2) PID & TB of Genital Organs - Dr. Srwa

Introduction

- TB is a common infection
- One-third of the world’s population are infected with Mycobacterium tuberculosis

Epidemiology of female genital TB

- The exact incidence of FGTB is not known as it is under-reported.
- Incidence 1% in US, 1-19% in India.
- In women presenting with infertility is 5-10% worldwide.

Pathogenesis

- TB is caused by the Mycobacterium tuberculosis complex (M. tuberculosis, M.bovis, M. africanum or atypical Mycobacteria spp.)

Predisposing factors for TB are

- Poverty, over-crowding with improper ventilation, inadequate access to healthcare, malnutrition, diabetes mellitus, smoking, alcohol abuse, drug abuse, HIV, renal failure, hemodialysis.

Genital TB

- Almost always occurs secondary to pulmonary (commonest) or extra pulmonary TB as GIT, kidneys, skeletal system, meninges & miliary TB.
- Primary GTB reported in women whose male partner had active genito-urinary TB.

Site of infection

1. Fallopian tube (90-100%)
2. Endometrium (50-80%)
3. Ovaries (20-30%)
4. Cervix (5-15%)
5. Rarely vagina & vulva (1%)

Clinical presentation

- It depends upon site of involvement of genital organs:
- 11% asymptomatic
- General systemic symptoms
  - Fever with night sweats
  - Anorexia
  - Weight loss
  - Poor general condition
- Menstrual dysfunction:
  - Puberty menorrhagia
  - Postmenopausal bleeding
  - Oligomenorrhea
  - Hypomenorrhea
  - Amenorrhea (primary & secondary)
  - Infertility (primary & secondary)
  - Lump in abdomen
  - Abdominal pain (may flare up after HSG or D&C)
  - Chronic pelvic pain
  - Acute abdomen
  - Abnormal vaginal discharge
• Unusual symptoms
  o Ulcer in vagina or vulva
  o Labial swelling
  o Retention of urine
  o Urinary incontinence
  o Fecal incontinence

Clinical signs

• No physical sign (common)
• Systemic Examination: fever, lymphadenopathy, crackles on chest ex.
• Abdominal exam: mass in abdomen, ascites, doughy feel of abdomen.
• Vaginal exam: ut.enlargement, adnexal (tenderness, induration & mass), tubo-ovarian mass.
• Unusual signs:
  o Fistula (vesicovaginal, rectovaginal, tuboperitonial….)
  o Ulcerative lesion in cervix, vagina & vulva.
  o Labial mass (Bartholin swelling).

Diagnosis

• High index of suspicion is required.
• Good history (family history of TB, ATT) in close family member, past history of TB & ATT.
• Examination: general for LN, evidence of TB at any other site in body(bones, joints, skin), chest exam(PTB), abdominal exam., speculum exam (cervical TB), bimanual exam(endometrial, fallopian tube TB), External genitalia (vulvar or vaginal TB)

Investigation

The test depend upon the site of TB & its clinical presentation.

1. *CBC*: increase ESR, WBC (non-specific)
2. *CXR*: AP film for PTB
3. *Mantoux (Mx)* or tuberculin test
4. Serological tests are not sensitive & specific enough to be of value in diagnosis of genital TB.
5. *Endometrial biopsy*: curettage or aspirate. Negative biopsy dose not rule out GTB as TB Endometritis is seen in only 50-60% & may be sampling error
6. *Smear & culture*: endometrial biopsy, aspirate, menstrual blood (within 12h of onset of menses), secretions from vagina, cervix, peritoneal fluid for AFB, culture on (L J) Lowenstein-Jensen medium & guinea pig inoculation which take 6-8 weeks to provide results.
7. *PCR*: this is rapid, sensitive & specific

Imaging methods:

1. Ultrasonography: noninvasive may show bilateral solid adnexal masses.
2. CT scan, MRI, PET scan: can detect mass, enlarged LN
3. HSG: in a known case of GTB is contra-indicated as it may flare up subclinical infection.
4. Endoscopy
  o Hysteroscopy it may show a normal cavity, pale, vascular adhesion, poor distensibility or granulomas.
  o Laparoscopy is most reliable tool to diagnose GTB especially for tubal, ovarian & peritoneal TB.
Treatment

Medical treatment

- Good communication between health care professional & patient is essential.
- Multiple drug therapy in adequate doses & for sufficient duration is main stay in the treatment of TB & GTB.
- Medical treatment using (DOTS) directly observed treatment short course strategy.

Surgical treatment

- Is rarely required & should only be done in exceptional circumstances in the form of limited surgery (laparoscopy, hysteroscopy & drainage of abscess, etc.)
- Surgery in GTB & peritoneal TB can be difficult & hazardous.

Prognosis

- Prognosis for fertility is poor.
- However for tubal disease in the absence of endometrial disease, assisted reproductive techniques especially IVF, give encouraging results.
- Endometrial disease with adhesion prognosis for fertility is very poor even with IVF.

Pregnant women with PTB or GTB

- Should be treated fully even in the 1st trimester using DOTS strategy using all four primary drugs with optimum maternal & perinatal outcome.