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Case report

Intestinal Obstruction Due to Gastric Duplication: A Case Report

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ABSTRACT

Alimentary tract duplications are rare congenital lesions. About 5% are gastric duplication. Two forms of gastric duplications tubular & cyst, with variable presenting features and the treatment is surgical resection. Herein we present a case report of 40 days male transferred from Sabha hospital with progressive abdominal distension since birth, bilious vomiting, respiratory distress, and constipation. Perinatal history unremarkable. The patient was full term vaginal delivery discharged home after birth. On examination, there were distension mainly upper abdomen. Blood investigation within normal apart from hyperbilirubinemia. Radiological investigations exhibited Uss abdomen showed huge cystic lesion either duplication or mesenteric. computer tomography abdomen showed large cyst pushing the stomach up. Exploration laparotomy was done, and the finding was huge gastric duplication cyst at the greater curvature, the cyst excised & was sent for histopathology. The patient discharged home within few days after uneventful recovery. The microscopic description shows multiple sections reveal cystic structure lined by cuboidal to flat epithelium with underlying fibrocollagenous tissue wall that shows few chronic inflammatory cells infiltration and congested blood vessels along with few mucosal glands lined by benign-looking epithelial cells. In conclusion, gastric duplication is rare entity account for 2% of GIT duplication. Gastric duplications more commonly diagnosed in young children.

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INTRODUCTION

Gastrointestinal duplications are rare congenital anomalies that may happen any part of the GIT from mouth to anus [1,2]. The incidence rate is rare, with racial variations [3]. The ileum duplications are the commonest about 65% of gastrointestinal duplications, then the esophageal, jejunal. The gastric duplications are about 5% of all alimentary tract duplications [4,5,7]. There are two variety of gastric duplications the cystic and the tubular. The commonest one is the cystic variety about 80% of total gastric duplications, the remaining is the tubular form about 20%. The cystic form is not communicating to the stomach lumen, while the tubular may show some communications to the gastric mucosa [7,8].

Those congenital anomalies usually presenting at infancy age [2-4]. The presenting clinical features are different as the characters of lesion, and the age of patient [4]. The presenting manifestations might be abdominal distention, abdominal pain, vomiting, intestinal obstruction, and even asymptomatic totally [6]. Some cases are diagnosed accidentally during routine examinations [7]. Surgical excision is the best treatment method for the alimentary duplication except the duodenal duplications as it is close to the pancreas and the biliary system and treated by

drainage with concern of ulceration development [6]. Nowadays laparoscopic resection of the gastric duplication in neonates as well as in adults has been described [8].

CASE REPORT

We report a case of 40 days male infant from the southern suburbs of Libya transferred from Sabha hospital as case of intestinal obstruction. The perinatal history was full term male infant born by normal vaginal delivery at a local hospital and discharged home after one day. The patient start vomiting after one week with abdominal distension and frequent vomiting. The family seek medical advice and the patient admitted to neonatal word at the local hospital and diagnosed as neonatal sepsis and received Intravenous fluids and antibiotics. Patient discharged home but there is no improvement and the abdominal distention getting worse and the vomitous changed to green color with constipation. The patient was admitted to Sabha hospital as a case of intestinal obstruction. On examination the patient was distressed with distended abdomen mainly upper abdomen with clear jaundice. No other abnormality was observed. The blood investigations were within normal ranges apart from hyperbilirubinemia (indirect). Cardiac echography was normal. Ultrasound abdomen shows huge cystic lesion pushing the stomach either duplication or mesenteric cyst. The computer tomography of abdomen shows large cyst at the greater curvature pushing the stomach up (Figure 1&2).

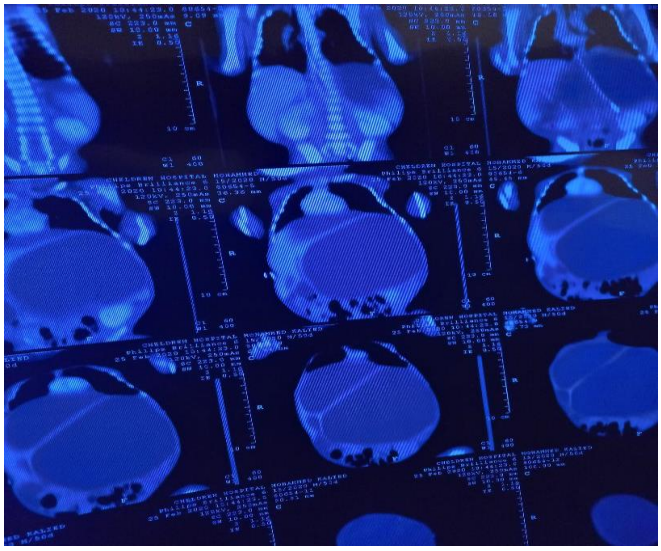

Figure 1. CAT scan Abdomen

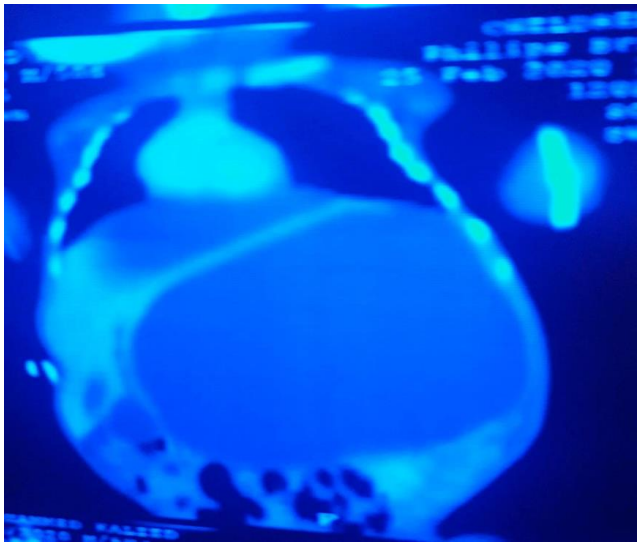

Figure 2. Maximized CAT scan showing the cyst Pushing the stomach up.

Exploration laparotomy was done and the finding reveled huge gastric duplication cyst at the greater curvature which was adjacent to the stomach and has a separate lumen (Figure 3). Excision of cyst done with mucosectomy, and then the cyst was sent for histopathology.

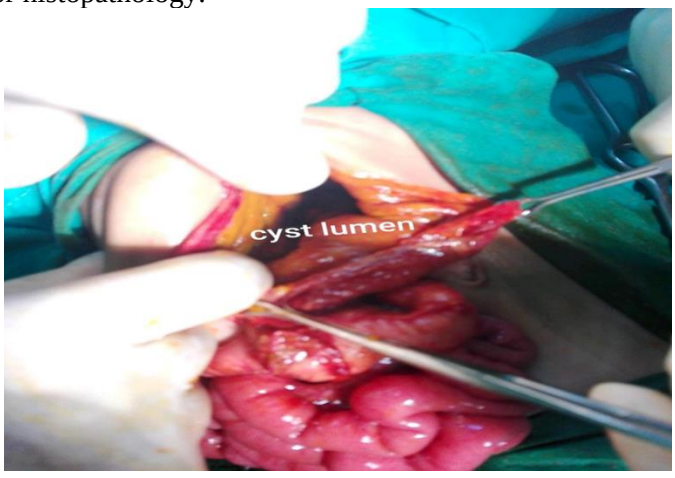

Figure 3. Intraoperative view of the cyst after evacuation

Histopathology report shows gray whitish evacuated cystic mass measures 5x30 cm in size on C/S: unilocular cyst with gray whitish inner surface. While the microscopic description exhibited multiple sections reveal cystic structure lined by cuboidal to flat epithelium with underlying fibro collagenous tissue wall that shows few chronic inflammatory cells infiltration and congested blood vessels along with few mucosal glands lined by benign-looking epithelial cells. There is no evidence of atypical or malignant changes. The patient discharged home within few days after good recovery. The follow up period is up to date with good thriving. He underwent circumcision at age of 3 months.

DISCUSSION

Gastric duplications are rare congenital anomaly that may occur at any site between the mouth and the rectum, ileal duplications are the commonest. Gastric ones are occurred in the greater curvature [9]. Gastric duplications characterized by cyst wall which is continuous with the stomach wall, the smooth muscle continuous with the stomachs, and the lining of the cyst is gastric epithelial or other type of GUT mucosa [2,8,9].

Our case has the similar characteristics. The gastric duplications diagnosed by radiological investigations mainly CT scan, our patient even the ultrasound scan with expert radiologist had been strongly suspicious and confirmed with the histopathology report. The presentation of Gastric Duplication Cyst (GDC) is variable from abdominal pain to nausea, abdominal mass by examination [3].

Our case presented with intestinal obstruction. The only treatment of GDCs is surgical excision either open or via minimally invasive surgery to avoid the risk of complications such as obstruction perforation hemorrhage or malignant changes [9]. In our case, the cyst was completely excised and sent for histopathologist for confirmation.

CONCLUSION

Alimentary tract duplications are rare anomalies. The gastric duplication is 5% of them. Clinical examination with corresponding tests helps to reach the accurate diagnosis, the appropriate treatment is total surgical excision of the cyst, if possible, to prevent future complications including malignant changes.

Conflict of interest

We declare no conflicts of interest.

Consent for publication

Verbal consent was obtained from the parents at time of discharge as their son case is a rare case and publication could help the knowledge of the diagnosis of such cases.

Acknowledgment

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إنسداد معوي بسبب ازدواجية المعدة: تقرير حالة

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المستخلص

ازدواجية القناة الهضمية هي آفات خلقية نادرة. حوالي 5% منها عبارة عن ازدواج في المعدة. نوعان من ازدواجية المعدة الأنبوبية والكيسة، مع مظاهر مختلفة والعلاج هو الاستئصال الجراحي. نقدم هنا تقرير حالة لذكر تم نقله من مستشفى سبها لمدة 40 يومًا مصابًا بانتفاخ تدريجي في البطن منذ الولادة، وقيء صفراوي، وضيق في التنفس، وإمساك. تاريخ الفترة المحيطة بالولادة غير ملحوظة. الولادة المهبلية للمريض كانت كاملة المدة. عند الفحص كان هناك انتفاخ في الجزء العلوي من البطن بشكل رئيسي. فحص الدم ضمن الطبيعي باستثناء فرط بيليروبين الدم. أظهرت الفحوصات الشعاعية للبطن وجود آفة كيسية ضخمة إما ازدواجية أو مساريقية. أظهر التصوير المقطعي بالكمبيوتر للبطن وجود كيس كبير يدفع المعدة إلى الأعلى. تم إجراء فتح البطن الاستكشافي، وكانت النتيجة وجود كيس معدي مزدوج كبير عند الانحناء الأكبر، وتم استئصال الكيس وإرساله للتشريح المرضي. غادر المريض المنزل في غضون أيام قليلة بعد الشفاء الهادئ. يُظهر الوصف المجهري أقسامًا متعددة تكشف عن بنية كيسية مبطنة بظهارة مكعبة إلى مسطحة مع جدار نسيج ليفي كولاجيني يظهر عددًا قليلًا من تسلل الخلايا الالتهابية المزمنة والأوعية الدموية المزدحمة إلى جانب عدد قليل من الغدد المخاطية المبطنة بخلايا ظهارية حميدة المظهر. في الختام، فإن ازدواج المعدة هو أمر نادر يمثل 2% من ازدواج الجهاز الهضمي. يتم تشخيص ازدواجية المعدة بشكل أكثر شيوعًا عند الأطفال الصغار.

الكلمات المفتاحية. انسداد معوي، ازدواج المعدة، الآفات الخلقية.