intensive care.

Conflict of interest

There is no conflict of interest in our study.

Since this study was presented retrospectively, an ethical committee was not taken.

References

1. Myers NA. (1986) The history of oesophageal atresia and tracheo-oesophageal fistula--1670-1984. *Prog Pediatr Surg.* 20:106-57.
2. C B: Konjenital Özofagus Atrezisi ve Trakeo-özogageal Fistül In B. C (ed), Bebek ve Çocukların Cerrahi ve Ürolojik Hastalıkları (Vol. 1). Ankara: Palme Yayıncılık 2006, 311-52.
3. Harmon CM, Coran AG. Congenital Anomalies of the Esophagus. In J. L. Grosfeld, E. W. Fonkalsurd and A. G. Coran (eds), Pediatric Surgery (Vol. 1). Philadelphia: Mosby Elsevier, 2006;1051-81.
4. Kluth D, Steding G, Seidl W. (1987) The embryology of foregut malformations. *J Pediatr Surg.* 22:389-93.
5. Morini F, Cozzi DA, Ilari M, et al. (2001) Pattern of cardiovascular anomalies associated with esophageal atresia: support for a caudal pharyngeal arch neurocristopathy. *Pediatr Res.* 50:565-8.
6. *Beasley SW: Esophageal Atresia and Tracheoesophageal Fistula. In Oldham Keith T and Colombani Paul M (eds), Principles and Practice of Pediatric Surgery (Vol. 2): Lippincott Williams & Wilkins, 2005; 1040-53.*
7. Touloukian RJ, Seashore JH. (2004) Thirty-five-year institutional experience with end-to-side repair for esophageal atresia. *Arch Surg.* 139:371-4.
8. Torfs CP, Curry CJ, Bateson TF. (1995) Population-based study of tracheoesophageal fistula and sophageal atresia. *Teratology.* 52:220-32.
9. Pletcher BA, Friedes JS, Breg WR, Touloukian RJ. (1991) Familial occurrence of esophageal atresia with and without tracheoesophagel fistula: report of two unusual kindreds. *Am J Med Genet.* 39:380-4.
10. Woolley MM, Chinnock RF, Paul RH. (1961) Premature twins with esophageal atresia and tracheo-esophageal fistula. *Acta Paediatr*. 50:423-30.