Case Report

Unusual Association of Gastric Volvulus with Hypertrophic Pyloric Stenosis: A Rare Entity

Punit Kumar Srivastava*, Richa Jaiman, Juhi Singhal and Surendra Pathak
Department of Surgery, S N Medical College, India

Abstract

Gastric volvulus is extremely rare in neonates and is to be considered in differential diagnosis of recurrent vomiting in pediatric age group. There are various predisposing congenital and acquired factors that lead to gastric volvulus like absence of gastrocolic ligament attachment, abnormal fixation; diaphragmatic hernia and eventration of diaphragm etc. We describe unusual association of gastric volvulus with infantile hypertrophic pyloric stenosis. The patient was well managed by pyloromayotomy and anterior gastropexy with gastrostomy. This is the very case of infantile hypertrophic pyloric stenosis associated with gastric volvulus and very few cases described in world literature.

INTRODUCTION

Acute gastric volvulus in childhood is uncommon and very rare in neonates [1]. Delay in the diagnosis can result in gastric ischemia and perforation [2]. Gastric volvulus was first described by Berti in 1886 [3]. There are various etiology of gastric volvulus which includes failure of attachment of gastric ligament or elongation of gastric fixation, disorder of gastric anatomy or function and abnormalities of adjacent organ like diaphragm and spleen. The diagnosis was suspected on clinical ground and was confirmed by barium meal examination. Case presentation

A full term 22 days old male child weight 2.5 kg presented with recurrent non bilious vomiting, refusal to feed and excessive crying with mild dehydration. On abdominal examination there was no visible peristalsis and no lump palpable. Plain X-Ray abdomen showed a large gastric shadow, with minimal air fluid level in the rest of abdomen. Serum Electrolyte was hypokalemia and hyponatremia. Ultrasound abdomen showed dilatation of stomach and was inconclusive. Barium meal examination showed a horizontally placed stomach along with gastric distention lying in upper abdomen with thin line of barium passing through pylorus (Figure 1). Per operative finding was dilated, mobile, twisted stomach with absence of gastro hepatic ligament and lax gastrospenic ligament along with hypertrophic pyloric stenosis (Figure 2). Pyloromayotomy with feeding gastrostomy was performed and patients recovered uneventfully. Patient did well in follow up.

DISCUSSION

Gastric volvulus is a rare condition in the neonatal period [1,4]. Most cases are secondary to diaphragmatic complications such as anomalies of the gastric ligaments and those associated with gastric malfixation as the asplenia/polysplenia syndrome [5,6]. Organ axial gastric volvulus is the most common form, in which the stomach rotates about its cardio pyloric line [6].

Gastric volvulus is defined as an abnormal degree of rotation of one part of the stomach around another [7]. The normal stomach is fixed and is prevented from abnormal rotation by the four gastric ligaments and diaphragm which serves to

Figure 1 Gastric volvulus on upper gastrointestinal study.
Acute gastric volvulus is a surgical emergency as delay in recognition which doesn't tolerate any therapeutic delay. Chronic volvulus however may be initially treated conservatively [6] by keeping the patient in the prone position and gastric decompression [14,15]. Open anterior gastroscopy [16,17] with or without a gastrostomy is a satisfactory solution to this life threatening problem [18]. Percutaneous gastrostomy using anchoring devices [19] and laparoscopic guided gastroscopy are newer modalities [20,21]. Though nonsurgical treatment has been described for primary gastric volvulus [22], however the remote possibility of gastric perforation and gangrene still remains (which has also been seen in one of our case) hence surgical treatment is preferably. The similar previous reports of that rare coexistence also described.

CONCLUSION

Gastric volvulus in neonate is extremely rare very rare and poses a diagnostic dilemma. High index of suspicion remains by excluding other common causes of neonatal vomiting. It is mandatory to rule out other cause of gastric outlet obstruction like hypertrophic pyloricstenosis and malrotation etc. Diagnostic confirmation is mostly made by upper GI contrast study. Ideal treatment should be surgical intervention i.e. gastroscopy either by open or laparoscopic technique.

REFERENCES


