



GENITAL TUBERCULOSIS WITH ENDOMETRIOSIS LEADING TO SECONDARY INFERTILITY: A RARE CASE REPORT OF SUCCESSFUL TREATMENT

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ABSTRACT

The incidence of female infertility is rising globally. Genital tuberculosis is a known cause of infertility in women and infertility is the most common initial symptom of genital tuberculosis. Genital tuberculosis not only causes tubal obstruction and dysfunction but also impairs implantation due to endometrial involvement and ovulatory failure from ovarian involvement. Endometriosis is the growth of endometrial tissue outside of the uterus and is commonly associated with an increased risk of infertility. We are presenting a case of secondary infertility due to genital tuberculosis with endometriosis which is treated with antitubercular therapy and intrauterine insemination.

KEYWORDS : infertility, genital tuberculosis, endometriosis etc.

INTRODUCTION:

The incidence of female infertility is rising globally. Infertility is inability to conceive by at least one year of unprotected intercourse. Most common etiology in the developed nations is unovulation whereas tuboperitoneal damage from infectious disease is very common in the underdeveloped nations. Genital tuberculosis is known cause of infertility in women.^{1,2,3} India holds one-fifth of the global burden of tuberculosis.⁴ Genital tuberculosis is a form of extrapulmonary tuberculosis. In most of the cases genital tuberculosis starts in the fallopian tubes and extend to the endometrium, ovary and cervix.⁵ Worldwide in the infertility clinics, 5% women presenting have genital tuberculosis with increasing prevalence rates in the developing nations.^{6,7} Genital tuberculosis often exists without any symptoms or clinical signs. Infertility is the most common initial symptom of genital tuberculosis. Other manifestations include menstrual irregularities and chronic pelvic pain. It is mostly acquired by hematogenous spread from extragenital source.^{8,5} Genital tuberculosis causes tubal obstruction as well as impairs implantation due to endometrial involvement and also causes ovulatory failure.⁹

Endometriosis is the growth of endometrial tissue outside of the uterus and is commonly associated with an increased risk of infertility.¹⁰⁻¹³ The mechanism for infertility might be due pelvic adhesions, endometriomas, and the production of cytokines causing adverse effects on normal ovulation, fertilization and implantation.^{10,14} Treatment options for infertility associated with endometriosis involve a combination of medical therapy, surgery and assisted reproduction techniques.¹⁵

Here, we report a rare case with genital tuberculosis and endometriosis coexisting in an infertile female.

Case report:

26 years female patient came to our IVF centre, BHRC, Jaipur in January 2018 with history of secondary infertility since 16 months. She was married since 3 years. Her menstrual cycle was regular with 30 days interval and 3-4 days of normal flow. She had history of one missed abortion at 10 weeks of pregnancy for which she underwent dilatation and evacuation in other hospital on 20/6/2016. Her vital parameters were within normal limit. Abdomen was soft. On speculum examination, cervix and vagina were healthy. On per vaginal examination, uterus was of normal size, retroverted freely mobile and fornices were clear. Diagnostic laparoscopy done in Nov 2017 was showing bilateral salpingo-oophoritis, both fallopian tube with lead pipe appearance and bilateral chromoperturbation test negative, bilateral cornual block with endometriotic patches in pouch of Douglas. Diagnosis of secondary infertility due to tubal pathology was made.

Male profile: Husband's investigations were found within normal limit. Seminal fluid analysis showed normal parameters.

Treatment at BHRC IVF centre:

AKT-4 was given once daily for 2 months from 17/1/2018 on clinical basis. Hysterosalpingography was done on 21/3/2018 at BHRC showed, mild delayed spill of dye on both sides. After completing 2 months of intensive phase, AKT-3 was given once daily next for 4 months. Patient came on 13/4/2018 on 2nd day of menstrual period, so ovulation induction started for intrauterine insemination (IUI).

Ovarian stimulation protocol:

Tab Letrozole 2.5mg was given 12 hourly for 5 days (13/4/18 to 18/4/18). Injection (urinary) FSH 75 U was given for 5 days (23/4/18 to 27/4/18) with continuous follicular growth monitoring. On 27/4/2018 transvaginal sonography showed one dominant follicle of 18 mm in right ovary. Injection HCG 10000 U was given on 24/4/2018. But patient had vaginal bleeding for 3 days. So IUI cancelled.

Patient came again on 15/5/2018, 2nd day of menstrual period. Ovulation induction started for IUI. Tab Letrozole 2.5 mg was given 12 hourly for 5 days. Inj (recombinant) FSH 75U was given every alternate day from 4th day to 10th day with continuous follicular monitoring. Injection HCG 10000 U given on day 14 with TVS showing right ovary 18 mm and left ovary 19.5mm. Endometrial thickness was 8.6 mm with flow upto zone 3, triple layer. Double intrauterine insemination with husband's sperm (IUI- H) done on 28/5/18 (after 24 hrs) and also on 29/5/18 (after 48 hrs).

Semen analysis report:

	Sperm concentration / ml	Motility	Morphology
Pre wash	60×10 ⁶	70%	normal
Post wash	70×10 ⁶	90%	normal

IUI Procedure findings: Rigid transfer catheter was used as IUI was difficult due to fibrosed cervical canal. Luteal phase support was given with progesterone 400 mg vaginally every 12 hr for next 15 days. βhCG on 14/6/2018 was 7560 U. First ultrasonography on 29/6/18 showed a well defined gestational sac of 7 weeks with positive fetal heart and fetal wellbeing.

DISCUSSION:

The present case is about genital tuberculosis with endometriosis in a young female who is suffering from infertility. Both fallopian tubes are involved in almost all patients with genital tuberculosis. Infertility is the most common clinical symptom of genital tuberculosis even if fallopian tubes are not obstructed.^{16,17} The finding of endometrial tuberculosis almost always means that the tubes are infected. But 30-40% of cases of tubercular salpingitis are found without associated endometritis.¹⁸ Laparoscopy has definite place in the diagnosis of genital tuberculosis.

Patients with genital tuberculosis may not have history of tuberculosis. Even in apparently low risk patients, if the case is presented with

infertility, the genital tuberculosis needs to be suspected. An increased erythrocyte sedimentation rate and a positive test for Mantoux are not specific for genital tuberculosis. Hysterosalpingography and pelvic ultrasound may be useful for the diagnosis. Histopathology of premenstrual endometrial tissue or detection of mycobacterium tubercle bacilli in cultures of menstrual blood or endometrial curetting useful for diagnosis of genital tuberculosis.¹⁹⁻²¹ In our case, coexisting endometriosis and tuberculosis was diagnosed on laparoscopy. The patient was given antitubercular therapy before intrauterine insemination. Early diagnosis by surgical exploration and adequate treatment may improve the chances of conception. In conclusion, the case presented highlights the need to consider the possibility of genital tuberculosis in the etiology of infertility even in apparently low risk patients. The resultant proper and adequate treatment may be all that is necessary to treat infertility.

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