Güvenç H, Arisoy AE, Arisoy ES, Aygün D, Kocabay K.
Pyloric atresia accompanied by a Meckel diverticulum.
PYLORIC ATRESIA ACCOMPANIED BY A MECKEL DIVERTICULUM

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Submitted: 2/2006

ABSTRACT: Pyloric atresia rarely occurs as an isolated or outgrowth of a congenital malformation. Several associations and conditions have been reported with pyloric atresia. This patient appears to be an interesting case of pyloric atresia and Meckel diverticulum in the literature.

Key Words: Pyloric atresia, Meckel diverticulum

MECKEL DIVERTICULUM İLE BİRLIKTE PİLOR ATREZİSİ

ÖZET: Pili atresi, malformasyonlar ve konjenital malformasyonların herhangi bir komplikasyonu olmaksızın bireysel bir durumdur. Pili atresi ile Meckel divertikulumun birbiriyle ilişkisi, literatürde literatürde bir bireysel durum olarak sunulmuştur.

Anahtar Kelimeler: Pili atresi, Meckel divertikulum

INTRODUCTION

Many congenital anomalies of the gastrointestinal tract may be responsible for obstruction in infants. Pyloric atresia is a rare cause in this group, manifested by gastric outlet obstruction. Several reports have called attention to the association of pyloric obstruction with esophageal atresia and tracheoesophageal fistula. As far as we know, our patient is the first with pyloric atresia accompanied by a Meckel diverticulum in the pediatric literature.
CASE REPORT

A 2800 g full-term male infant was admitted to the newborn unit for perinatal asphyxia, resulting from a prolapsed, an compressed umbilical cord. He had a history of polyhydramnios and AOD blood gas, incompatibility. The physical examination revealed moderate cyanosis, a weak cry, poor muscle tone and poor neonatal reflexes. The white blood cell count, urinalysis, chest roentgenogram, and serum electrolytes were within normal limits and the hematocrit was 63 %. Neonatal asphyxia was appropriately treated. Supportive care and intravenous antibiotics were initiated. He developed mild epigastric distention and persistent vomiting after nasogastric feeding. The vomitus consisted only of gastric contents and was not bile-stained. Bowel sounds could not be heard.

![Figure 1](image1)

Figure 1. Direct erect roentgenogram of the abdomen demonstrates very prominent gastric gas in the left upper quadrant of the abdomen and absence of air in other parts of the gastrointestinal tract.

During his hospital stay, ileus appeared. To decrease the serum unconjugated bilirubin level, which rose to 22 mg/dl on the fourth day of admission, an exchange transfusion was performed in addition to phototherapy. On a direct abdominal roentgenogram gastric gas was seen to be very prominent while it was absent in other parts of the gastrointestinal tract (Figure 1). Additionally, during the barium upper GI series, the radiopaque material did not pass beyond the stomach (Figure 2). The infant was rehydrated and subjected to exploratory laparotomy.
Figure 2. Barium examination demonstrates very prominent gastric dilatation and absence of calcipaque material beyond the stomach.

At laparotomy, a distended stomach and collapsed intestines were seen. A catheter applied following gastroscopy could not be inserted into the pylorus and it was observed that the pylorus was completely atretic (Type 1). The procedure was completed with a gastrojejunostomy. Additionally, a Meckel's diverticulum was found in the ilium and excised. After surgery, intravenous antibiotics and supportive care were continued. The patient, who became increasingly lethargic and cried only when strongly stimulated, died of septicaemia on the second postoperative day.

DISCUSSION

Many congenital anomalies of the gastrointestinal tract may be responsible for complete obstruction. Pyloric atresia is a very rare cause of gastrointestinal obstruction, constituting only about 1% of all intestinal atresias (4). A gastric outlet obstruction due to atresia was first reported in 1749 by Cadle, as cited by Zorludemir et al (3). An autosomal recessive mode of inheritance and familial incidence have been reported to be associated with this anomaly (6, 7). Approximately half of the cases have a history of maternal polyhydramnios (8). Epidermolysis bullosa and esophageal atresia have been observed to accompany pyloric atresia (1-5), it has been suggested that the pathogenesis of this clinical entity may be due
to a failure of intestinal canalization or a mechanical or vascular injury to the fetal intestine (4). Pyloric atresia can be classified into three types of obstruction. A complete absence of the lumen with two blind ends (Type 1), a membrane or fibrous cord connecting two separated segments (Type 2) and a web or narrowed area (Type 3) (2).

A bile-free vomiting and the absence of gas in the lower abdomen are helpful in the diagnosis of pyloric atresia. Since air is the most useful contrast medium during normal radiological investigations, it is easy to diagnose pyloric atresia in a newborn infant with a direct abdominal roentgenogram, by the complete absence of gas beyond the stomach. Additionally, the upper GI series demonstrate prominent gastric dilatation and absence of radiopaque material beyond the stomach. Ultrasonography is of value in demonstrating the absence of the normal echo pattern of the pyloric muscle and the pyloric canal, thus confirming the diagnosis of pyloric atresia (9). The treatment is surgical and the procedure required depends on the type of obstructive lesion.

Although no other associated malformations such as epidermolysis bullosa and esophageal atresia was present in our patient, the additionally had a Meckel diverticulum. A review of the pediatric literature did not reveal a previous report of pyloric atresia accompanied by Meckel diverticulum. Therefore, our patient appears to be the first one with this combination of congenital anomalies. However, the coexistence of a Meckel diverticulum with pyloric atresia could be fortuitous and there is no proof that there is a relation between the two findings. As the child died, necropsy could have elucidated the relation between both anomalies but the family did not permit this. Nevertheless, our findings emphasize the importance of searching for additional malformations in children with any congenital anomaly.

REFERENCES

