JEJUNAL DUPLICATION CYST: RARE CONGENITAL ANOMALY

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Abstract: Duplication Cyst are rare congenital lesions occurring at variable sites in body. Due to their nonspecific symptoms or variable presentations accurate abdominal radiological investigations for diagnosis and precise surgical skills are needed for completely excising it.

Keywords: Enteric duplication cyst, Variable presentations, Surgical treatment, Histopathology

INTRODUCTION:

Alimentary tract duplications or Duplication cysts are congenital lesions occurring anywhere in gastrointestinal tract from tongue to anus. Many theories have been made about its occurrence but still exact etiology is unknown. It has slight male predominance with 1:4500 incidence among births.[1] Most of them presents with symptoms within first 2 years of life. Due to variety of nonspecific symptoms which are closely related to its location, size and type it poses a diagnostic dilemma.[2][3] Some cases are also found as incidental findings but pre-operative radiological diagnosis is possible with high suspicion index. Treatment is Surgical and optical outcomes are present after successful operation.

CASE: A 51 year old female presented to surgical opd with complaints of dull aching abdominal pain over periumbilical region with mild to moderate intensity and nonradiating in nature. She has no symptoms of nausea, vomiting, fever, constipation, diarrhea, maleana, jaundice, bleeding per rectum, worm infestation. On per abdominal examination swelling of approx. 8x4cm² size palpated in right iliac fossa having cystic consistency and nontender in nature. On enquiring patient has hospital admission at the age of 3 years for pain in abdomen where she was diagnosed with mesenteric cyst and she was treated conservatively. Ultrasonography revealed well defined cystic lesions of variable size noted in right hypochondrium, peri-pancreatic and right lumbar region. On CT it shows 4 cysts. First measuring 98x46x43mm in right iliac fossa. Second is 47x32x25mm on posterior aspect of head of pancreas. And two cyst of 35x26mm and 43x21mm respectively in right subhepatic region along with malrotation.
Surgical approach was chosen. On exploration all four cyst were found and none of them were communicating with each other. Approx 50 cm of jejunal segment was resected along with all four duplication cysts and end to end jejuno-jejunal anastomosis was done. Post-operative period was uneventful and specimen was sent for histopathology for final diagnosis.

Large duplication cyst seen in right iliac region

Resected part of jejunum with four duplication cyst
Duplication cyst behind head of pancreas

Malrotation of bowel loops noted

End to End Jejuno-Jejunal Anastomosis
DISCUSSION:

Duplication cysts of gastrointestinal tracts are rare and occur in approx. 2 in 10,000 children born and they can present at any age but majority presents during initial years of life. Approx 65-70% presents during infancy. In the present case also she was diagnosed at two years of age. No exact etiology has been known but many theories have been proposed describing its origin like split notochord, persistent embryological diverticula, aberrant luminization or partial twinning.[4] Some also proposed that it is due to proliferation of ectopic lymphatics that did not communicate with venous and lymphatic system. Duplication cyst can be single or multiple, communicating or non-communicating, unilocular or multilocular. Cyst may contain clear fluid, serous, chylous, hemorrhagic or turbid/infective material inside it. They range from few millimetres to few centimeters in size and symptoms varies depending on size, location and its lining. Duplication cysts are usually named after part of gastrointestinal tract to which they are closely attached or located. Ileal and mesenteric cyst are quite common while colonic, pyloroduodenal, rectal are quite rare.[5] Many of these cysts remain asymptomatic till adulthood or found out as incidental finding during other abdominal surgeries. Some patients present with nonspecific clinical picture having symptoms of abdominal pain, nausea and vomiting, constipation or diarrhea. Approx 30-40% patients also present with visible or palpable abdominal lump.[6] Duplication cyst should be evaluated with complete history, clinical examination, blood investigations. Accurate diagnosis of these requires good radiological setup. Ultrasonography is better investigation as it can show the location, nature, communications of the mass. During antenatal scans also if accurately diagnosed and treated early possible complications can be avoided. Of course computed tomography is investigation of choice as it allows to view anatomy of cyst and surrounding structures in great detail. Magnetic resonance imaging also allows to know character of fluid inside cyst.[7][8] Endoscopic ultrasound also helps to know if any hemorrhagic content present or not. Barium studies might show filling defects in otherwise normal alimentary tract. Same goes for gastrointestinal scopy. It might shows communication with cyst or normal lumen of gastrointestinal tract. Treatment of choice is complete resection of these cyst to avoid future recurrence. In some cases where these cyst are in close proximity to bowel or involve vasculature that supply bowel, bowel resection is required with appropriate anastomosis. In cases of multiple and long tubular duplications, mucosal stripping with multiple incisions is done to avoid resection and causing short bowel syndrome. Recurrence and malignant transformation are rare to occur if promptly treated and completely excised. Histopathological examination is diagnostic as it identifies the lining mucosa of cyst and confirms the diagnosis.

CONCLUSION:

Duplication cyst requires high suspicion and accurate radiology to diagnose it and should be treated with proper surgical skills as it can lead to obstruction, perforation or malignant transformation if left untreated. After excising completely it provides excellent outcomes.
REFERENCES:


