



INTERNATIONAL JOURNAL OF PHARMACEUTICAL RESEARCH AND BIO-SCIENCE

TUBERCULAR TUBO-OVARIAN ABSCESS ALONG WITH TUBERCULAR MENINGITIS – AN UNUSUAL PRESENTATION

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Accepted Date: 27/10/2015; Published Date: 27/12/2015

Abstract: Although tuberculosis (TB) is a major health problem worldwide, genital tuberculosis (GTB) is an extremely rare genital tract infection that is almost always secondary to a focus elsewhere in the body and is very difficult to diagnose unless one maintains a high index of suspicion. When diagnosed correctly at an early stage, it can be cured with anti-TB medications. Here, we present a case of about a 23-year-old patient admitted to our hospital with Post LSCS tubercular tubo-ovarian abscess with tubercular meningitis. She had complaints of headache, fever, pain abdomen, backache & vomiting since last 2 months. Ultrasonography of abdomen revealed the tubo- ovarian abscess. Ultrasound guided aspiration of the pelvic abscess was done and it tested positive for acid fast bacilli. In addition, CT findings were suggestive of tubercular meningitis. Simultaneous presentation of tubercular tubo-ovarian abscess with meningitis has not been reported in literature. However, microbiological evidence of tubercular meningitis could not be established as the patient was lost on follow up.

Keywords: Genital Tuberculosis, Tubo –Ovarian Abscess, Meningitis



PAPER-QR CODE

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Access Online On:

www.ijprbs.com

How to Cite This Article:

Rama Gupta, IJPRBS, 2015; Volume 4(6): 106-111

INTRODUCTION

Pelvic inflammatory disease (PID) is a common disorder of the upper female genital tract that can lead to formation of abscesses and peritonitis.^[1] In about two thirds of all reported cases, an underlying cause cannot be identified. Sometimes it is facilitated by postsurgical and post-delivery conditions or intrauterine devices (IUDs), especially shortly after insertion.^[2] Tubo-ovarian abscess (TOA) is a late complication of PID and involves a frank abscess or an inflammatory mass resulting from breakdown of the normal structure of fallopian tubes and ovaries by inflammation.^[3,4] Although tuberculosis (TB) is a major health problem worldwide, primary extrapulmonary tuberculosis (EPTB), and in particular female genital tract infection, remains a rare event. Genital TB affects about 12% of women with PTB and 15% to 20% of women with EPTB. ^[5] Tubo-ovarian involvement is usually caused by hematogenous or lymphatic spread and occasionally by peritoneal dissemination. ^[6] Here, we present a case of about a 23-year-old patient admitted to our hospital with Post LSCS tubercular tubo-ovarian abscess with clinical and radiological suspicion of tubercular meningitis.

CASE REPORT

A 23-year-old female who underwent Lower Segment Cesarean Section (LSCS) 8 months back was admitted to our hospital in March 2015 with a 3-day history of altered sensorium. She had complaints of headache, fever, pain abdomen, backache & vomiting since last 2 months. Earlier she had been evaluated & treated outside for bilateral infective tubo-ovarian abscess. On examination, Glassgow coma scale was E₁M₃V₇ and meningeal signs were present. Movements of patient were lesser on left side of the body. Patient was intubated on account of respiratory failure. Plantar reflex was increased bilaterally. BP was 60/ by pulse & HR 60-70/min. Laboratory investigations of the patient revealed the following results: haemoglobin- 9.7g/dl, total leucocyte count- 15,200/mm³, platelets-34,900/μl, ESR-78 mm in 1st hour, PTI(INR)- 14.5(1.32), RBS- 216mg/dl, serum urea-32 mg/dl, serum creatinine- 0.66 mg/dl, arterial blood gases- ph 7.48, CO₂- 33mm Hg, HCO₃-24.6mEq/l, serum bilirubin-total 0.45 mg/dl, alkaline phosphatase- 64 U/l, total serum proteins- 6.5 g/l, albumin-3.7 g/l, A/G ratio- 1:3, Ca-125- 128.2 U/ml, AFP-0.46, LDH-342U/l, CRP- 126.9 mg/l, serum sodium- 174mmol/l, serum potassium- 4.01 mmol/l and serum chloride- 132 mmol/l.

On ultrasound examination of abdomen, fluid collection with internal echoes 7x2.6cm in ® adenexal region- suggestive of tubo-ovarian abscess, was seen. The abscess was aspirated under ultrasound guidance and the fluid was positive for acid fast bacilli with Ziehl-Neelsen & Auramine staining.

Xray chest findings did not demonstrate any signs of tuberculous involvement of the lungs or any other hilar or mediastinal lymphadenopathy.

CT head with contrast, revealed enhancement in left sylvian fissure MCA cistern suggestive of enhancing exudates. Ill-defined hypodense areas were present in white matter in left frontal region and in left basal ganglia and right thalamus- suggestive of vasculitic infarcts. Hence CT diagnosis of? tubercular meningitis with vasculitic infarcts was made. (Image1-3).

CSF was negative on Gram, s stain & India ink preparation, bacterial and cryptococcal antigen detection tests were negative. CSF findings revealed glucose-31mg/dl, proteins-123.5 mg/dl, chloride-109mg/l. Blood & CSF culture were negative for pyogenic organisms & the procalcitonin levels were 0.1ng/ml.

Diagnosis of tubercular tubo-ovarian abscess with meningitis (? Tubercular) was made. Laparoscopic drainage of pelvic abscess was planned, but the patient was discharged against medical advice and was lost for follow up.

DISCUSSION

Genital tract TB is a chronic disease that often presents with low grade symptomatology and very few specific complaints. A proper diagnosis usually requires abdomino-pelvic ultrasonography, chest radiography, PPD skin tests, AFB staining, polymerase chain reaction analysis and/or histopathological evaluation, and specific cultures from intra-operative specimens, including invasive surgical procedures such as diagnostic laparoscopy.^[7]

The diagnosis of GTB is a clinical challenge and is rarely achieved by consideration of clinical symptoms alone, given their low specificity. Therefore, every attending gynaecological physician should be aware of the possibility of tuberculosis as a cause of pelvic inflammatory disease (PID). In patients with risk factors such as HIV-positivity, alcoholism, intravenous drug abuse (IVDA) and other immunosuppressive diseases, tubo-ovarian abscesses (TOA) caused by tuberculous pathogens should be considered.^[2] However, there was no predisposing condition reported for the development of tubercular tubo-ovarian abscess in our case.

In the present case, the diagnosis of tubercular tubo-ovarian abscess (genital tuberculosis) was made on the basis of positive ZN stained smear made from pelvic abscess pus. In addition, serum cancer antigen 125 (CA-125) levels were found to be raised, but less than 500 IU/ml. Tubercular tubo-ovarian mass can mimic ovarian cancer by both radiologic findings and clinical setting, the symptoms are usually vague, serum CA-125 (cancer antigen 125) levels are usually elevated, and the radiologic findings closely resemble those of ovarian cancer with peritoneal seeding. In general, TB should be taken into account in the differential diagnosis of malignancy in patients with pelvic masses, ascites, and CA-125 levels < 500 IU/ml. Rather serum cancer antigen 125 (CA-125) levels and high-molecular-weight glycoproteins have been used to monitor the response of genital TB to anti-TB treatment.^[7,8]

Tuberculosis primarily manifests in the lungs, although extra pulmonary infections are also observed. However, extra pulmonary infections such as primary genital tuberculosis is an extremely rare genital tract infection that is almost always secondary to focus elsewhere in the body. [9] However in the present case X ray chest findings did not demonstrate any signs of tuberculous involvement of the lungs. In addition, no other primary focus of tuberculosis was identified. Therefore, it is difficult to state the exact mechanism of development of tubercular tubo-ovarian abscess in the present case. However, the possibility of contracting the pelvic infection during the Lower Segment Cesarean Section (LSCS) 8 months back cannot be ruled out.

In our case, a suspicion of meningitis was kept on the basis of clinical presentation. CT findings were suggestive of tubercular meningitis. Simultaneous presentation of tubercular tubo-ovarian abscess with meningitis has not been reported in literature. However, tubercular meningitis could not be confirmed as the patient was lost on follow up.

Patients with tuberculosis sometimes may present with atypical, unusual features. Disease may involve one organ, two or more organs simultaneously or be disseminated throughout the body. In conclusion, high index of clinical suspicion, timely judicious use of invasive diagnostic methods and confirmation of the diagnosis are the key to the successful diagnosis and management of EPTB.



Image 1: Hypodense area is seen involving right thalamus suggestive of infarct



Image2: There is dilatation of temporal horns of bilateral lateral ventricles



Image3: Bilateral lateral ventricles are dilated suggestive of hydrocephalus with ill defined hypodense area seen in left frontal region.

REFERENCES:

1. Haggerty CL. Evidence for a role of *Mycoplasma genitalium* in pelvic inflammatory disease. *Current Opinion in Infectious Diseases*. 2008; 21(1): 65–9.
2. Ilmer M, Bergauer F, Friese K and Mylonas I. Genital Tuberculosis as the cause of Tuboovarian Abscess in an immunosuppressed patient *Infectious Diseases in Obstetrics and Gynecology* 2009 (2009), Article ID 745060. <http://dx.doi.org/10.1155/2009/745060>
3. Ellis JH, Francis IR, Rhodes M, Kane NM, Fechner K. CT findings in tubo-ovarian abscess. *J Comput Assist Tomogr* 1991; 15: 589-92.
4. Ha HK, Lim GY, Cha ES, et al. MR imaging of tubo-ovarian abscess. *Acta Radiol* 1995; 36:510-4.
5. Gatongi DK, Gitau G, Kay V, Ngwenya S, Lafong C, Hasan A. Female genital tuberculosis. *Obstet Gynaecol*. 2005; 7: 75–9. doi: 10.1576/toag.7.2.075.27000.
6. Anderson JR. Genital tuberculosis. In: Jones HW, III, Wentz AC, Burnett LS, eds. *Novak's textbook of gynecology*. 11th ed. Baltimore, Md: Williams & Wilkins, 1988; 557-60.
7. Akbulut S, Arikanoğlu Z and Basbug M. Tubercular tubo-ovarian cystic mass mimicking acute appendicitis: a case report *J Med Case Reports*. 2011; 5: 363.
8. Ulusoy AN, Karabicak I, Dicle K, Kefeli M, Tosun M, Cetinkaya M, Alper T, Ustun C. Peritoneal tuberculosis in premenopausal patients with elevated serum CA 125. *Arch Gynecol Obstet*. 2010; 282: 639–42.
9. Hsieh HC, Lu PL, Chen YH, et al. Genitourinary tuberculosis in a medical center in southern Taiwan: an eleven-year experience. *Journal of Microbiology, Immunology and Infection*. 2006; 39(5): 408–13.