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Surgery

PROMPT RECOGNITION OF STUMP APPENDICITIS IS IMPORTANT TO AVOID SERIOUS COMPLICATIONS: A CASE REPORT

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ABSTRACT Retroperitoneal abscess is a rare condition which is difficult to diagnose and treat because of its insidious onset. Herein, we present a case of retroperitoneal abscess secondary to stump appendicitis. A 50-year-old female was admitted with history of abdominal pain more in the right lower quadrant for 1 week. History of fever present since week associated with chills, History of poor stream of urine for 1 week, not associated with burning micturition. Her past medical history showed a laparoscopic appendectomy operation performed 5 months ago. Computed tomography of abdomen and pelvis showed features suggestive of right psoas abscess with possible communication with the tubular structure arising from IC junction (? appendicular stump), Ill-defined peripherally enhancing collection in presacral region and bilateral ischiorectal region -? Abscess. CECT Abdomen and pelvis showed right mild Hydroureteronephrosis. Cystoscopy + DJ stenting was done post which Exploration with drainage of retroperitoneal abscess with stump appendectomy done on 15/2/19. Intraoperatively 50cc pus with caseous material was drained, psoas was bulky. 3cm appendicular stump was noted, dissected, ligated and buried. A drain was placed in the site of the operation. Post-operative course was uneventful and he was discharged 9 days after surgery. The histologic evaluation reported suppurative stump appendicitis. Residual long stump of the appendix after appendectomy might lead to persistence of infection and possibly late complications such as intraperitoneal, retroperitoneal or iliopsoas abscess. Surgical exploration may be necessary in persistent cases of Retroperitoneal abscess, to allow for recognition and treatment of the underlying pathology.

KEYWORDS : Retroperitoneal Abscess, Stump Appendicitis

INTRODUCTION:

Stump appendicitis (SA) is a rare complication of appendectomy caused by infection of the residual portion of the appendix left in place, whose presentation is similar to that of acute appendicitis. It must be included in the differential diagnosis of right lower quadrant pain in patients who already underwent appendectomy as delayed diagnosis may cause serious complications. A few numbers of stump appendicitis are reported in the medical literature [1]. We report a case of stump appendicitis in a 50-year old female, who underwent a laparoscopic appendectomy 5 months before the admission.

Patient Information

A 50-year-old female patient, was admitted with history of pain abdomen more in the right lower quadrant, high grade fever associated with chills and history of poor stream of urine for 1 week with past history of laparoscopic appendectomy performed 5 months ago.

Clinical Findings:

Patient had rebound tenderness in right iliac fossa during palpation, port site scars noted.

Investigations:

WBC- 10780 cells/cu mm with neutrophilia (79.1%)
ESR -130mm/hr.
Urinalysis-normal.

CECT abdomen and pelvis showed features suggestive of right psoas abscess with possible communication with the tubular structure arising from IC junction (? appendicular stump), Ill-defined peripherally enhancing collection in presacral region and bilateral ischiorectal region as described-? Abscess, shown in figure below. It also showed right hydroureteronephrosis.

Therapeutic Intervention:

Cystoscopy + DJ stenting was done post which Exploration with drainage of retroperitoneal abscess with stump appendectomy done on 15/2/19. Intraoperatively 50cc pus with caseous material was noted, drained, psoas was bulky. 3cm appendicular stump was noted, dissected, ligated and buried. A drain was placed in the site of the operation. Post-operative course was uneventful and she was discharged 9 days after surgery. The histologic evaluation reported suppurative stump appendicitis.

DISCUSSION:

Postoperative complications after appendectomy include wound infection, intra-abdominal abscess, retrocecal abscess, intestinal perforation with peritonitis, bleeding and adhesions [2]. Stump appendicitis which is one of the rare delayed complications of appendectomy first described in 2 patients by Rose in 1945 and its incidence is about 1 in 50,000 cases [1,3]. The recognition and the adequate treatment of this acute condition is important since residual appendix may cause small bowel obstruction, haemorrhage from the mesoappendix, generalized peritonitis, retrocecal abscess. Rarely, malignancy and endometriosis may originate in the appendiceal stump. The time intervals from the initial operation ranged from 2 months to 50 years [4]. The most common symptoms and signs are periumbilical pain localized to the right lower quadrant, nausea, anorexia, vomiting, pyrexia, right lower quadrant tenderness, muscular guarding and rebound tenderness [5,8].

A correct preoperative diagnosis of stump appendicitis can be made by ultrasonography and by computed tomography. Ultrasonography can reveal a thickened appendix stump, fluid in the right iliac fossa and oedema of caecum. [6]. Computed tomography (CT) findings may be similar to those present in acute appendicitis (i.e. contrast enhancing tubular structure arising from the cecum with adjacent fat strand) if the appendiceal stump left after appendectomy is long [7]. CT may also demonstrate a pericecal phlegmon or abscess, as well as a thickening of the cecal wall with oral contrast material insinuating into the expected location of appendiceal origin, the so called “arrowhead sign”. In our case a tubular structure was identified but was interpreted, due to the anamnesis of previous appendectomy.

We think in agreement with other authors, that in most cases the diagnosis of stump appendicitis may be made by ultrasonography alone with high index of suspicion and a certain familiarity with sonographic finding are necessary. Laparoscopy has an important role in the diagnosis of stump appendicitis, this diagnostic modality may also be therapeutic [9].

The causes of stump appendicitis are: insufficient inversion of the stump, long proximal remnant of the appendix, incomplete removal of the distal remnant and partial laparoscopic or laparotomic appendectomy [3,5,].

There are three basic methods for treating the appendiceal stump: 1) simple ligation, 2) ligation and inversion, 3) inversion without ligation. No agreement exists on which is the best method. Rao et al [9] showed that all cases reported in literature undergo simple ligation of the appendix without invagination of the stump, whereas , Mangi and Berger [5,7] reviewed 2,185 case of appendectomy and found no correlation between simple ligation and stump appendicitis. They reported that the stump must be shorter than 3 mm in depth, while other authors reported that leaving an appendix stump less than 5 mm can

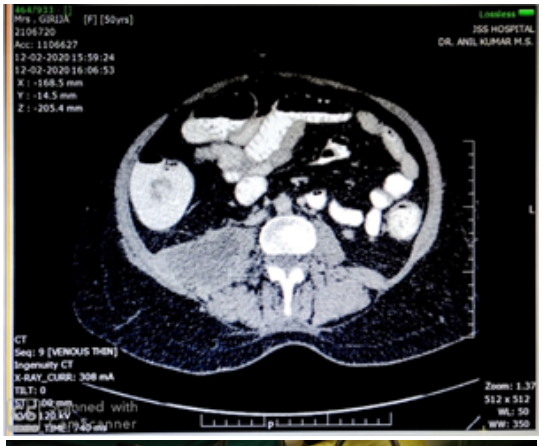
minimize the incidence of stump appendicitis. Recent reports have pointed out that the laparoscopic techniques itself may play a role in the increased incidence.

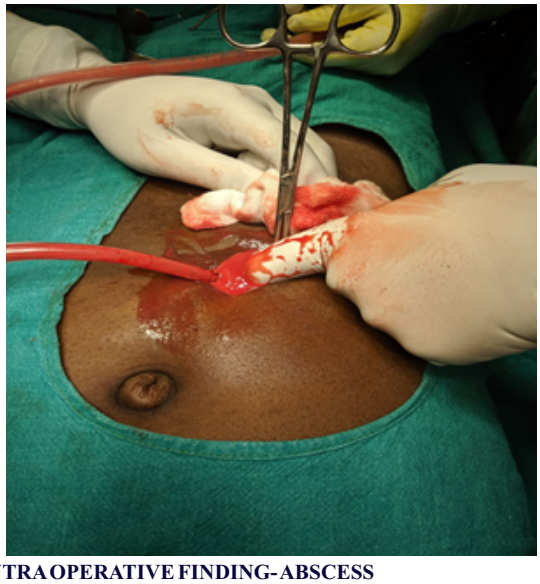
There are only few cases reported in the literature of late onset retro-peritoneal abscess associated with old appendectomy. Of which, the first one is a case of left psoas abscess reported in 1989 for a patient operated for appendectomy more than ten years prior to presentation of psoas abscess. The second case was reported in 1992 as a case of right psoas muscle abscess presented ten years after appendectomy. The third case was reported in 2010 as a case of retroperitoneal mass for a patient who had interval appendectomy for acute perforated appendicitis two years before presentation. The fourth case reported in 2014 was a case of ilio-psoas abscess with history of acute appendicitis and complicated appendectomy four years before presentation of ilio-psoas abscess. Authors of all the above-mentioned cases considered the presence of the retroperitoneal abscess as a late uncommon complication of appendicitis without identifying a cause of delayed onset of the abscess or an actual relation between appendicular disease and abscess formation.

CONCLUSION:

Stump appendicitis is rare but serious complication of appendectomy, requires early prompt recognition and treatment to avoid serious complications like retroperitoneal abscess. High degree of suspicion can help to make a correct diagnosis and a safe treatment; hence, clinicians should always consider the possibility of this complication as the cause of right lower quadrant pain.

CECT ABDOMEN AND PELVIS





INTRA OPERATIVE FINDING- ABSCESS

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