Pelvic actinomycosis presenting as a single episode of postmenopausal bleeding in a 60-year-old woman whose intrauterine contraceptive device had been removed 10 years previously: A case report

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ABSTRACT

Actinomycosis is a rare opportunistic infection caused by Actinomyces bacteria entering tissue through a disruption in the normal mucosal barrier and spreading in a slow, progressive manner. Patients often present with mass lesions and abscesses which mimic malignancy. We present the case of a 60-year-old postmenopausal woman who presented with a single episode of spotting with no other symptoms. On hysteroscopic examination no abnormalities were found and Actinomyces spp. were cultured from an endometrial biopsy. The patient had last used an intrauterine contraceptive device (IUCD) 10 years previously; it had been removed at menopause. This is a rare presentation that highlights that pelvic actinomycosis can be precipitated by factors other than IUCD use. Biopsy is important, as ultrasound is not diagnostic.

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1. Introduction

Actinomycosis is caused by gram-positive anaerobic Actinomyces bacteria. These opportunistic bacteria cause suppurative and granulomatous inflammatory changes in infected tissue, spreading in a slow, progressive manner across tissue planes, and resulting in mass lesions and abscesses which can be mistaken for tumours [1]. Patients with pelvic actinomycosis present with non-specific symptoms such as fatigue, anorexia, weight loss and abdominal pain; as a result, diagnosis is often delayed. At presentation, many patients have a pelvic mass or an abscess evident on examination or imaging, which results in urgent referral to exclude malignancy. A definitive diagnosis of Actinomycosis is obtained with a biopsy or culture from infected tissue [2].

The patient was referred for outpatient hysteroscopy to exclude malignancy. On hysteroscopy a normal endometrium with no abnormalities was found and an endometrial biopsy was taken to investigate the cause of PMB. Actinomyces spp. were cultured from the biopsy; however, there was no evidence of hyperplasia or malignancy. The patient did not experience any further episodes of PMB and no masses were found on pelvic ultrasound.

The case was discussed in a multidisciplinary team meeting involving the histopathologist and microbiologist and a decision was taken to treat the patient with amoxicillin 500 mg TDS for 6 weeks, due to the association of Actinomyces with sinuses, abscesses and fistula formation.

3. Discussion

This case report highlights a rare presentation of actinomycosis, with the only symptom being a single episode of PMB. Furthermore, no pelvic masses or pain nor intrauterine contraceptive device (IUCD) were present. We are not aware of any other cases with a similar presentation to our patient. In nearly all published cases, recent or current use of an IUCD is reported. There are cases in which the infection was unrelated to IUCD use, but, unlike in our case, the patients had significant symptoms and pathology, such as retroperitoneal fibrosis and adnexal masses at the time of diagnosis [3–5].

Pelvic actinomycosis has a strong association with IUCD use in women [6,7]. Actinomyces are opportunistic bacteria that require a break in the normal mucosal barriers to infect tissue. It is thought that
IUCDs can precipitate this by injuring the mucosal lining of the uterus and altering the carbohydrate metabolism of endometrial cells. It is unlikely that the previous IUCD use by our patient precipitated the infection, due to her limited symptoms and signs. Therefore, the actinomycosis must have had another cause, such as bacterial vaginosis, which is associated with Actinomyces and other microorganisms [8]. The infection in our patient could even have been an incidental finding. Further studies are required to explore the aetiology of actinomycosis in patients without an IUCD.

4. Conclusion

Pelvic actinomycosis has classically been thought to be always associated with IUCD use. However, our patient had not recently used an IUCD, which highlights that the true aetiology of pelvic actinomycosis may be multifactorial. Therefore, we recommend further studies are done to explore the aetiology of pelvic actinomycosis. Finally, our case also highlights the importance of biopsy, as ultrasound is not diagnostic.

Contributors

Eushaa Mirza was involved in the conception, drafting, review, and revision of the manuscript.
Shazia Jaleel was involved in the conception, drafting, review, and revision of the manuscript.

Conflict of Interest

The authors declare that they have no conflict of interest regarding the publication of this case report.

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Patient Consent

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