Case Report
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Bilious Vomiting in Infantile Hypertrophic Pyloric Stenosis

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Summary

Infantile Hypertrophic Pyloric Stenosis (IHPS) is the most common cause of intestinal obstruction requiring surgery in the newborn. The exact aetiology is unknown. IHPS classically presents with non-bilious vomiting. Bilious vomiting is a rare presentation of IHPS that could lead to confusion in diagnosis. In this report we present our experience with this unusual presentation of IHPS and its management.

Key words: Hypertrophic Pyloric Stenosis, Bilous Vomiting.

Introduction

Infantile Hypertrophic Pyloric Stenosis (IHPS) is the most common cause of intestinal obstruction requiring surgery in the newborn[1]. IHPS classically presents with non-bilious vomiting. In this report we present a case of IHPS which presented with bilious vomiting, a rare presentation that could lead to confusion in diagnosis of IHPS and its management.

Case Report

A 3 week old boy born full-term was referred from a district general hospital with a history of intermittent projectile vomiting, weight loss and an ultrasound confirmed diagnosis of pyloric stenosis. Family history was positive for pyloric stenosis with his mother requiring pyloromyotomy at 5 weeks of age. On examination, the baby was dehydrated but no pyloric mass was palpable. Blood results on admission showed metabolic alkalosis with a pH of 7.53, Cl^- =96mmol/L and HCO_3^-=31.8 mmol/L. Bilious aspirates were noted in the nasogastric tube and the diagnosis of pyloric stenosis was challenged. Correct position of the nasogastric tube was confirmed on plain radiography and an upper gastrointestinal contrast study excluded a diagnosis of malrotation or duodenal obstruction. However, during the contrast study a brief hold up of contrast was noted in the stomach close to the pyloric end. A repeat ultrasound confirmed a thick but short pyloric muscle (5mm thick, 15mm long) with reflux of duodenal content into the stomach. After fluid resuscitation and electrolyte correction, the patient underwent pyloromyotomy with an uneventful post-operative recovery.

Discussion

The incidence has been reported to be 3 per 1000 live births[2] which varies with geographic location, season and ethnic origin[3]. It has a male to female predominance of 4:1[4].

The disease re-occurs in families with sufficient frequency to imply genetic contribution as exemplified in this case. IHPS has been reported in multiple siblings and multiple births[5-7]. The lack of neuronal NOS1 in pyloric tissue has been thought to be responsible for pylorospasm in IHPS[8] and recently, evidence for genetic heterogeneity has been demonstrated by linking a monogenic form of IHPS to 16p13-p12.[9]

The patient is usually a full-term infant between 3 and 12 weeks of age. It classically presents with non-bilious vomiting but 17-18% of vomitus has been found to be streaked with blood or appear coffee-ground in colour due to oesophagitis or gastritis[10]. Only one case of bilious vomiting with pyloric stenosis has been reported so far[11].

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It is important to distinguish bilious vomiting from non-bilious vomiting as bilious vomiting suggest a more life-threatening surgical abnormality such as malrotation and midgut volvulus whereas non-bilious vomiting tends to occur in less urgent entities like pyloric stenosis and pre-ampullary duodenal atresia. In this case, the pyloric tumour was short in length

Le vomissement bilieux dans la sténose pylorique hypertrophique infantile

Résumé

La sténose pylorique hypertrophique infantile (SPHI) est la cause la plus fréquente de l'occlusion intestinale qui exige la chirurgie chez le nouveau-né. L'étiologie exacte est inconnue. La SPHI se présente classiquement avec un vomissement non-bilieux. Le vomissement bilieux est une caractéristique rare de la SPHI qui pourrait créer la confusion dans le diagnostic. Dans ce rapport, nous présentons notre expérience de la gestion de la manifestation exceptionnelle de la SPHI. ***Mots-clés:*** Sténose pylorique hypertrophique, vomissement bilieux.

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