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Case Report

An Emergency Right Hemicolectomy for Suspicious Appendiceal Malignancy but Turned Out as an Appendiceal Actinomycosis

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Abstract

Actinomycosis is a rare cause for acute appendicitis or appendiceal abscess specially when there is no pre-existing immunosuppressing disease or medication history. In this case the patient presented with a slightly longer duration of symptoms for acute appendicitis but examination findings, biochemistry and imaging were supportive for an appendicitis rather than a mass or abscess. When underwent for a laparoscopic appendicectomy the appearance of swollen appendix was more suspicious for a malignant mass and had an emergency right hemicolectomy which eventually turned out as Actinomycosis.

Keywords: Actinomycosis; Abscess; Reconstruction; Penicillin G; Cyst

Introduction

Actinomycosis is a rare subacute to chronic bacterial infection caused by Gram positive, filamentous, non-acid fast bacilli, anaerobic to microaerophilic bacteria called Actinomycetes [1]. It causes suppurative and granulomatous inflammation and formation of abscess [1,2]. Area of infection mainly involves cervicofacial, chest and abdomen. Actinomycetes are prominent among the normal flora in oral cavity, less prominent in GI tract and female genitalia. [2,3]. These microorganisms are not virulent so they require a break in the integrity of the mucous membranes and invasion of devitalized tissue to enter deeper body structures. Management depends on antibiotic therapy as well as surgical based on area involved [2, 4, 5]. Penicillin G is the drug of choice as antibiotic therapy [3].

Case Presentation

An early adolescent otherwise healthy girl presented to a regional emergency department with her mother with one- month history of right iliac fossa pain and associated sweating at night. Denies any associated weight loss or loss of appetite.

On examination she had Mc Burny's point tenderness and rebound tenderness positive. But no guarding or rigidity.

Inflammatory markers were elevated to 15.8 X10^9/L (reference range 4.0-12.0) and CRP 53.8 (reference range < 5.0) and beta- HCG < 1 as well as urine dipstick test was negative for nitrites or leucocytes.

Ultrasound of abdomen reports the appendix wall is diffusely thickened and vascular with surrounding echogenic fat. It measures 35mm in AP diameter, is not compressible, and contains an echogenic vascular focus suggestive of appendicolith. Surrounding fat is inflamed suggestive of acute appendicitis with inflammation of peri appendiceal fat.

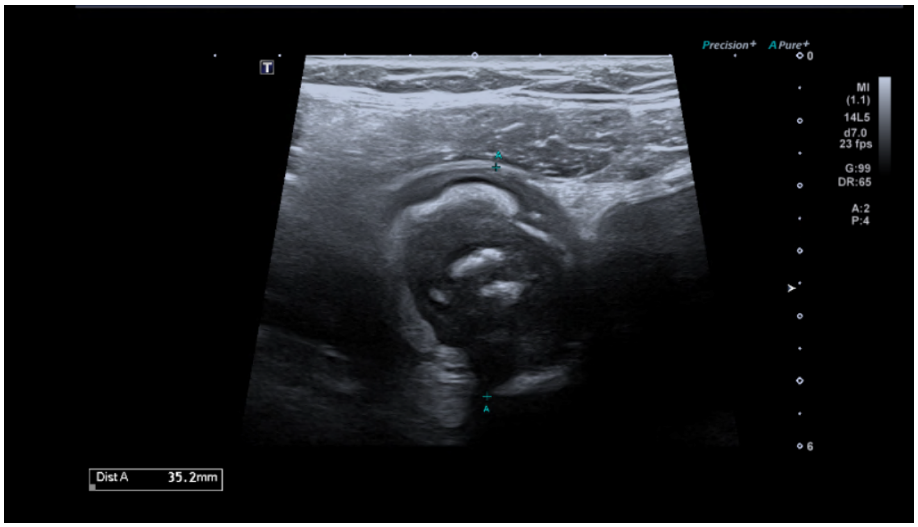

Figure 1: USS of appendix diameter 35.2mm.

She subsequently went for laparoscopic appendicectomy but found an appendiceal mass as shown below with thickened caecum and enlarged adjacent mesenteric lymph nodes.

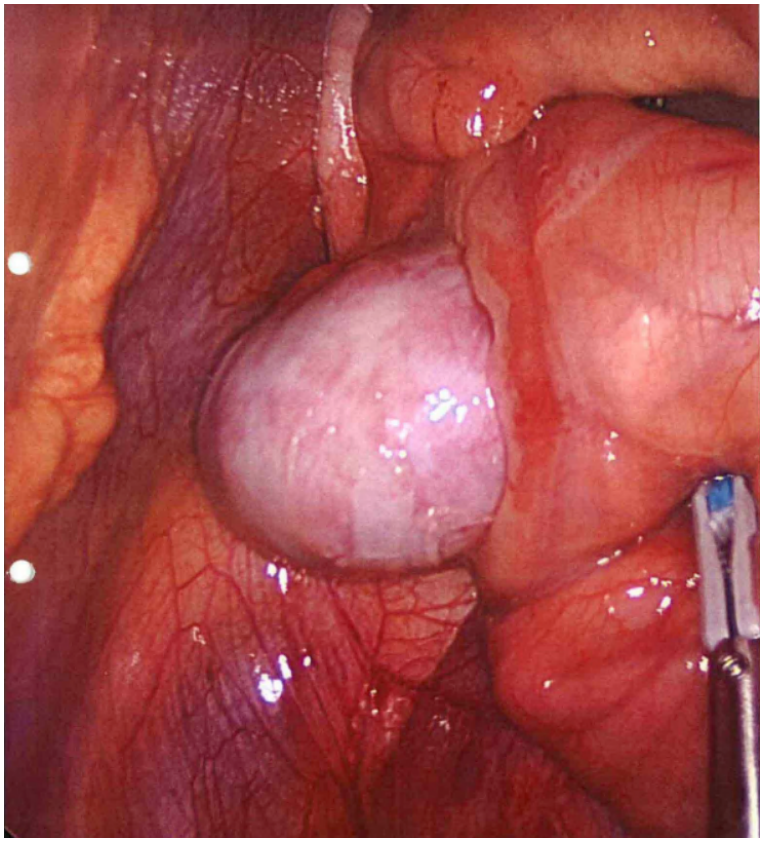

Figure 2: Intraoperative laparoscopic picture of appendicular mass.

Clinically was suspicious for appendiceal malignancy and had emergency right hemicolectomy and anastomosis. Post operatively she was sent to home in two days with good progress and no complication with a plan of chasing histopathology as outpatient and further management.

However, almost three weeks later histopathology reported as peri appendiceal abscess with appendiceal Actinomycosis. She had a planned re-admission to hospital for IV antibiotic as suggested by infectious disease department and completed two weeks of IV Benzylpenicillin. She completed her antibiotic regimen with excellent full recovery.

Differential Diagnosis

Tubo-ovarian pathology such as tubo-ovarian abscess, ovarian cysts and it's complication like haemorrhagic cyst, torsion of cysts excluded by ultrasound. Negative serum beta-HCG ruled out early pregnancy complications.

Laparoscopically diagnosed appendicular mass could be of appendicular carcinoma which was highly suspected or lymphoma or neuroendocrine tumour specially given history of night sweats and feeling unwell for about a month, however histopathology confirmed actinomycosis. Other differential diagnoses include abdominal tuberculosis or Crohn's disease.

Treatment

See the section case presentation

Outcome and Follow Up

After receiving 2 weeks of IV antibiotic via peripherally inserted central catheter (PICC) line at home via hospital in the home (HITH) service she presented to surgical outpatient clinic. Her follow up meeting was quite satisfactory. All symptoms of feeling unwell and dragging abdominal pain and discomfort were resolved. Her inflammatory markers were within normal range. She was discharged from surgical clinic with a remarkably satisfactory prognosis.

Discussion

Since actinomycosis being a rare cause for appendicitis it was a wise decision to perform a right hemicolectomy for suspected malignancy. However, more evidence-based research or study in cardinal features of actinomycosis (specially appearance of affected organ) might help for simpler surgical outcome.

Learning Points

- . Acute appendicitis is one of the common surgical causes of abdominal pain but to have an open mind of major surgeries like hemicolectomy is rare but a possibility
- . Actinomycosis is a curable disease with appropriate source control.
- . It is one of the least likely causes of intra-abdominal infection in a healthy individual who does not have immunosuppression but still possible.

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