Case Report

Intestinal Actinomycosis: A case report

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Abstract

Diagnosis of actinomycosis is a great imitator and challenge in clinical practice. It is uncommon and accounts for 20 % of actinomycosis infection. Disease presents with atypical symptoms and a chronic suppurative process that is most of the times misinterpreted as malignant disease, the correct diagnosis is frequently attained after histopathological examination. We here present a case of abdominal actionomycosis involving intestinal region revealed on emergency exploratory laparotomy.

Keywords: Abdominal Actinomycosis; Small Intestine; Splender Hopeli

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INTRODUCTION

Actinomycosis was common and eventually a fatal disease before the advent of antimicrobial agents but now as patients no longer commonly present advanced disease, actinomycosis has become a more diagnostic challenge.[1] Three main clinical forms are cervicofacial, thoracic and abdominal. In the abdominal form of actinomycosis, the most commonly affected organs are the appendix and caecum, but other reported sites include the colon, stomach, liver, gallbladder, pancreas, small bowel, anorectal region, pelvis, abdominal wall, and urinary tract.[2]As the infection mimics multiple disease processes, thus requires accurate diagnosis for successful treatment.[3] We here present a case of abdominal actionomycosis involving intestinal region revealed on emergency exploratory laparotomy.

CASE REPORT

A 19 year old female patient presented in the casualty with complaints of abdominal pain, distension, vomiting and not passing stool and flatus since past 2 days. Previously, she was admitted under the physicians with gross ascites and hydrosalpinx 1month back. She was empirically started on anti Kochs medication which she as being taking regularly.On examination there was gross abdominal distention and no masses were palpable. All her laboratory tests were within normal limits. A plain abdominal X-ray standing showed multiple air fluid levels in the small bowel with no gas in the colon. CT Abdomen showed multiple, dilated,fluid filled jejunal loops in its mid and distal part. A large cyst may represent Primary infective intraperitoneal encysted collection or Intraperitonel cyst likely mesenteric cyst with

secondary infection. As, the abdominal pain and distension became markedly worse patient underwent an emergency exploratory laparotomy. On exploration, two large locuated cyst filled with pus were present. Approximately 1 liter of pus drained. Two jejunal loops segments showed impending gangerene. These segments were resected and anastomosis was done. A loop ileostomy was performed. Histopathological examination of resected bowel segments showed areas of necrosis, suppuration and at places showed Splender Hopeli material surrounded by neutrophils and scattered histiocytes, i.e. features suggestive of Actinomycosis with suppuration. Patient had a satisfactory postoperative outcome.

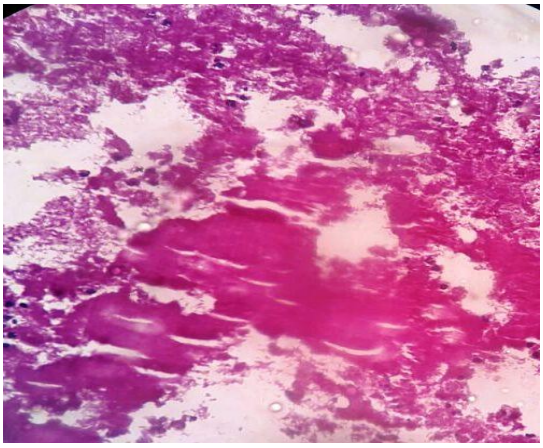

Fig 1: Photomicrograph of histopathological examination showing features suggestive of Actinomycosis with suppuration

DISCUSSION

Actinomyces forms endogenous flora of the oral cavity, gastrointestinal tract, and female genital tract and clinical disease is most commonly seen in these anatomic regions.[4] The pathogenesis of abdominal actinomycosis has not been well understood yet, although medical history usually reveals appendectomy, intra- abdominal organ perforation, previous surgery or IUD use. Coban Actinomycetes are normally not capable of invading the intact intestinal mucosa. However, under certain circumstances deeper invasion occurs. Predisposing factors include immunosuppression (HIV, diabetes), surgical trauma, appendicitis, diverticulitis, bowel perforation, foreign bodies and neoplasia.[3]The etiologic organism is the anaerobic, Gram-positive bacterium, Actinomyces israelii. It reveals invasive in nature and it spreads by direct extension across the tissue planes with the formation of multiple abscesses, abundant granulation tissue and sinuses.[5] Abdominal actinomycosis may be the most indolent and latent of all of the clinical forms of the disease; diagnosis may be delayed months to years after the inciting event. There is a predilection for involvement of the ileocecal region of the gut; thus, chronic abdominal actinomycosis may be confused with intestinal tuberculosis, ameboma, chronic appendicitis, regional enteritis and carcinoma of the cecum. The disease may localize or spread extensively without conforming to fascial and connective tissue planes or vascular channels.[6] Clinical findings of the disease varies, depending on the primary or principal site of involvement and the duration of the disease. Although actinomycosis generally causes a chronic, localized inflammatory process associated with fever and leukocytosis, the diagnosis is often not suspected. Radiologic findings are also nonspecific. Barium examination of the colon and small intestine may show mural invasion and mass effect with tapered narrowing of the lumen and intact or thickened mucosal folds, findings that are quite similar to those in Crohn's disease, intestinal tuberculosis, or, sometimes, excavated malignant tumor. Definite diagnosis is generally based on histologic identification of the actinomycotic granule or culture of the *Actinomyces*, or both.[7] In the present case, diagnosis was confirmed by histopathological examination (figure 1). Penicillin G and ampicillin are the first choice therapy for actinomycosis. Initial treatment with parenteral penicillin G, 18-24 million units for 4-6 weeks can be followed by penicillin V or oral ampicillin for at least 6-12 months. For

penicillin-allergic cases, tetracyclines, erythromycin, clindamycin or cephalosporines are suitable alternatives.[6] Diagnosis of actinomycosis is an imitator in clinical practice. It is uncommon and accounts for 20 % of actinomycosis infection. Disease presents with atypical symptoms and a chronic suppurative process that is most of the times misinterpreted as malignant disease, the correct diagnosis is frequently attained after surgery.[8]

CONCLUSION

Abdominal actinomycosis represents great diagnostic challenges in clinical practice. To reduce misinterpretation and delays in diagnosis, actinomycosis should be considered in the differential diagnoses in cases when patient presents with abdominal pain, fever, leucocytosis, or abdominal inflammatory lesion.

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