

Tubercular Appendicitis With Abscess In Hernial Sac- A Case Report.

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Abstract: A 55 year old male, presented with pain and right inguinal lump for 5 days, with long standing history of inguinal hernia. A diagnosis of obstructed inguinal hernia was made. Intraoperatively, perforated appendix with mesenteric lymphadenopathy was found, with 2 litre of pus, trickling to hernial sac, through deep inguinal ring. Sac contained no bowel contents. An appendectomy and a modified Bassini's repair of hernia was performed with satisfactory postoperative outcome. HPE of appendix, mesenteric lymph nodes, Pus reports and HPE of hernial sac revealed tubercular etiology.

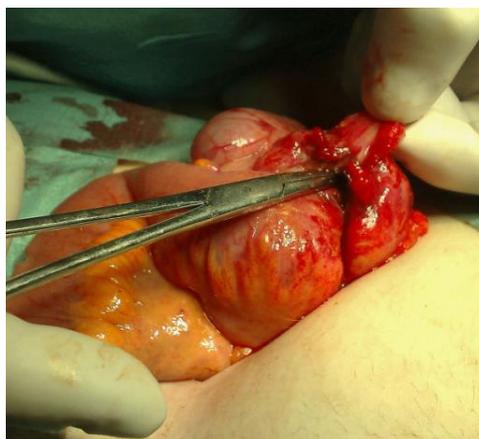
Background: Signs and symptoms of abdominal TB are nonspecific. High index of suspicion is required in detection of abdominal/peritoneal cold abscess. Tubercular appendicitis is rare and seen only in 0.1-0.3% of cases. [1]

Case Presentation: A 55yr old male, presented in surgery emergency at RIMS, Ranchi, with complain of pain and swelling over right inguinal region for 5 days, and inability to reduce his hernia, which he had been doing for 25 years. On examination, he had right indirect irreducible inguinal hernia, which was not strangulated. There was no clinical or radiological evidence of intestinal obstruction. His vital signs were normal. Emergency blood reports and ultrasound abdomen was requested, which showed Hb 10.7g/dl, TLC 11400/cmm (N-55%, L-39%), RBS-117mg/dl, USG whole abdomen- Rt inguinal hernia, Appendicitis and Rtpyocele.

A provisional diagnosis of Right obstructed inguinal hernia was made and patient was shifted to operating room after taking consent. Under general anesthesia, inguinal canal exploration was done. A large hernial sac with thick fibrous wall extending upto scrotum was found. On opening the sac, thick, white, non foulsmelling, about 2L of pus was aspirated, communicating to peritoneal cavity through deep inguinal ring. There was no contents in the sac. By separate lower midline incision, peritoneal cavity was explored, which revealed perforation at base of appendix, with no signs of ischemia/ gangrene. Few enlarged lymph nodes, about 2*2 cm were present in paracaval, mesenteric and periappendicular region. From the base of perforated appendix, pus was found to be trickling. Pus was evacuated completely, appendectomy done, followed by thorough peritoneal wash. The anatomy of inguinal canal was distorted due to pus and necrotic tissue. Testis and cord structures were atrophied and could not be separated from hernial sac. Excision of hernial sac with (Rt) orchidectomy was done. A bassini repair of hernia was performed. Wound was closed after placement of corrugated drain.

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{1} Perforation at appendicular base with pus



{2}Hernial sac excision with orchidectomy, with later repair of hernia.

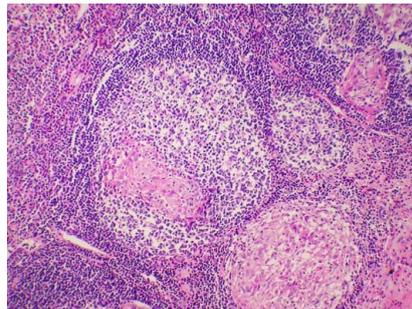
OUTCOME AND FOLLOW UP:

1) Pus reports- (a) culture and sensitivity- no organism , (b) Pus for AFB- no growth (c) Pus for ADA- 102 U/l (normal range <40U/l), (d) Pus for CB-NAAT- positive for tuberculosis.

2) HPE of excised appendix with lymphnodes- Granulomatous inflammation with necrotizing lymphadenitis

3) HPE of hernial sac- granulomatous inflammation.

Cat 1 ATT was started on 5th postoperative day after consultation with chest and TB dept. Postoperative period was uneventful and patient was well on discharge on 10th postoperative day.



{3} HPE of appendix showing granulomatous inflammation.

I. Discussion

Contrary to Amyand's hernia, the pathophysiology of tubercular cold abscess is distinct. Amyand's hernia is due to extraluminal obstruction of appendix , subsequent trauma and retention by adhesions within the hernial sac, followed by ischemia & sepsis[0]. In our case, there was no contents in hernial sac, except pus. There was no signs of ischemia of bowel or appendix. Histopathology and pus reports further confirmed tubercular etiology.

Gastrointestinal tuberculosis(GTB) is the sixth most frequent site of extrapulmonary involvement in tuberculosis (TB) with rising trends seen with ever increasing incidence of Human Immunodeficiency Virus (HIV) infection[2]. In decreasing order gastrointestinal involvement include: the ileocecal region, ascending colon, jejunum, appendix, duodenum, stomach, esophagus, sigmoid colon, and rectum,[3].

A recent study from India found that GTB was seen in 11.2% of children affected with TB of which over 50% have extra-abdominal manifestations,[4]. Inguinal hernia is one of the commonest surgical problems encountered in day-to-day practice. It is quite surprising, that with such wide prevalence of GTB,[4] involvement of sac or its contents is not common in patients with inguinal hernia in our country,[5] even though the omentum is a common content of the sac.

A review of rather meagre literature about Hernial tuberculosis (HT)[6] states that it involves sac, its contents or both. In children it affects only the sac because the sac is usually empty and the concomitant visceral

involvement usually affects the visceral organs. As a rule when tuberculosis affects the viscera, the hernia sac is always involved and when it affects the hernia sac the entire peritoneal surface is also involved[6].

The probable mechanism can be that, the congenital groin sac, as in the present case, is the lower most part of the peritoneal sac into which the seeding of the tuberculous bacterium from the peritoneal cavity can occur through gravitational forces.

There are three forms of HT :Miliary or ascitic, ulcerocasseous and fibrous,[6]. The clinical findings of HT are pain, change in size & consistency of hernia bulge and incarceration which is the most constant finding besides the usual constitutional symptoms of tuberculosis. We describe here an unreported physical finding of presence of palpable nodule at the hernial site.

Histopathological examination of tissue samples like the sac wall for mycobacterium tuberculosis is essential for the confirmation of diagnosis,[6].

Surgery involves repair of inguinal hernia, wide resection of the sac and resection of the involved omentum. Bowel resection can be necessary in presence of strictures, firm adhesions, localized ulcerative lesions as well as strangulation and incarcerations. All cases must receive full course of antituberculous therapy,[6].

If at operation the hernia sac is seen to be abnormal or is thickened, then histology should always be performed. However routine histological examination of hernia sacs is not recommended. Kasson and colleagues routinely examined 1020 hernial sacs after surgery[7]. The incidence of unexpected findings, the discovery of an occult tumor in those specimens which appeared normal at operation was 1 in 1020(0.098%).

As pointed by Vashist et al,[8] presence of tubercles in omentum or hernia sac during hernia surgery should be biopsied and sent for histopathology to rule out tuberculosis. In our patient there was preoperative suspicion of HT which lead to close visual inspection of the sac tissue and later histopathological examination to confirm our suspicion of HT.

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