

INTRODUCTION

- Actinomyces is a Gram-positive, branching, filamentous bacteria.
- Actinomycosis results in chronic suppurative inflammation of the organs involved.
- Actinomycosis is caused by different species of *Actinomyces* bacteria.
- Recently many novel species termed *Actinomyces*-like organisms (ALOs) have been introduced. There is scant data regarding the role of these novel bacterial species in various infectious processes in human.

CASE REPORT

- A 34-year-old woman visited the gynaecology out patient department with complaint of on and off bleeding for one week. Her obstetric history was P2 L2. She had delivered her youngest child 14 years ago. She gave history of Intrauterine contraceptive device (IUCD) insertion following which she developed growth in the uterus. She underwent total abdominal hysterectomy and bilateral salpingo-oophorectomy (TAH+BSO) eight years ago. The detail of this operation was not available.
- Her routine haematological investigation showed Hb 11.6 gm/dl, TLC $7.73 \times 10^3 \mu\text{l}$, TPC $253 \times 10^3 \mu\text{l}$. Peripheral smear showed microcytic, hypochromic red blood cells with anisocytosis. HIV, HCV, HBs Ag test were non-reactive. Microscopic examination of urine showed pus cells (70-75/HPF), and red blood cells (3+). Per speculum finding showed vault granuloma of size (0.5 x 0.5) cm, positive for contact bleeding. Papanicolaou (PAP) smear was prepared from the vault and was sent for cytopathology examination.
- The PAP smear fulfilled the Bethesda adequacy criteria. It showed superficial squamous cells and colonies of actinomyces. It was interpreted as Negative for intraepithelial lesion or malignancy with organism actinomyces according to 2014 system of Bethesda reporting. [Figure A,B,C]

MICROSCOPY

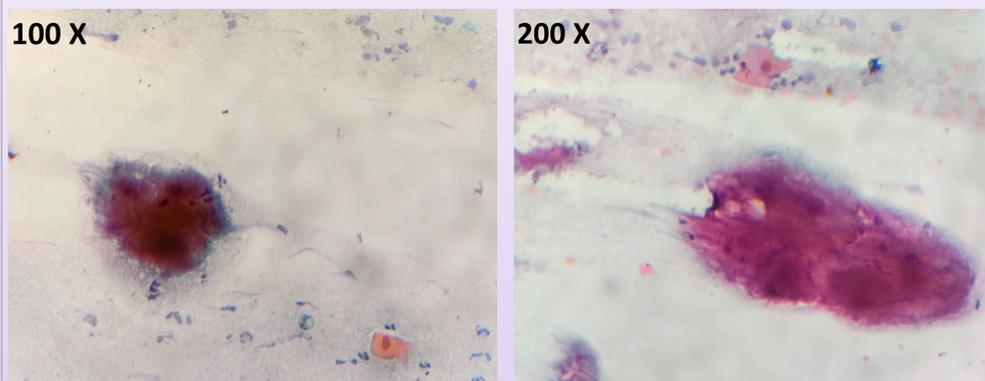


Figure A

Figure B

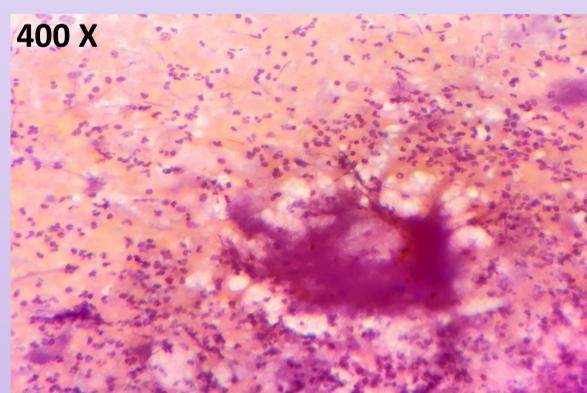


Figure C

Figure A,B : Vault smear showing presence of Actinomyces (Papanicolaou stain x 100 , x 200 respectively)

Figure C : Actinomyces organism (Papanicolaou stain x 400)

DISCUSSION

- Female genital tract is colonized by *Actinomyces* species like: *A. meyeri*, *A. neuii*, *Actinomyces radingae*, *Actinomyces turicensis*, and *Actinomyces urogenitalis* by the long-term use of IUCD.
- IUCDs are known to have a permanent irritating effect of the endometrium by causing erosion followed by trauma, which may facilitate the invasion of bacteria. In IUCD-associated actinomycosis, abscess formation in the genital tract is frequent.
- The spread of bacteria from pelvic sites to the abdominal region or vice versa can cause abdomino-pelvic actinomycosis. This leads to complications like dense adhesions with contiguous structures, including the small bowel, causing fibrosis, fistulas, and peritonitis.
- Earlier *A. israelii* was one of the most common species involved in pelvic actinomycosis. Later on the pathogenic role of many novel species has been described.
- Fiorino had stated in a review way back in 1996 that the risk of pelvic actinomycosis in relation to the use of IUDs is very low. According to Fiorino, detection rates of actinomyces on Papanicolaou smear were somewhat variable. Merki-Feld GS et al have opined that Actinomyces-like organisms (ALOs) are a common finding in Papanicolaou-stained cervico-vaginal smears (PAP smears) of women using an IUCD.

TREATMENT

- Pelvic actinomycosis is a severe disease. Pelvic actinomycosis associated with the use of IUCDs can mimic pelvic malignancy; for that reason, it is often treated surgically. Most of these patients undergo operative procedures, usually hysterectomy and salpingo-oophorectomy. The present case might have undergone surgical procedure for this cause.
- High-dose penicillin is an effective antibiotic in the treatment of actinomycosis. If the diagnosis of actinomycosis can be obtained preoperatively, then antibiotic treatment may lead to complete resolution. The Papanicolaou smear may be useful in evaluating such patients.
- In the present case, though the patient underwent hysterectomy for IUCD related complications, still after eight years she had vault granuloma which showed presence of actinomycotic organism. So, it is very important to identify the organism so as to administer appropriate treatment.

REFERENCES

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