

A Case of Pelvic Actinomycosis in the Absence of An Intrauterine Device

Rahim İçi Araç Olmayan Olguda Pelvik Aktinomikozis

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ABSTRACT Pelvic actinomycosis is a rare disease which is caused by actinomyces species and often presents as a complication of intrauterine device (IUD) use. Pelvic actinomycosis can cause different clinical features and this infection is diagnosed by histopathologically. We report a case of pelvic actinomycosis in a 53-year-old woman without IUD who had a history of long duration of IUD use. Pelvic ultrasound examination revealed irregular heterogeneous endometrium. Therefore an endometrial biopsy was performed and the endometritis that caused by actinomyces was detected. The patient was treated medically and then a laparotomy was performed. Pathologic examination revealed characteristic sulfur granules in the uterine cavity and other infected tissues. Because of the different clinical features of this disease it is difficult to make diagnose by clinically. Pelvic actinomycosis usually occurs in women who have an IUD but this disease should be considered in women without an IUD and who had a history of long duration of IUD use.

Key Words: Intrauterine devices; actinomycosis

ÖZET Pelvik aktinomikoz nadir görülen ve etiolojisinde aktinomiçes türlerinin yer aldığı ve sıklıkla rahim içi araç (RİA) kullanımına bağlı gelişen bir hastalıktır. Pelvik aktinomikozun klinik özellikleri değişkendir ve bu hastalığın tanısı histopatolojik olarak konur. Bu yazıda 53 yaşında RİA olmayan ancak geçmişte RİA kullanım öyküsü olan pelvik aktinomikoz olgusu sunulmuştur. Pelvik ultrasonografide irregüler heterojen endometrium saptanması üzerine hastaya endometrial biyopsi yapıldı. Biyopsi sonucunda aktinomiçes endometriti saptanan hasta medikal tedavi sonrasında opere edildi. Postoperatif patolojik incelemede uterin kavite ve diğer enfekte dokularda karakteristik sülfür granülleri saptandı. Pelvik aktinomikoz klinik olarak farklı görünümler sergilemesinden dolayı bu hastalığın klinik tanısı zordur. Bu hastalık genellikle RİA kullanan hastalarda görülmekle birlikte RİA olmayan ancak öyküsünde uzun süreli RİA kullanımı olan hastalarda da akla getirilmelidir.

Anahtar Kelimeler: Rahim içi cihazlar; aktinomikoz

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Pelvic actinomycosis is a rare disease and most cases are associated with a long duration of intrauterine device (IUD) use. In humans, the disease is caused by several actinomyces species, commonly by *Actinomyces israelii*. Actinomyces is gram positive, anaerobic or microaerophilic, non-acid fast, non-spore forming, slowly growing bacteria. Because of these special features of the bacteria, it is difficult to make a diagnosis via routine culture methods.¹

Actinomyces seems to be a part of normal flora in oral cavity, gastrointestinal tract and genital tract. It does not invade intact mucosal membranes. If there is a destruction of mucosal barriers, actinomyces can cause deep tissue infection.²

Actinomycosis infections are diagnosed histopathologically by finding sulfur granules in the infected tissue.³

Pelvic actinomycosis can cause different clinical features, such as asymptomatic infection, chronic pelvic pain, severe pelvic adherent syndrome, tuboovarian abscesses or pelvic mass mimicking pelvic malignancy.^{4,5}

A case of pelvic actinomycosis in a 53-year-old woman without IUD who had a history of a long duration of IUD use is reported below.

CASE REPORT

A 53-year-old asymptomatic woman without IUD, gravida 4, para 4, was admitted to our clinic for routine pelvic examination. She was at postmenopausal period for about three years. She had used an IUD for 10 years and the device was removed 2 years ago. Physical examination revealed tenderness in the left adnexa, an enlarged uterus and a left adnexial fixed mass of approximated 10 centimeters in diameter that was bounded to the uterus. Pelvic ultrasound examination showed left adnexial mass with irregular margins, intramural leiomyoma (7 x 8 cm in diameter) and irregular heterogeneous endometrium. The patient who was afebrile had a white cell count of $11200 / \text{mm}^3$ and C-reactive protein was 10 mg/dL. Papanicolaou smear revealed normal cytological findings. The endometritis caused by actinomyces was detected by endometrial biopsy. The patient was treated with intravenous penicillin G for 7 days and then oral penicillin V for two weeks before the surgery. A laparotomy was performed with the prediagnosis of pelvic mass and leiomyoma. Intraoperative observation revealed an agglutination of pelvic organs (tuba, ovary, bowel) forming a palpable, fixed complex in diameter 8-10 centimeters in the left adnexial region and intramural leiomyoma that arise from isthmus. During adhesiolysis pus were released into the ab-

domen. Total abdominal hysterectomy and bilateral salpingoophorectomy were performed. Pathologic examination revealed characteristic sulfur granules in the uterine cavity and other infected tissues. Postoperatively, the patient was treated with intravenous penicillin G for 7 days and oral doxycycline for four weeks. The written informed consent was obtained from the patient.

DISCUSSION

Pelvic actinomycosis is a rare chronic granulomatous infection. Clinical features of this disease are nonspecific and have a wide spectrum. Therefore, these clinical features lead to misdiagnosis before the surgery. Usually it is diagnosed postoperatively.^{4,6} Papanicolaou smear can be useful to determine the pelvic actinomycosis but it has a low sensitivity and specificity for identifying actinomyces species. Although culture can support the diagnosis of actinomycosis, it is difficult to make the diagnosis by using routine culture methods. Hence, diagnosis is often based on histopathologic identification of sulfur granules, but these are not specific for actinomycosis.³

In our patient, pelvic ultrasound examination revealed irregular, heterogeneous endometrium. We thought that this ultrasound finding was originated from the sulfur granules in the uterine cavity that were detected by macroscopic examination of

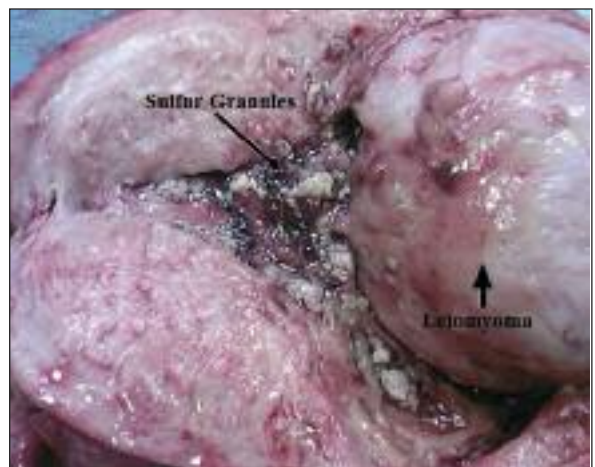


FIGURE 1: Postoperative macroscopic view of sulfur granules and leiomyoma in the uterine specimen

uterine specimen postoperatively (Figure 1). It is well known that pelvic actinomycosis usually occurs in women who have an IUD but it is not only caused by IUD use. This disease should be considered in women without an IUD and who had a his-

tory of long duration of IUD use like our patient.

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REFERENCES

1. Berardi RS. Abdominal actinomycosis. Surg Gynecol Obstet 1979;149(2):257-66.
2. Westhoff C. IUDs and colonization or infection with Actinomyces. Contraception 2007;75(6 Suppl):S48-50.
3. Persson E, Holmberg K. A longitudinal study of Actinomyces israelii in the female genital tract. Acta Obstet Gynecol Scand 1984;63(3): 207-16.
4. Koshiyama M, Yoshida M, Fujii H, Nanno H, Hayashi M, Tauchi K, et al. Ovarian actinomycosis complicated by diabetes mellitus simulating an advanced ovarian carcinoma. Eur J Obstet Gynecol Reprod Biol 1999;87(1):95-9.
5. Fiorino AS. Intrauterine contraceptive device-associated actinomycotic abscess and Actinomyces detection on cervical smear. Obstet Gynecol 1996;87(1):142-9.
6. Schmidt WA. IUDs, inflammation, and infection: assessment after two decades of IUD use. Hum Pathol 1982;13(10):878-81.