Trichomonas

Lecture: 4

Genital Flagellates:
*Trichomonas vaginalis*

Commensal Flagellates:
*Trichomonas hominis* (Intestinal)

*Trichomonas tenax* (mouth)
Genital Flagellates

*Trichomonas vaginalis*
**Trichomonas vaginalis**

- **Definitive host:** Human, direct transmission by sexual contact.
- **Infective stage:** Trophozoite stage
- **Diagnostic stage:** Trophozoites stage
- **No cyst stage**
- **Location in humans:** Mucosal surfaces of the vagina and urethra in female, Prostate gland and the epithelium of the urethra in male.
- This parasite has **worldwide distribution.**
Morphology:

- Exists only as a **trophozoite** form
- It is a pear-shaped organism
- Size 7-23μm long & 5-15μm wide
- Central nucleus and four anterior flagella
- Undulating **membrane extends about 1/3** of its length.
Life cycle:

1. **Trophozoite in vaginal and prostatic secretions and urine**
2. **Multiplies by longitudinal binary fission**
3. **Trophozoite in vagina or orifice of urethra**

**Infective Stage**

**Diagnostic Stage**
Pathogenesis

• The trophozoite is found in the urethra & vagina of women, and in men the urethra is the most common site of infection & prostate gland.
• It is more common in women, and hard to find in men because most are asymptomatic.
• Abnormal discharge: color variable, odor, pus.
• Vaginitis: irritation, itching, pain.
• Vaginal walls swollen.
• Possible: urethritis, cystitis, dysuria,
DIAGNOSIS:
Demonstration of trophozoites by microscopic examination
1- In females: may be found in urine.
   - Centrifuged urine sediment.
   - wet preparations of vaginal secretions.
   - Vaginal scrapings mixed with a drop of saline.
2- In males it may be found in
   - Urine sediment
   - wet preparations of prostatic secretions.
Other Tests

2. Papanicolaou test.
3. Cultures.
4. Polymerase chain reaction.
Pap test
cervical and vaginal biopsies
Pap test result Trophozoites stage
Treatment:

- Infection is treated and cured with metronidazole or tinidazole.
- The CDC recommends a one time dose of 2 grams of either metronidazole or tinidazole as the first-line treatment.
- Medication should be prescribed to any sexual partner(s) as well because they may be asymptomatic carriers.
Trichomonas hominis

- Found in the large intestine.
- Size of trophozoite: 8 - 14 μm
- Non-pathogenic
- Shaped body with an *undulating membrane* extending the entire length of the body.
- Feeds on bacteria and debris so it is a commensal.
- Fecal/oral route of transmission.
Two other species of *Trichomonas* occur in humans

*Pentatrichomonas hominis*

*Trichomonas vaginalis*

*Trichomonas tenax*