Case Report

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Rectosigmoid junction perforation due to foreign body straw

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Abstract

Introduction of the straw in rhe anus can cause severe complications, mimicking diseases causing acute abdomen. However, introduction of straw – related perforation may cause peritonitis. We describe a 10 year young male child with acute abdominal pains since five days with vomiting and constipation with abdominal distension. Due to introduction of straw per rectally causing perforation at recto sigmoid junction. The foreign body was detected and successfully removed by exploratory laprotomy. Perforation due to foreign body must be considered in the differential diagnosis in patients in whom routine sites of perforations are normal in case of perforative peritonitis, even when they do not recall any foreign body introduction or ingestion.

Key words: Recto sigmoid; perforative peritonitis; straw; foreign body

Introduction

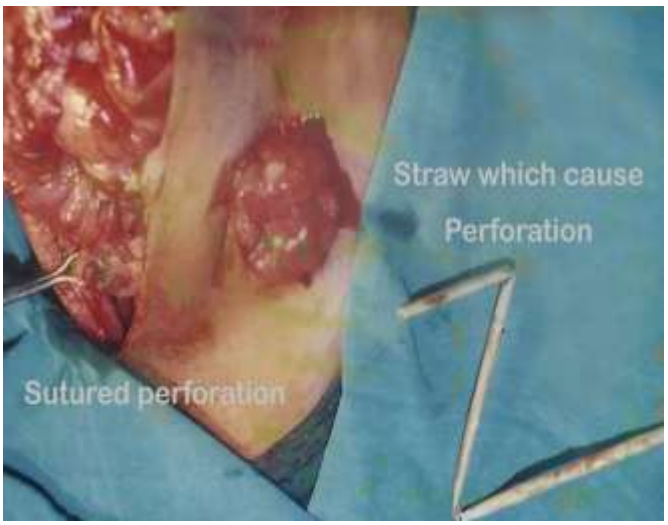
Introduction of the foreign body per rectally is a common practice and present as an emergency case. . It is well known that, fortunately, the majority of the introduced foreign objects can be removed easily without any complications. However some foreign bodies can leads to serious complication and require surgical removal. In general, the navigation of an introduced foreign body depends on the anatomic conditions of the gastrointestinal tract (physiologic or pathologic) and on factors related to the ingested foreign body. There are various etiologic factors like perforation of recto sigmoid junction due to endoscopic colonoscopy, [1]. Due to self induced hydrostatic pressure, [2]. Stercoral perforation [3]. Due to impaction of gall stone [4]. Ingestion of toothpick [5]. Complications after foreign body introduction (impaction, perforation, or obstruction) most often occur in areas of acute angulation or physiologic narrowing of the gastrointestinal tract. The majority of introduced foreign bodies which comes out successfully through the rectum

uneventfully. However, the risk of perforation is higher when long, sharp or pointed metallic objects, straw are introduced per rectally. Such patient may present with acute abdominal pain due to perforative peritonitis, or some tomes chronic abdominal pain in case of impaction of tooth pick due to ingestion [5].

Case report

A 10-year-old mentally retarded child was admitted to our hospital with history of 5 days acute abdominal pain. The pain was generalised with abdominal distension and vomiting. On physical examination there was abdominal distension guarding and rigidity with absent bowel sound. There were no palpable masses. The rectal examination revealed normal sphincter tone, no tenderness or mass, with hollow rectum. Having pulse rate 120/min, BP 90/54 mm of Hg. Laboratory test shows increased leucocytes count and borderline increased Sr creatinine and BUN levels Sr electrolytes were normal. X – abdomen standing and chest PA views show free gas under diaphragm. On exploration stomach (anterior and posterior wall), first part of duodenum, ileum was normal. Large bowel was examined from caecum till sigmoid which was normal. On examining at pouch of Douglas we felt one pointed foreign body which has caused perforation at rectosigmoid junction. Perforation was sutured and foreign body removed with fecal diversion was done by proximal ileostomy, which was closed after six weeks after conformation of healing of perforation by distal cologram.

Figure shows the sutured recto sigmoid perforation with diverting ileostomy and foreign body (Straw) who's pointed folded edge which lead perforation.



Discussion

The incidence of perforation was very low, and most cases involved the sigmoid and rectosigmoid areas of the colon. All perforations were diagnosed by history and physical examination findings in conjunction with radiographic evidence of free air or by direct endoscopic visualization during the index endoscopic procedure [1], but in our case it was diagnosed intraoperatively. A primary repair was feasible in most patients. The morbidity and mortality following perforation were significant, and a higher ASA class was associated with an increased risk of death within 30 days of the event. Most of the existing literature on endoscopic perforation describes the incidence, mechanism, and location of the perforation1 or focuses on the various treatment options, including new evolving techniques such as endoscopic clipping or laparoscopic repair. In this case the site of perforation was recto sigmoid junction which was the most common site of perforation in the in the large bowel. The relative mobility, angulation, and tortuosity of this portion of the large bowel, is the commonest cause have been implicated as contributing factors to the development of perforation [5]. In this case patient underwent surgical exploration and we could able to diagnose the perforation due to the presence of straw in the pouch of douglas. Depending on the time of recognition of the perforation, endoscopic clipping, bowel rest, and broad-spectrum antibiotics are a viable alternative in a select group of patients. A successful outcome was noted in our patients with a defect more than 10 mm. In our study underwent surgical intervention had faecal diversion. This is similar to the Mayo Clinic study, which reported a stoma formation rate of 38%. . The Mayo Clinic study reported a postoperative complication rate of 36% and 7% mortality rate. In our case post operative period was uneventful and closure of stoma was done successfully after six weeks. Most iatrogenic colorectal perforations occur as a result of endoscopic or fluoroscopic studies. Accidents associated with hydrostatic pressure – induced perforations are also reported [2]. There are several causes of recto sigmoid junction was reported in the literature. Stercoral perforation of the colon is one of the cause due to feacaloma, the disease mainly involves the recto sigmoid colon. The condition is correlated with long standing decubitus, chronic constipation, abuse of laxatives and/or constipating agents [3]. A gallstone ileus is also an unusual cause of bowel perforation. Impacted gall stone, causing pressure and necrosis of bowel wall and leads to perforation [4], another cause of recto sigmoid

junction perforation is also reported during placement of intra uterine contraceptive device. Sometimes migration of the intra uterine device into abdominal cavity can leads to perforation [5]. There was also reported case of recto sigmoid junction perforation due to ingestion of tooth prick which migrated from entire GI tract and got stuck at rectosigmoid junction and caused perforation there.

Conclusion

The case put forth an unusual type of colorectal injury, caused specifically by pointed edge of the straw at the fold. Even though straw is considered as relatively benign objects, there is incidence may cause severe complication like perforation and present as acute abdomen. Whichever the clinical presentation, acute or chronic, a perforation due to foreign body must be considered in the differential diagnosis in patient with perforative peritonitis. Even when they do not give history of ingestion or introduction of foreign body.

Conflict of Interest

The authors declare that there are no conflict of interest

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