# STANDARD TREATMENT WORKFLOW (STW)

## **Female Genital Tuberculosis**

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### Standard Treatment Workflow (STW) for the Management of

### FEMALE GENITAL TUBERCULOSIS

#### ICD-10-A18.17



#### SUSPECT

#### Consider following symptoms in history:

- · H/O infertility (primary or secondary)
- Chronic lower abdominal or pelvic pain
- · Amenorrhoea or other menstrual disturbances
- Abnormal vaginal discharge
- Constitutional symptoms of TB (low grade fever, weight loss etc.)
- · Other symptoms related to extra-genital TB (abdominal, CNS, bone and lymph nodes etc.)

In addition, standard investigations for TB to be carried out

#### Clinical Examination

- General Physical Examination
- Pelvic Examination (cervical growth, uterine size and mobility, adnexal tenderness & mass)

### Abdominal and Pelvic USG (TVS)

 Uterus, adnexa & pelvis to be evaluated preferably by transvaginal scan Endometrial cavity & vascularity to be looked carefully with colour Doppler

#### Specific Investigations

- · Endometrial sampling or biopsy with Pipelle device or Karman cannula (4 mm) for microbiological & histopathological examination
- Endoscopy
- › Hysteroscopy & laparoscopy to evaluate uterus, adnexa & other pelvic organs along with lower abdomen
- Laparoscopic biopsy from peritoneum or ab-dominal/pelvic lesions
- MTB diagnosis from biopsy specimen (endometrium & other tissues) by
- Smear microscopy (AFB smear) & culture Gene Xpert or other NAAT
- HPE of biopsy specimen

#### DIAGNOSIS

#### SUGGESTIVE FINDINGS IN FGTB **Imaging and Radiological**

- HSG: to be avoided in acute phase Findings: blocked fallopian tubes, usually cornual; tobacco pouch
- appearance of the tubes; beaded tubes; filling defect in the uterine cavity (Asherman syndrome)
- · USG: cogwheel appearance of tubes; uterine cavity may show thin diffuse endometrium with irregular borders
- · CT/MRI: can be used for tubo-ovarian

### Endoscopy

- · Hysteroscopy: To look for tubercles, pale endometrium & endometrial adhesions
- Laparoscopy: Direct visualization of tubercle like lesions on the uterus, tubes and other pelvic organs including peritoneum, & caseous

### FEMALE GENITAL TB (STEPWISE DECISION)

- · General physical and pelvic examination
- · Pelvic ultrasound
- · HSP as indicated in infertility HSG

#### Definite FGTB needing ATT if any of the following tests are positive

- AFB microscopy positive
- AFB culture positive · Gene Xpert or other NAAT +ve
- · Histopathological demonstration of epithelioid granuloma

### Probable FGTB needing ATT if any of following positive

- · Clinical findings/suspicion of TB with tubo-ovarian masses on imaging studies
- Clinical findings/suspicion of TB with laparoscopic findings of beaded tubes, caseous nodules, tubercles, adhesions, hydrosalpinx & pyosalpinx etc.
- Clinical findings/suspicion of TB with hysteroscopic findings of tubercles, caseous nodules, pale endometrium, intrauterine adhesions etc.

### **Negative FGTB: No ATT**

No microbiological, histological, radiological, laparoscopic & hysteroscopic evidence of FGTB

Menstrual blood should not be used for NAAT.

### **MANAGEMENT**

#### **TREATMENT**

- · Treatment of FGTB should be as per NTEP
- · Patients requiring specific treatment such as infertility, Asherman syndrome & tubo-ovarian mass etc. should be referred to higher centres

#### Follow-up of the patient should be flexible depending on the clinical presentation and response to ATT

- · 1 month: Clinical Evaluation (General & Gynaecological)
- · 3 months: Clinical Evaluation (General & Gynaecological)
- · 6 months: Clinical Evaluation & Investigations (endometrial biopsy, hystero-laparoscopy & USG as needed)

### **ABBREVIATION**

AFB: Acid-Fast Bacilli ATT: Anti-Tuberculosis Therapy CNS: Central Nervous System CT: Computed Tomography

FGTB: Female Cenital TB FNAC: Fine-needle Aspiration Cytology **HSE:** Histopathology Examination HSG: Hysterosalpingography

MRI - Magnetic Resonance Imaging MTB: Mycobacterium Tuberculosis

PCR: Polymerase Chain Reaction TB: Tuberculosis NAAT: Nucleic Acid Amplification Test TVS: Transvaginal Scan NTEP: National Tuberculosis Elimination USG: Ultrasonography Programme

### REFERENCES

- 1. National TB Elimination Programme, Central TB Division. Training Modules for Programme Managers & Medical Officers. Ministry of Health & Family Welfare, Government of India. https://tb-cindia.gov.in/index1.php?lang=1&level=1&sublinkid=5465&lid=3540 Last access on 08 March, 2022.

  2. Guidelines for programmatic management of drug resistant tuberculosis in India March 2021. National TB Elimination Programme, Central TB Division, Ministry of Health & Family Welfare, Government of India accessed at https://tb-cindia.gov/in/showfile-ph?id=3590 Last access on 08 March, 2022.

  3. Sharma JB, Sharma E, Sharma S, Dharmendra S. Recent advances in diagnosis and management of female genital tuberculosis. J Obstet Gynaecol India. 2021;71:1-12.

This STW has been prepared by national experts of India with feasibility considerations for various levels of healthcare system in the country. These broad guidelines are advisory, and are based on expert opinions and available scientific evidence. There may be variations in the management of an individual patient based on his/her specific condition, as decided by the treating physician. There will be no indemnity for direct or indirect consequences, Kindly visit our web portal (stream.org.in) for more information.

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