Does Treatment of Infertile Women with Probable Genital Tuberculosis Improve Fertility Outcome?

Presenting Author: Shilpa N Naik, BJGMC, Pune, India
Co-authors: Ajay Chandanwale, Dileep Kadam, P.W. Sambarey, Gauri Dhumal, Andrea DeLuca, Divyashri Jain, Amita Gupta, Robert Bollinger, Vidya Mave

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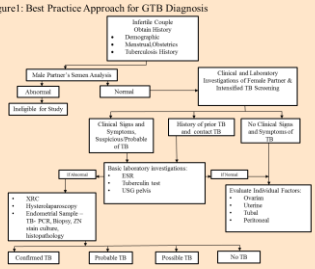
Background

- The incidence of female infertility is rising globally, with variation in the etiology among high, low and middle income countries.(1)
- In India, reported annual EPTB burden was 20-25% of which 4% of EPTB cases were reported to be urogenital TB (urinary tract and genital TB).(2)
- Diagnosis of genital tuberculosis (TB) as a cause of infertility still remains a diagnostic dilemma for clinicians, as no standard guidelines exist. (3)
- The recently proposed best practices for genital TB diagnosis have not been evaluated yet in India. (4,5)
- Therefore, we implemented best practices to diagnose and treat likely genital TB as a cause of infertility.

Objectives

- To categorize genital TB cases as likely (confirmed, probable) and unlikely (possible and no TB) based on: clinical, radiological, hysterolaparoscopy and microbiological findings
- To study the fertility outcome among genital TB group.

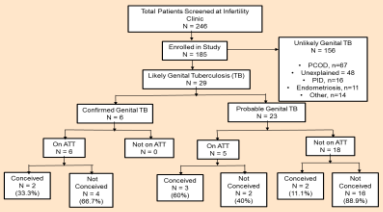
Figure1: Best Practice Approach for GTB Diagnosis



Results

- Primary infertility was found in 155 (84%) women and secondary in 30 (16%) women
- Of 185 women seeking infertility care, median age was 26 years (interquartile range (IQR), 24-30) and the median body mass index (BMI) was 22.96 (IQR, 21.5-25.1).
- Using the Figure 2 approach, likely genital TB was identified among 29 (15.7%) women, with 6 (21%) confirmed and 23 (79%) probable genital TB.
- Compared to unlikely genital TB cases, the likely genital TB group were more likely to have past history of TB ($p < 0.001$); positive TST ($p=0.002$) and elevated ESR ($p=0.001$).
- Likely genital TB group were subjected to laparohysteroscopy more often (75% vs. 5%, $p<0.001$).
- Peri-tubal and tubo-ovarian adhesions were seen in 10 (66.7%), hydrosalphinx in 4 (26.7%), tubal block in 3 (20%), and other tubal abnormalities in 3 (20%) women
- Of the likely genital TB group, 2 (33.3%) of the 6 confirmed genital TB cases who initiated and completed ATT conceived.
- Among 23 probable genital TB cases, 5 (21.7%) were initiated on ATT and 3 (60%) conceived. (Figure 3).

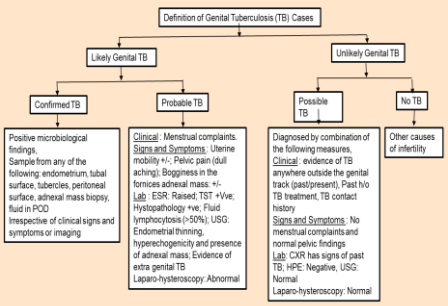
Figure 3. Women with likely and unlikely genital TB and their pregnancy outcomes



Design/Methods

- **Study Type**: Prospective Cross sectional Study
- **Study Site:** B.J. Government Medical College & Sassoon General Hospitals, Pune, Maharashtra, India
- **Study Duration:** April 2016 to June 2018
- **Inclusion Criteria:** 18-40 years of age with Primary or secondary infertility
- **Exclusion Criteria:** Congenital Anatomical abnormality, Male partner with diagnosed infertility, Unwilling to participate in study
- **Best Practices for GTB:** Screening for TB symptoms, prior TB and history of TB contact, ESR and TST; clinical findings and tissue sampling at hysterolaparoscopy for microbiological evaluation
- **Statistical Analysis:** Descriptive statistics

Figure 2. Genital TB definitions



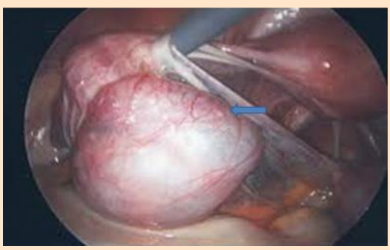
Conclusions

- Our study that employed best clinical practices to diagnose genital TB identified a 16% prevalence of likely genital TB among women reporting infertility.
- Importantly, though the numbers were very small, 3 out of 5 women with probable genital TB conceived after starting treatment, providing preliminary evidence that the proposed approach can be utilized, but needs further confirmatory studies.

Limitations

- We did not have a comparative group.
- We did not uniformly apply some invasive components of the diagnostic approach to all infertile women, but used the clinical judgment of treating clinicians to avoid unnecessary procedures for those unlikely to have genital TB or whenever alternate diagnoses were available.
- The decision about treatment initiation for probable TB cases was as per the treating physician.

Figure.4: Laparoscopy showing tuboovarian mass



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