Case Report

Pelvic actinomycosis – an unusual case

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Introduction

Actinomycosis is a chronic suppurative granulomatous infection characterized by formation of abscesses, multiple draining sinuses and appearance of tangled mycelial masses or granules in the discharges and tissue sections. Actinomycotic infection in human is a rare entity affecting cervicofacial, thoracic, abdominopelvic and central nervous system. However abdominopelvic affection is uncommon contributing to 20%¹. Pelvic actinomycosis involving female genital tract is very rare.

Case report:

A 38-year-old female, para one, living one, presented with pain in the lower abdomen since one year and burning micturition on and off for the past two months. She gave history of poliomyelitis in childhood and is a known case of schizophrenia for the past 16 years. She had an intrauterine contraceptive device (IUCD) inserted three years back. She was admitted and treated thrice in nephrology for recurrent urinary tract infec-

On examination her vital signs were normal. Bimanual gynecological examination revealed a right sided solid adnexal mass 6×6 cm and a 2×2 cm cystic mass in left fornix. A clinical diagnosis of right tubo-ovarian mass with left ovarian cyst was made and patient was investigated.

Investigations:

USG – Enlarged right ovary with two simple cysts 5cm, 2.5cm and right hydroureteronephrosis.
CA 125 – 2.7u/ml

Intra Venous Pyelography –
Rt. Hydroureteronephrosis with growth cut off of distal ureter and diverticuli of bladder (Fig. 1).

In view of her pelvic pathology she was planned for diagnostic cystoscopy and ureteroscopy and exploratory laparotomy. Intra-operative cystoscopy revealed bladder trabeculations, right distal ureteric stricture and proximal dilated tortuous ureter. Ureteric DJ stenting was done. Exploratory laparotomy revealed dense intra abdominal adhesions mimicking frozen pelvis on the right side. After adhesiolysis a right adnexal tubo-ovarian mass of 6×5 cm and left ovarian cyst of 2×2 cm was noted. A pocket of pus was seen between the cervix and bladder. Supravacuicular hysterectomy with bilateral salpingo ovariectomy was done (Fig. 2). Histopathological examination of the specimen revealed the diagnosis of actinomycotic tubo-ovarian mass (Fig. 3). The patient was treated with high dose of penicillin therapy.
Pelvic actinomycosis is often unsuspected clinically because of its rarity and also actinomyces normally do not inhabit the vaginal canal. However the incidence of pelvic actinomycosis is on a rise since the past two decades. This could be attributed to the popularity of IUCDs. Direct correlation has been noted in pelvic actinomycosis with prolonged use of IUCD over 8 years in our case the duration of IUCD usage was 11 years. Interesting to note is the fact that the incidence of colonization with actinomyces depends on the type of IUCD being used. The incidence is around 20% with multi load copper IUCD (ML 375) as compared to 2.9% with levonorgestrel releasing IUCD (LNG-IUCD)\(^a\). Pelvic actinomycosis involving the adnexa may also be secondary to infection in gastrointestinal canal either in the appendix or in ileocecal junction.

The association of actinomycosis to foreign body like fish bone in the large intestine and wooden stick in the uterine cavity are reported\(^b,c\). Long forgotten tampons and peassy may also be associated with pelvic actinomycosis in women. Clinical presentation may include abdominal pain, vaginal discharge, fever, weight loss, anemia and repeated urinary infection. Pelvic actinomycosis may result in endometritis, salpingo-oophoritis, tubo-ovarian abscess or a pelvic mass. Making an
accurate diagnosis of actinomycosis is an important yet
challenging task. Unfortunately a preoperative diagno-
sis is made in less than 10% of the cases19.

Clinical diagnosis can be suggested by finding the char-
acteristic surface granules in tissue section. Confirmation
diagnosis requires either anaerobic culture or species
specific antibodies. Differentiating actinomycosis from
nocardia is important as antimicrobial therapy is differ-
et. Modified acid fast staining technique helps to dif-
ferentiate nocardia from actinomycoses where the former
stain is positive. Histopathology along with Hematoxylin
and Eosin (H&E) stains and gram staining helps in mak-
ing accurate diagnosis. Special stains like Gomori’s
methenamine silver, Periodic Acid Schiff, Brownbren or
Maceillen Good pasture can be used3.

Treatment of actinomycosis depends on the severity of
the involvement. Medical therapy alone can achieve
cure in mild cases. Role of surgical intervention is de-
batable. Surgical intervention is suggested in complica-
ted disease process where malignancy cannot be
excluded. An extended course of antibiotics may elimi-
nate the need for surgery as suggested by some au-
thers19. However others argue for a shorter course of
antibiotics3. Ultimately clinical judgment should be
advocated on a case by case basis in directing therapy.

The drug of choice for actinomycosis is intravenous
penicillin G at doses of 18-20 million units day for 2-6
weeks followed by oral penicillin for 6-12 months.
Chloramphenicol, clindamycin, erythromycin, tetracy-
cline, imipenem, streptomycin, cephalosporin can be
used alternatively if the patient is sensitive to penicillin.
If favorable response is not seen within 4 weeks of ini-
tiation of therapy, a super infection from another bac-
terial source should be considered. Serial radiological
imaging is recommended to assess the response to ther-
apy3. Actinomycosis generally carries a good prognosis
when treated expeditiously; however if treatment is de-
layed, extensive local involvement and complications
can develop19.

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