



Tishk
International University



TISHK INTERNATIONAL UNIVERSITY
FACULTY OF APPLIED SCIENCE
MEDICAL ANALYSIS DEPARTMENT

Lecture 5: Trichomonas

Fall Semester:
Course Name : Parasitology theory
Stage : Third
Lecture: Asst.prof.Dr Ramiar Kamal



Trichomoniasis

- Sexually transmitted disease of worldwide importance
- It is cosmopolitan in distribution, however prevalence is not uniform because of sanitary and hygiene habits (depends on surroundings).
 - 20-40% in Women
 - 15% in Men

Pathology

Women

- Asymptomatic in most cases
- **Vulvovaginitis**
 - Purulent vaginal discharge (**leukorrhoea**)
 - Malodorous smell
 - Strawberry cervix
 - Punctate haemorrhages in mucosa
 - Vulval & vaginal epithelium fiery red and inflamed
 - Dyspareunia
- **Urethritis**
 - Dysuria
 - Increased frequency of micturition

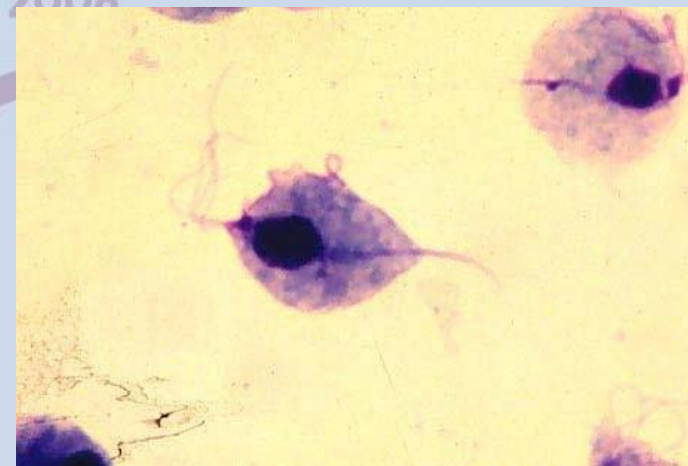
Pathology

Men

- Usually asymptomatic
- **Non-gonococcal urethritis**
 - Pain in urethra
 - Testicular pain
 - Purulent to mucoid discharge
- Epididymitis
- Prostatitis
- Superficial penile ulcerations

Trichomonas

- Trophozoite is the only stage present in the life cycle, **cystic stage absent**
- 3 species in humans
 - T. vaginalis*
 - T. tenax*
 - T. hominis*
- Characteristic jerky motility
- Multiplies by longitudinal binary fission



Three spp. of *Trichomonas* found in humans

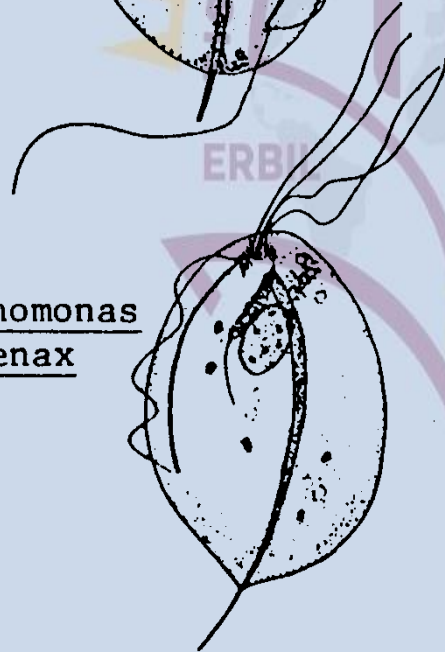
Trichomonas
hominis



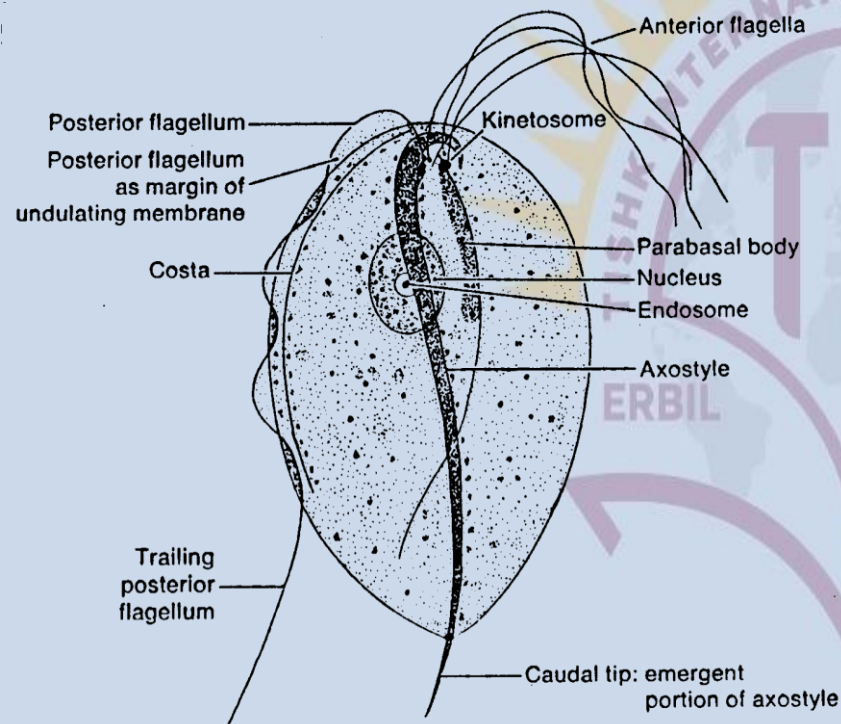
Trichomonas
vaginalis



Trichomonas
tenax

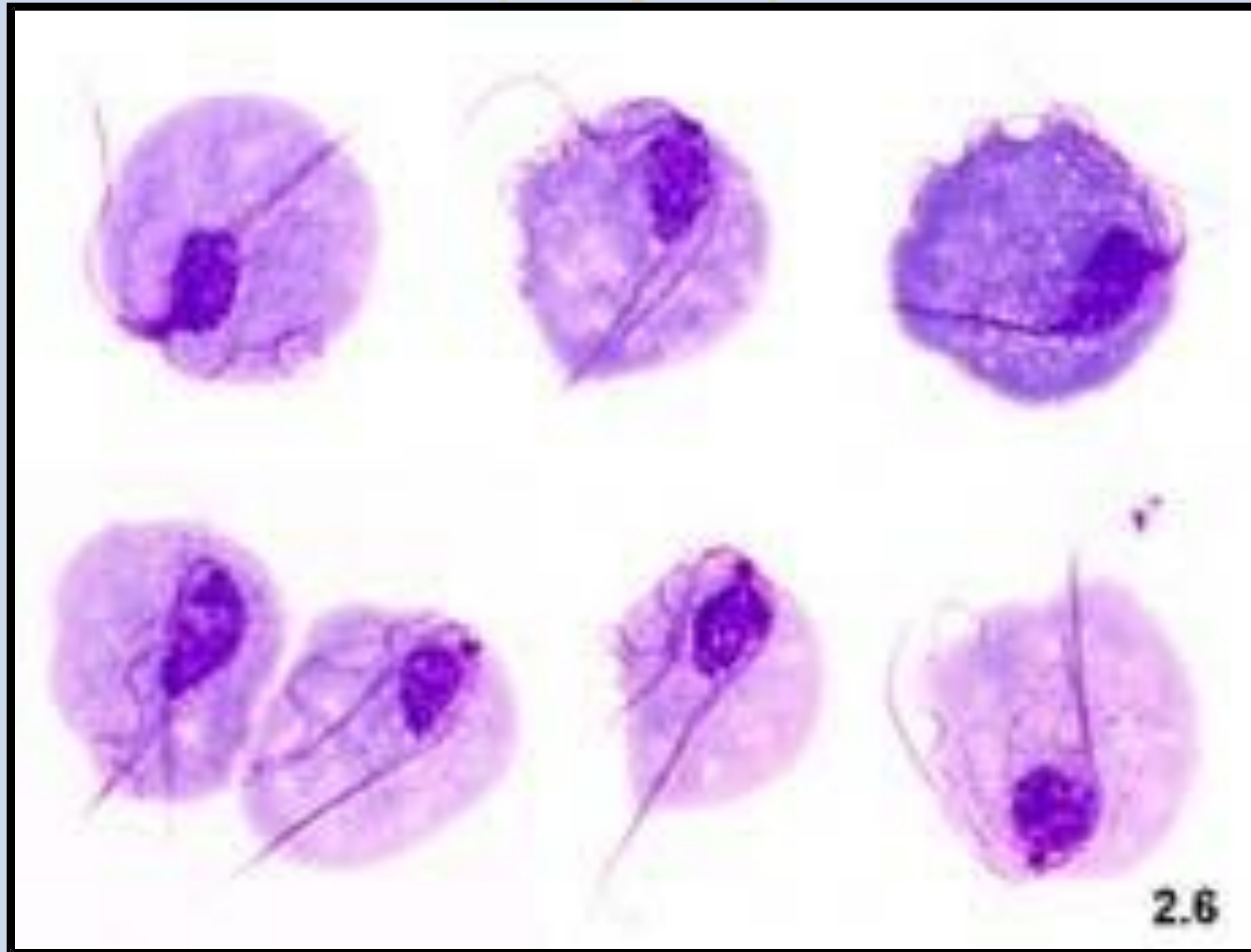


General Morphology of *Trichomonas* trophozoite



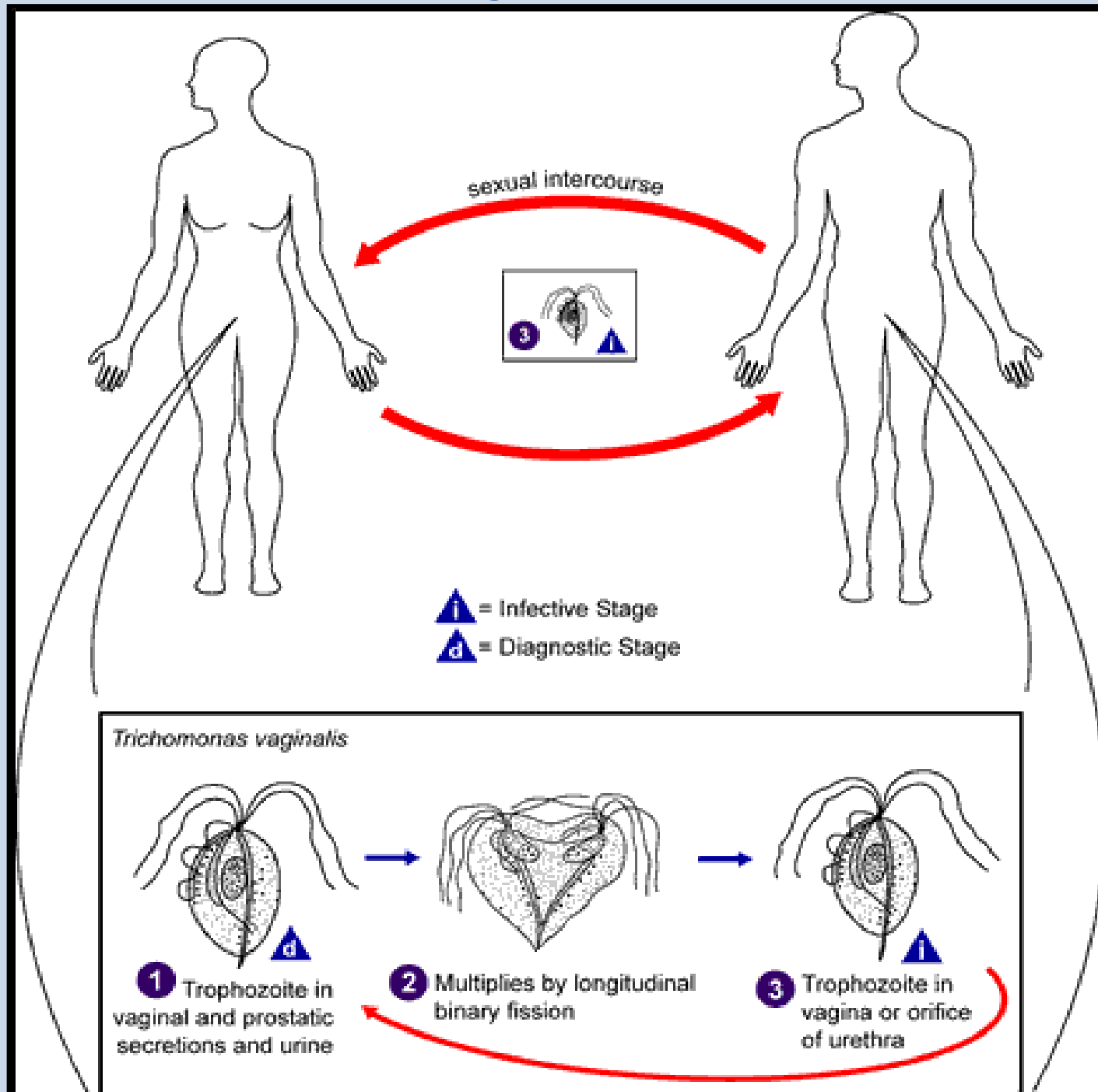
- Pear shaped
- 7 – 23 in length
- 4 flagella extend anteriorly
- 1 flagellum extends posteriorly along the cell membrane to form an **undulating membrane**
- **Costa** , a rigid cord attaches the undulating membrane to the cell membrane and gives the undulating membrane support
- **Axostyle** runs down the middle of the body & ends in a pointed tail like etremity
- Round nucleus in the anterior portion

Trichomoniasis (*Trichomonas vaginalis*)

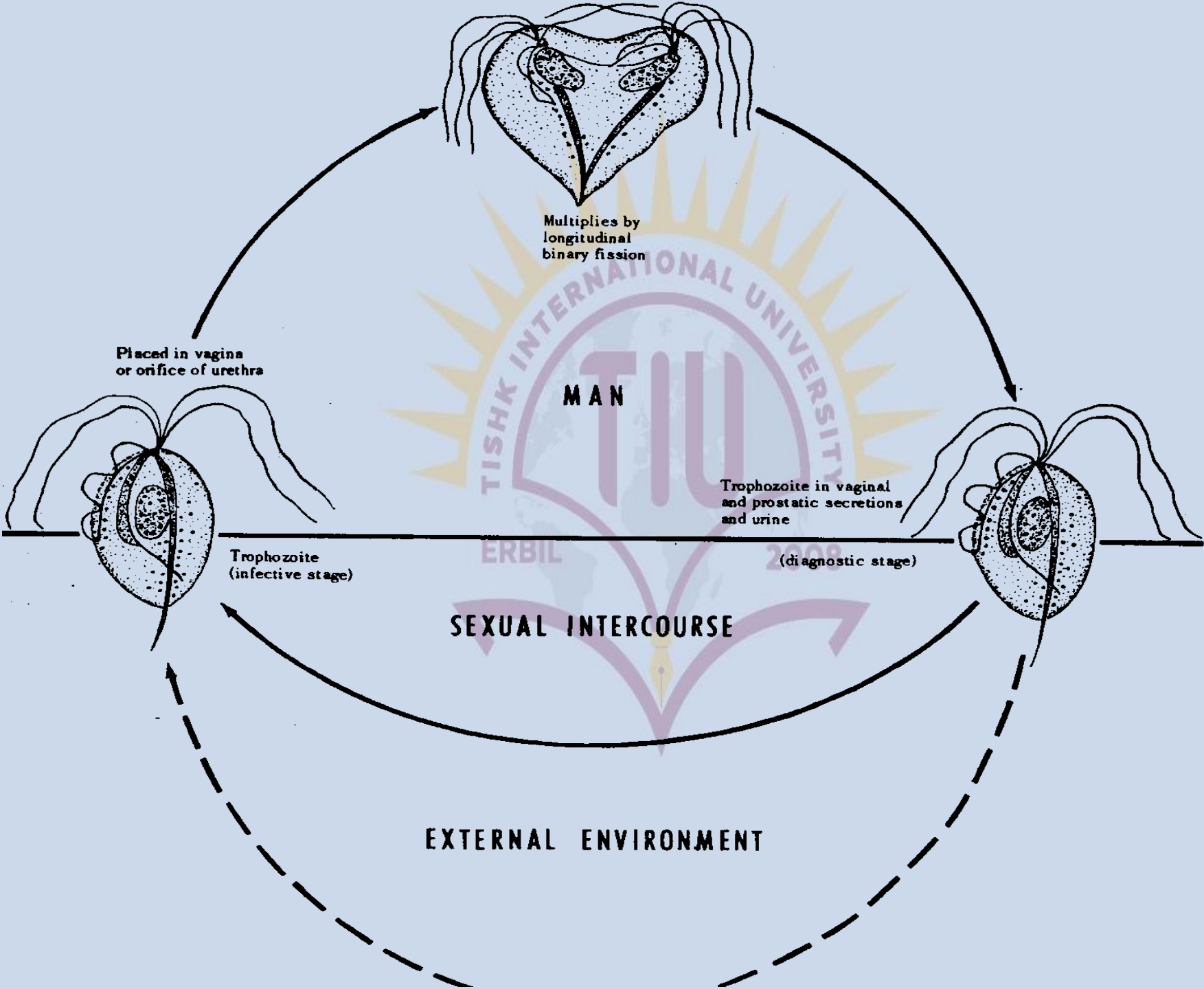


Trophozoites

Trichomonas vaginalis – Life Cycle



Life Cycle of *Trichomonas vaginalis*



Trichomonas vaginalis

- It lives in the reproductive and urinary system of people (obligate parasite)
- **Obligate parasite** – cannot live without close association with vaginal, urethral or prostatic tissues
- Infects **squamous epithelium** but not columnar epithelium
- High incidence of symptomatic infection is seen in **women**
- Zinc and other inhibitory substances probably inhibit their growth in men

Trichomonas vaginalis

- Natural flora (bacteria) keep the pH of the vagina at 4-4.5 and ordinarily this discourages infections.
- *T. vaginalis* can survive at a low pH.
- Once established it causes a shift toward alkalinity (pH 5-6) which further encourages its growth.

Treatment

- Metronidazole – highly effective
- Clotrimazole topical



Prevention

- Detection & treatment of cases – both partners
- Avoidance of sexual contact with infected partners
- Use of condoms

