Abstract. – Transmesenteric hernia is a rare type of internal hernia. We report a case of a 45 year old lady who was found to have an incidental congenital transmesenteric hernia of ileum caused by a congenital mesenteric defect during radical cystectomy done for muscle invasive transitional cell carcinoma of urinary bladder.

Key Words: Transmesenteric hernia, Internal hernia, Asymptomatic.

Introduction

Transmesenteric hernia is defined as protrusion of the bowel through a defect in the mesentry of small bowel, transverse and sigmoid colon. They characteristically do not have any sac. They are very rare type of internal hernia constituting 5-10% of all symptomatic internal hernia. Transmesenteric hernia in an adult is usually acquired, and the cause is iatrogenic, usually related to prior abdominal surgery, especially with Roux-en-Y anastomosis, trauma, or inflammation. They often remain undiagnosed before emergency laparotomy and commonly lead to gangrene necessitating bowel resection of varying extent which may contribute to high morbidity and mortality. Incidental finding of transmesenteric hernia in an asymptomatic patient has not been reported till date in English literature.

Case Report

A 45 year old lady was diagnosed as a case of muscle invasive transitional cell carcinoma of urinary bladder. A contrast enhanced computed tomography (CT) abdomen and pelvis revealed growth in the left lateral wall of the bladder with muscle invasion but no extravesical spread. A preoperative cystoscopy revealed papillary growth in the bladder arising from near the left ureteric orifice. Biopsy of the mass revealed a histopathology of muscle invasive transitional cell carcinoma. She was taken for radical cystectomy. At the stage of reconstructing the ileal conduit during radical cystectomy, only 10cm of ileum from ileo-caecal junction could be identified. The rest of the ileum was found in the left hypochondriac region adherent to the adjacent jejunal loops and omentum. A thorough examination identified a defect in the mesentery of the ileum through which the rest of ileum was seen to herniate in to left hypochondrium. The defect was nearly 5cm in length. The defect was widened with reduction of bowel loops slowly through the defect. Mesenteric defect was closed with 3-0 polyglactin suture. Post operative period was uneventful.

Discussion

Transmesenteric hernia is a type of internal hernia. An internal hernia is formed by protrusion of a viscus through a peritoneal or mesenteric aperture within the confines of the peritoneal cavity. Internal abdominal hernias are rare cause of acute intestinal obstruction caused by hernias (0.5 to 4.1%), accounting for only a small percentage (0.2-0.9%) of all instances of intestinal obstruction. Transmesenteric hernias are further rarer constituting 5-10% of all causes of internal hernias. Hensing in 1742 was the first to describe surgical anatomy of some varieties of internal hernia while F. Treves in 1885 was the first to describe various fossae and mesenteric defects mainly in relation to ileocaecal junction.

Defects in mesentery may be either congenital or acquired. Congenital defects are usually present in children and developmental defect is likely cause, mainly in the mesentery of ileocaecal...
Various theories have been postulated to explain these developmental defects including prenatal intestinal ischemia and subsequent thinning of the mesenteric leaves, intraperitoneal inflammation, trauma, partial development regression, and fenestration of the mesentery by the colon during the embryologic displacement into the umbilical cord. Transmesenteric hernia in adults is usually acquired resulting from previous abdominal surgery especially Roux en Y anastomosis, abdominal trauma or intraperitoneal inflammation. These defects are found to be nearer to ileocaecal junction or ligament of Treitz.

Transmesenteric hernia in adults may have varied presentations ranging from symptomless to off and on pain to dramatic presentation of intestinal obstruction. Transmesenteric hernias are difficult to diagnose on imaging investigation because of variable appearance and location. Blacher et al\(^5\) described characteristic features of transmesenteric hernia with a sensitivity of 63%, specificity of 76% and accuracy of 77%. These characteristic features for predicting transmesenteric hernia include clustering of small bowel, especially those that are adjacent to the abdominal wall, crowding, stretching and engorgement of the mesenteric vessels, displacement of the main mesenteric trunk to the right, and signs of small-bowel obstruction. Abrupt tapering or termination of the mesenteric vessels, abnormal course and whirlpool arrangement of the arteries at the point of mesenteric twist and delayed arterial and venous filling and emptying are characteristic CT angiographic findings.\(^5\) Despite characteristic CT findings, transmesenteric hernia is usually a diagnosis of surprise, established on exploratory laparotomy done for intestinal obstruction.

Intraoperative finding of an incidental transmesenteric hernia in a lady undergoing radical cystectomy really astounded us. This lady never had any previous abdominal surgery. Congenital transmesenteric hernia in an adult is very rare. To our knowledge, incidental transmesenteric hernia has never been reported so far which was detected during surgery for some other diseases. This case report highlights presence of a congenital incidental transmesenteric hernia in an adult. It provides an opportunity to emphasize understanding of anatomy of the peritoneal cavity and the characteristic anatomic location of each internal hernia as well as recognition of the characteristics CT findings as it may help in identification of internal hernias whether symptomatic or incidental surprises. These incidental transmesenteric hernias should be repaired so as to avoid obstruction in future.

References