Cukurova Medical Journal

Olgu Sunumu / Case Report

Genital Tuberculosis Associated Pyosalpinx: Report of Two Cases

Genital Tüberküloz İlişkili Pyosalpinks: İki Olgu Sunumu

Nazlı Aksoy Kala[1], Hasan Onur Topçu[1], Ali İrfan Güzel[1], Sabri Cavkaytar[1], Melike Doğanay[1], Hüseyin Yeşilyurt[1]

[1]Zekai Tahir Burak Women's Health Education and Research Hospital. ANKARA

Cukurova Medical Journal 2015;40 (2):330-335.

ABSTRACT

Tuberculosis is an infectious disease which typically affects the lungs and caused by Mycobacterium tuberculosis. Genital tract is commonly affected secondary to a primary lesion via peritoneal, hematogenous or lymphatic spread. It causes destruction in tissue due to granulomatous reaction and is a cause of infertility in affected patients when the infection locates on genital tract. The aim of this study was to report two cases of genital and peritoneal tuberculosis of a 20 year-old women that underwent surgery because of bilateral pyosalpinx and another case with genital and peritoneal tuberculosis of a 27year-old women that underwent surgery because of bilateral adnexal mass.

Key words: Genital tuberculosis, peritoneal tuberculosis, pyosalpinx

ÖZET

Tüberküloz, tipik olarak akciğeri etkileyen ve Mycobacterium tuberculosis tarafından oluşturulan enfeksiyöz bir hastalıktır. Genital kanal genellikle primer lezyona sekonder olarak peritoneal, hematojen veya lenfatik yayılımla tutulmaktaktadır. Enfeksiyon, granülomatöz reaksiyona bağlı doku hasarı yapmakta, genital kanal tutulumu olan hastalarda infertiliteye neden olmaktadır. Bu çalışmanın amacı, bilateral pyosalpinks nedeniyle opere olan 20 yaşındaki genital ve peritoneal tuberkülozlu bir olguyla bilateral adneksiyal kitle nedeniyle opere olan 27 yaşındaki genital ve peritoneal tüberkülozlu bir başka olguyu sunmaktır.

Anahtar kelimeler: Genital tüberküloz, peritoneal tüberküloz, pyosalpinks

INTRODUCTION

Tuberculosis is a major death cause in worldwide and remains among the top three causes of mortality in women. There were an estimated 410 000 deaths and 2.9 million new cases of tuberculosis in women in 2012[1]. It can locate extrapulmonary. The genital tuberculosis is one of the extrapulmonary form and its prevalence in female population is 1-2%[2]. Primary genital tuberculosis is very rare[3] and it occurs secondarily to a tuberculosis infection elsewhere in the body. It affects fallopian tubes most commonly[4] and is the major factor causing occluded fallopian tubes[5].

Possible symptoms of genital tuberculosis are infertility (most common symptom), abdominal pain, abnormal vaginal bleeding, amenorrhea, vaginal discharge and post-menopausal bleeding[6-10] and can be clinically seen in various situations such as tuboovarian abscess[11], salpingitis[12], PID with other infectious agents[13] or mistaken as ovarian cancer[14].

CASE A

20 year-old, gravida 0 para 0 woman presented with abdominal pain and menstrual irregularity. She had no weight loss or tuberculosis history and has a rare history of odorless, colorless vaginal discharge.

On examination, her body mass index was 22.03. She had tenderness and a palpable mass in right lower abdominal quadrant. She had a subfebrile fever of 37.8°C and other vital parameters were normal. On transvaginal ultrasound an antevert, subseptum uterus with an endometrial thickness of 6.5 mm was seen. Myometrium was homogenous and both ovaries were polycystic. There was a 45x11 mm sized tubular hyperecogen structure between right ovary and uterus. Her hemoglobin value was 12.2 gr /dl, white blood cells (WBC) was 12 600 cells/mm3 and sensitive C- Reactive Protein (CRP) was 123.2 mg/dL.

Initial diagnosis was pyosalpinx. Antibiotherapy was planned empirically. The patient was informed about her medical situation. She did not want her tubes to be excised. Laparoscopy was performed on the third day of hospitalization. In laparoscopy, widespread granulomatous foci on anterior abdominal wall, intestines, uterus and both fallopian tubes were seen (Figure 1 and 2). Left tube was adherent to the posterior part of uterus and right tube was hydropic and adherent to the right fossa ovarica. Intestines were adherent to left abdominal wall and liver was adherent to anterior abdominal wall (Figure 3). Adhesiolysis was performed and right tube was freed, incised with monopolar cautery and caseous material was drained. Samples for culture, acidoresistant stain and mycobacterium tuberculosis PCR were taken. Methylene blue was given through cervical way but both tubes were observed as occluded. There was no complication occurred in laparoscopy and patient was continued to take antibiotics after surgery.

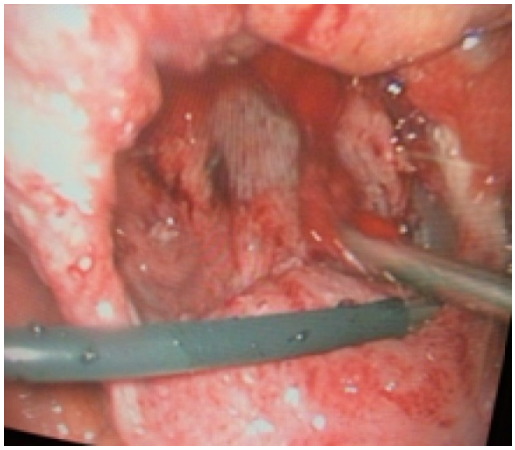

Figure 1. Granulomatous foci on uterus and fallopian tubes

Figure 2. Granulomatous foci on anterior abdominal wall

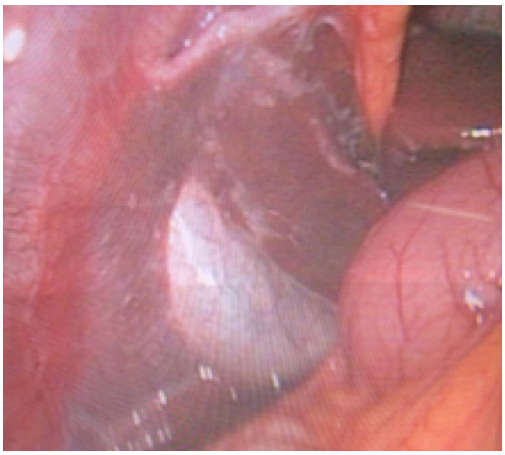

Figure 3. Liver was adherent to anterior abdominal wall.

In postoperative period, her body temperature was higher than 38° C for two days, and her WBC count and CRP remained high for three days. No microorganisms were proliferated in culture samples or seen in acidoresistant stain. The polymerase chain reaction (PCR) demonstrated mycobacterium tuberculosis. She had been given antibiotics for 10 days and was discharged from hospital after being diagnosed as genital tuberculosis and referred to tuberculosis center.

CASE B

A 27 year-old, gravida 1 para 1 woman presented with abdominal pain. She did not have any symptoms or findings such as weight loss, tuberculosis history or vaginal discharge.

Her first general examination and vital findings were all normal. She had mild pelvic tenderness with palpation. A mass in right lower abdominal quadrant was detected and nodular lesions were palpated in bimanual examination. Her pregnancy test was negative and complete blood count was normal. Transvaginal ultrasonography was consistent with a normal uterus size, normal endometrial thickness and left ovary had a cyst with a diameter of 20 mm, right ovary had cysts with a diameter of 45 mm that looked like hemorrhagic cyst and another cyst with a diameter of 50 mm and dense content (Figure 4 and 5).

Figure 4. View of cyst on transvaginal ultrasound

Figure 5. View of cyst on vaginal ultrasound

Laboratory parameters were: hemoglobin: 12.4 gr/dL; WBC:7 700 cells/mm^3, Ca-125 112 IU/ml, normal values of Ca 19-9, Ca 15-3, CEA, AFP, negative results for anti HIV, anti HCV and HbSAg and normal liver and kidney functional tests. Serum human chorionic gonadotropin (βHCG) level was negative for pregnancy.

Laparoscopy and frozen section biopsy were planned. In laparoscopy, widespread foci in abdomen were seen (Figure 6 and 7). Left tube was dilated and adherent to peripheral tissues, right tube was dilated and there was a 5cm cyst in right ovary. Left salpingectomy, specimen for microbiologic culture and tuberculosis PCR from salpingectomy material, right ovarian cyst excision and peritoneal biopsy were performed. Biopsy specimens were sent to frozen section biopsy and resulted as granulomatous infection in salpingectomy specimen. No malignity sign was seen in cyst biopsy. There was no complication occurred in laparoscopy.

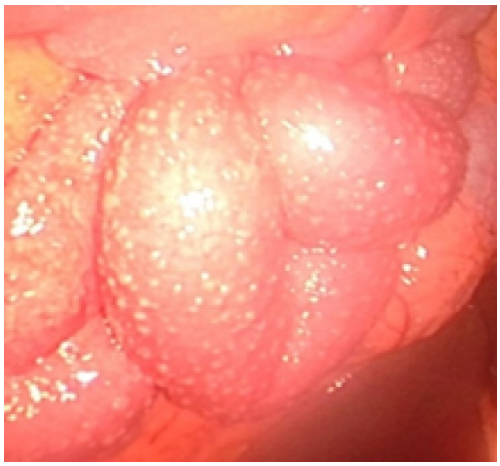

Figure 6. Tuberculosis foci on intestine

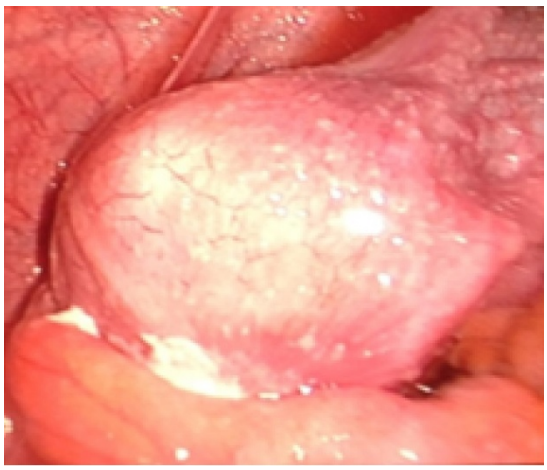

Figure 7. Tuberculosis foci on uterus

In postoperative period, no microorganisms were proliferated in culture but PCR evidence demonstrated mycobacterium tuberculosis. Patient was consulted to infectious diseases and tuberculosis specialist. In examination, BCG scars were seen on both left and right arms. Respiratory voices were reduced in right inferior zone and pleural fluid in right costophrenic sinus and 3 millimetric density on superior zone were seen on posterior-anterior chest X-ray. Respiratory isolation was recommended and patient was referred to a tuberculosis center.

DISCUSSION

Tuberculosis is a worldwide infectious problem. It still remains as a problem because of difficulties that are related to diagnose because its incidence and prevalence show variations between developed and undeveloped countries.It does not have any specific symptom and there is lack of sensitive and specific methods to diagnose. Even though culture is the gold standard in diagnose, PCR gives rapid results. PCR test is also sensitive (78.5%) in diagnosis of extra pulmonary tuberculosis[15,16].

Genital tuberculosis is mostly seen in 20-40 aged women but there are postmenopausal cases as well. Female genital tuberculosis is mostly secondary to another focus elsewhere in the body and affecting the female genital organs, fallopian tubes (90%), endometrium (50%) and the ovaries (10-30%)[4,17,18]. It is a major cause of infertility[19] and can cause visible deformations on uterus and

fallopian tubes [20]. It is found in about 1% of all tuberculosis patients[21].

The diagnosis criteria of primary genital tuberculosis are the genital lesions that are the first infection focus in the body and the regional lymph nodes should show the tuberculosis development[22]. We could not know if the case A is the primary genital tuberculosis if pathologic evaluation was not performed. Uterus, the tubes and the ovaries may be involved by the peritoneal spread which originates from an intra-abdominal lesion[23]. Tuberculosis foci were seen on the anterior abdominal wall of this patient so, genital tract may be secondarily affected because of these lesions. In case B, primary focus was thought as located in lung after of physical examination and chest X-ray findings.

Gynecologists always have to consider genital tuberculosis in patients with irregular menses, vaginal discharge, abdominal pain, vaginal bleeding and previous tuberculosis in personal or family history, immunodeficiency and weight loss.

REFERENCES

1. WHO World Health Organization. Global Tuberculosis Report. 2013.
2. Seshadri Lakshmi. Essentials of gynaecology. New Delhi: Wolters Kluwer India Pvt Ltd; 2012.
3. Elkin M. Urogenital tuberculosis. In: Pollack HM, editor. Clinical urography. 1st ed. Philadelphia: WB Saunders Co. 1990;1020–52.
4. Varma TR. Genital tuberculosis and subsequent fertility. Int J Gynaecol Obstet. 1991;35:1–11.
5. Zhao WH, Hao M. Pelvic inflammatory disease: a retrospective clinical analysis of 1,922 cases in North China. Gynecol Obstet Invest. 2014;77:169-75.
6. Qureshi RN, Samad S, Hamid R, Lakha SF. Female Genital Tuberculosis Revisted, Department of Obstetrics and Gynaecology, The Aga Khan University Hospital, Karachi. J Pak Med Assoc. 2001;51:16–8.
7. Namavar-Jahromi B, Parsanezhad ME, Ghane-Shirazi R. Female genital tuberculosis and infertility. Int J Gynaecol Obstet . 2001;75:269–72.
8. Sutherland AM. Surgical treatment of tuberculosis of the female genital tract. Br J Obstet Gynaecol . 1980;87:610–2.
9. Malani AK, Rao J. Peritoneal tuberculosis. Mayo Clin Proc. 2006;81:443.
10. Hassoun A, Jacquette G, Huang A, Anderson A, Smith MA. Female genital tuberculosis: uncommon presentation of tuberculosis in the United States. Am J Med . 2005;118:1295–9.
11. Ilmer M, Bergauer F,Mylonas I. Genital Tuberculosis as the Cause of Tuboovarian Abscess in an Immunosuppressed Patient. Infect Dis Obstet Gynecol. 2009;2009:745060.
12. Rajaratnam A, D'Cunha P, Fernandes H. Tuberculous Salpingitis: A Case Report. J Clin Diagn Res. 2013;7:1186–8.
13. Kokkayil P, Rawre J, Malhotra N, DhawanB. Co-infection of Mycoplasma genitalium and Chlamydia trachomatis in an infertile female patient with genital tuberculosis. Indian J Pathol Microbiol. 2013;56:457-9.
14. Hasanzadeh M, Naderi HR, Shahidsales S. Female genital tract tuberculosis presenting as ovarian cancer. J Res Med Sci. Feb. 2014;19:184–9.
15. Singh KK, Muralidhar M, Kumar A, Chattopadhyaya TK, Kapila K, Singh MK, et al. Comparison of in house polymerase chain reaction with conventional techniques for the detection of Mycobacterium tuberculosis DNA in granulomatous lymphadenopathy. J Clin Pathol. 2000;53:355-61.
16. Rimek D, Tyagi S, Kappe R. Performance of an IS6110-based PCR assay and the COBAS AMPLICOR MTB PCR system for detection of Mycobacterium tuberculosis complex DNA in human lymph node samples. J Clin Microbiol. 2002;40:3089-92.
17. Sutherland AM. The changing pattern of tuberculosis of the female genitaltract. A thirty-year survey. Arch Gynecol. 1983;234:95–101.

18. Schaefer G. Female genital tuberculosis. Clin Obstet Gynecol. 1976;19:223–39.

19. Singh N, Sumana G, Mittal S. Genital tuberculosis: a leading cause for infertility in women seeking assisted conception in North India. Arch Gynecol Obstet. 2008;278:325–7

20. Afzali N, Ahmadi F, Akhbari F. Various hysterosalpingography findings of female genital tuberculosis: A case series. Iran J Reprod Med. 2013;11: 519–24.

21. Arora R, Rajaram P, Oumachigui A, Arora VK. Prospective analysis of short course chemotherapy in female genital tuberculosis. International Journal of Gynecology and Obstetrics. 1992;38:311–4.

22. Auerbach O. Tuberculosis of the female genital organs. Surg Gynecol Obstet. 1942;75:712.

23. Tripathy SN, Tripathy SN. Gynaecological tuberculosis-An update. Ind. J. Tub. 1998;45:193.

Yazışma Adresi / Address for Correspondence:
Dr. Nazlı Aksoy Kala
Zekai Tahir Burak Women's Health Education and Research Hospital ANKARA
E-mail: nazli.aksoy@gmail.com

Geliş tarihi/Received on : 12.07.2014
Kabul tarihi/Accepted on: 03.09.2014