Abstract: Pelvic actinomycosis is uncommon, accounting for only 3 percent of all actinomycotic infections(1). It usually represents a complication of intrauterine contraceptive device (IUCD) usage. Isolated ovarian actinomycosis in the absence of IUCD is very rare and only 2 cases have been reported in the literature (2). Here we present an interesting case of bilateral tubo ovarian actinomycosis in a non IUCD user.

Keyword: Actinomycosis, Intrauterine contraceptive device, Tubo ovarian abscess

Case report: A 30 year old female P3L2, with previous two caesarian sections and subsequently sterilized 8 years back, was admitted with the complaints of lower abdominal pain and fever for the past 6 months. Physical examination revealed tenderness in the right iliac fossa. CT scan showed a right adnexal cyst measuring 4.5x3.4cm with no internal septations. She gave no history of sexually transmitted diseases and her serology was negative for HIV & VDRL.

Introduction: Actinomycosis is a chronic suppurative granulomatous disease most often caused by Actinomyces Israeliili, a gram positive anaerobic bacilli. The presenting symptoms are nonspecific with abdominal pain, mass, fever and weight loss. It is often misdiagnosed as a gynecological malignancy and the proper treatment is overlooked or delayed. Here, we present a case of bilateral tubo ovarian actinomycosis diagnosed by histopathology.
Explorative laparotomy was carried out. Intra operative findings were, bilateral tubo ovarian mass densely adherent to the sigmoid colon and the posterior wall of uterus. Grossly, left tubo ovarian mass measured 3x2x1cm. Cut surface showed grey white rounded by micro abscess. PAS and GMS stain were positive. Hence a diagnosis of bilateral tubo ovarian mass due to actinomycosis was made.

**Figure 1- CT scan shows right adnexal cyst**

**Figure 2 - Gross external appearance**

**Figure 3- Cut surface of tubo ovarian mass**

**Figure 4 – Actinomycosis - 100x**

**Figure 5 – Actinomycosis -400x**

**Figure 6 - GMS stain**
Discussion:
Actinomycosis is a chronic suppurative and granulomatous bacterial infection caused by Actinomyces israelii, which is a slow growing, filamentous, gram positive, non-spore forming anaerobic, or microaerophilic bacteria. Most cases are seen in adolescents and middle-aged adults. Actinomyces species are normally found in the human oropharynx, gastrointestinal tract and vagina, and they grow slowly under conditions of reduced oxygen. The most frequent site of human infection is cervico-facial region, accounting for about 60% of the cases. Approximately 15% cases occur in thorax. 25% cases occur in abdomen and pelvis. Pelvic actinomycosis is rare accounting for only 3% of all human actinomycotic infections. Ovarian actinomycosis is even rarer. Pelvic actinomycosis usually occurs following bowel perforation, especially perforation of the appendix due to appendicitis, or following ascending infections through the IUCD. Almost 85% of cases occur in women who have had an IUCD in place for 3 or more years. It is more common in plastic IUCD than in copper devices. It can also be caused by direct spread or hematologic dissemination in systemic disease. Ovarian actinomycosis is rare, because the structure of the ovary is resistant to surrounding inflammatory disease. It has been assumed that bacteria enter the ovary when its surface is broken by the process of ovulation. It is insidious in its course and often presents as a pelvic mass that mimics a pelvic malignancy. Symptoms are nonspecific and include abdominal pain, weight loss and foul-odorous vaginal discharge. Abdominal tenderness and fever are noted in 60% of patients on physical examination and a definite noninvasive preoperative diagnosis can be achieved in only 10% of the cases. Culture methods are slow and insensitive and only 25% of the cases show positive results after 2 to 3 weeks. However, it may be possible to diagnose actinomycosis before surgery by the finding of actinomyces like organisms on Papanicolau smears. Diagnosis is usually by histopathological examination which shows bacterial colony ‘sulfur granule’ in the centre of the abscess characterized by radiating filaments with eosinophilic club like ends. A fluorescent antibody technique has been reported to be useful in identifying actinomycetes in tissue. Treatment of actinomycosis consists of long-term antibiotic therapy and adequate surgery, such as drainage of the abscess and reduction of infected tissue. For antibiotic therapy of actinomycosis, oral penicillin and tetracycline for 6–12 months are effective.

Conclusion: It is important to remark that the ovarian infection by Actinomyces species can also occur in patients without an IUCD or a pessary; it might cause the formation of an adnexal mass that can be misinterpreted as a tumour, resulting in erroneous diagnosis and treatment.

References:


