Case Report

Pyloric duplication in the newborn: A rare cause of gastric outlet obstruction

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ABSTRACT

Pyloric duplication is the rarest duplication in gastrointestinal tract. Only seven cases have been reported so far in the English literature. In most cases pre-operative diagnosis was not made. We present such a case in a 9-day-old baby, presenting with non-bilious vomiting since birth. The diagnosis was made pre-operatively by ultrasonography, which is a good investigation for pre-operative diagnosis. The case was operated successfully without opening the pyloric canal.

KEY WORDS: Pyloric duplication, gastric outlet obstruction

INTRODUCTION

Pyloric duplication is a rare entity, constituting 2.2% of all gastric duplications.[1] Only seven cases have been reported so far in English literature.[1-5] We report another case of this rare anomaly, which was diagnosed pre-operatively solely by ultrasonography and managed successfully without opening the pyloric canal.

CASE REPORT

A 9-day-old, full term, normally delivered, female baby presented with a history of persistent non-bilious vomiting from birth. Antenatal scan was reported as normal. Changing of breast milk to formula feed did not alter the symptom. On examination, a 5 x 4 cm firm, non-tender mass, separate from the liver, was palpated in right upper quadrant of the abdomen. There were no other positive findings on examination. The plain X-ray abdomen showed a distended stomach. Ultrasonography delineated a cystic mass extending from the right side across the midline in close proximity to a non-dilated pylorus. The diagnosis of pyloric duplication was postulated.

Laparotomy revealed a pyloric duplication cyst of 5 x 4 x 4 cm size, obstructing but not communicating with the patent lumen of the pyloroduodenal canal [Figure 1]. No other gastro-intestinal duplication was identified. As the cyst had a common wall with the pylorus, 7/8th of the cyst was excised after partially deflating the cyst by aspiration. The residual 1/8th of the residual mucosal coat was resected completely with bipolar cautery without damage to the underlying pyloric channel. The post-operative recovery was uneventful with feeds re-instituted and tolerated at 12 hours. Histopathology confirmed the cyst wall as pyloric in nature with no evidence of ectopic tissue.

Figure 1: Pyloric duplication cyst
DISCUSSION

The clinical features of pyloric duplication cyst vary according to the precise site of cyst. Besides an epigastric mass or gastric outlet obstruction, it may cause recurrent peptic ulceration, gastro-intestinal hemorrhage or hypergastrinaemia.[2-5]

Surgical options should be individualized to each case. These vary from simple excision to pyloro-antrectomy. In six of the seven reported cases of pyloric duplication, the cysts have been removed after opening the pyloric canal longitudinally.[2-5] The vascularity of the stomach makes it technically feasible to excise only the cyst. In this case, the pylorus was not opened and the cyst was partially (7/8th) excised with stripping out of the residual (1/8th) mucosa. The raw surface was then patched with omentum. This proposed ‘closed’ approach allows for a rapid post-operative recovery and the early re-institution of feeding after 12 hours as is common in the management of patients following pyloromyotomy. This alternative operative technique allows effective relief of the obstruction, removal of the cyst and prompt post-operative recovery.

REFERENCES


Source of Support: Nil, Conflict of Interest: None declared.