

DUODENOJEJUNAL FLEXURE (D-J) PERFORATION - UNUSUAL CAUSE OF IDIOPATHIC PERFORATION.

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INTRODUCTION

The duodenum is C-shaped structure located in upper abdomen and subdivided into superior, descending, horizontal and ascending part.

The ascending part (fourth part, D4) runs cranially along the left side of the vertebral column and aorta as far as the level of the upper border of second lumbar vertebra. It is retroperitoneal, less mobile and surrounded by suspensory muscles of the duodenum which helps to stabilize the jejunum (1).

Duodenojejunal flexure is a common location for traumatic bowel perforation mainly by shearing forces due to its relative fixity.

Spontaneous free perforation of the DJ is uncommon, especially if there is no prior history of visceral trauma (2). The incidence is reported as 1 in 3.5 lac individuals. Pathological etiology like ulceration leading to perforation is rare, and no cause may be found. (3) Obstruction and inflammation of the bowel are most common causes of nontraumatic intestinal perforation in industrialized countries, whereas infectious causes are more common in developing countries (4). In cases of non traumatic perforation, management depends on the circumference of perforation and the contamination. Primary suturing with either NJ tube or feeding jejunostomy may be the preferred modality of choice.

Recent evidence also supports this modality of end to end anastomosis or primary closure in which anastomosis or primary closure is recommended and the surgical area be kept dry either by nasogastric tube, nasojejunal tube and feeding jejunostomy. (5, 6)

We report a case of retroviral positive patient with non-traumatic perforation at the D-J flexure in a 45-year-old male.

CASE REPORT

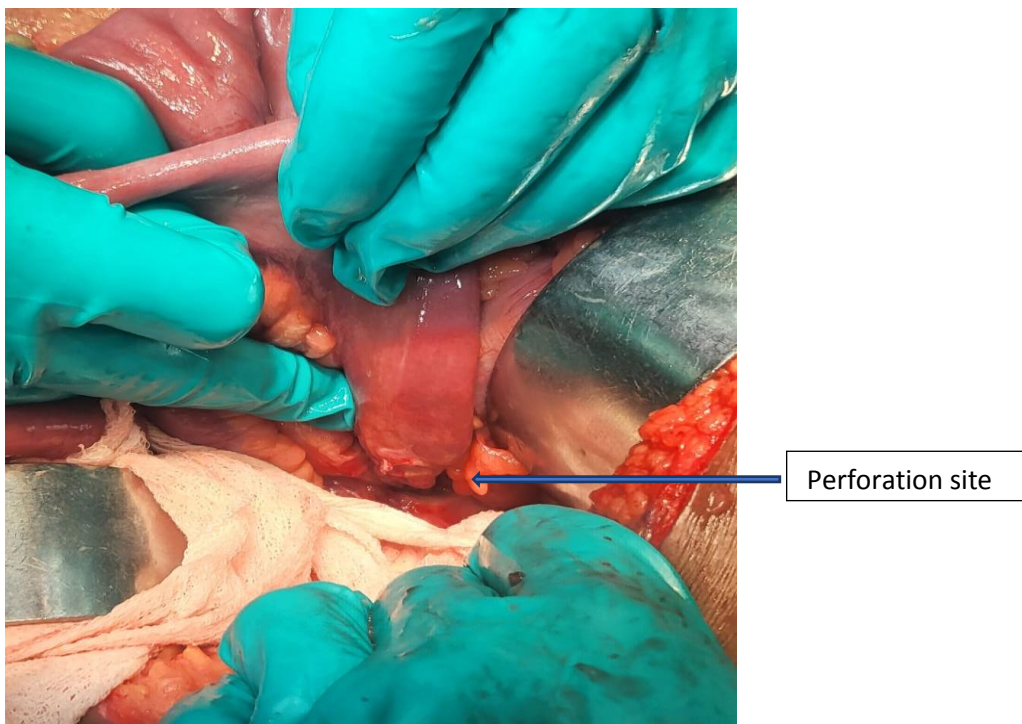
A 45-year-old male, known case of retroviral positive disease on ART since 10 years presented with severe upper abdominal pain, nausea and multiple episode

of vomiting of 1 day duration. On examination, patient had tenderness and guarding throughout the abdomen more in, the upper quadrant.

His laboratory tests showed elevated white cell count 15×10^3 , Radiograph of chest and erect abdomen done showed free gas under diaphragm.

The patient was stabilized before emergency laparotomy. Intraoperative findings showed purulent exudate and enteric fluid mainly in the left quadrant of the abdominal cavity, and diffuse inflammatory reaction of rest of the peritoneum.

3x 3 cm perforation with ragged margin was present on the antimesenteric border of D-J. Edge biopsy was taken. Two layered Primary closure of perforation with feeding jejunostomy done. Two wide bore abdominal drain kept in the splenic flexure and pelvis. Patient had uneventful recovery and was asymptomatic at 3 month follow up. Final histopathology report suggestive of inflammatory reaction with finding consistent with perforative peritonitis.



DISCUSSION

Duodenojejunal flexure is a common location for traumatic bowel perforation due to its relative fixity by the ligament of Treitz which makes it more susceptible to injury by shearing forces.

Spontaneous free perforation of the small intestine is uncommon, especially if there is no prior history of visceral trauma (2).

The incidence is reported as 1 in 3.5 lac individuals. Ulcerations of the small intestine distal to the duodenum are rare, in some cases of small bowel ulceration, no specific cause can be found.

Literature suggests, if perforation is found at DJ, to consider resection with duodenojejunal anastomosis as treatment with external tube duodenostomy. Recent literature suggests that end to end anastomosis or primary closure may be equally effective and nasogastric tube, nasojejunal tube and feeding jejunostomy to be done to bypass secretions through anastomosis (3,4). The duodenum changes from retroperitoneal to intraperitoneal thus it is technically difficult to do primary closure as anatomical changes makes it challenging.

In our case, primary closure with feeding jejunostomy was done. Recent literature supports the procedure of primary closure. To avoid post-operative complication like leak it is recommended to decompress the tract by nasogastric tube and nasojejunal tube placed distal to the site of primary closure and in addition to do feeding jejunostomy to provide postoperative nutritional support. (3,4,5)

CONCLUSION

Duodenojejunal perforation due to non-traumatic cause is uncommon surgical emergency reported in literature. Primary closure of perforation or end to end anastomosis have same prognostic outcome. It is also important to keep this differential in mind for acute abdomen presenting with pain in left hypochondrium due to non-traumatic etiology.

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