MANAGEMENT OF SEXUALLY TRANSMITTED INFECTIONS

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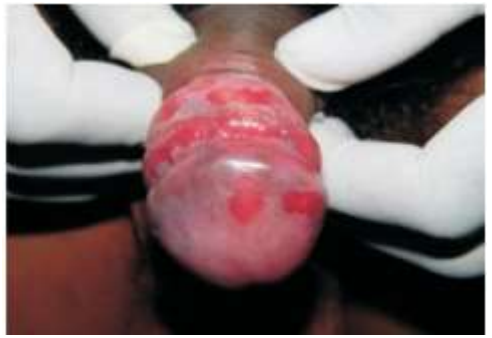
TOPICS COVERED IN THIS PRESENTATION

- MAJOR DIFFERENTIATING CLINICAL FEATURES
- IMPORTANT INVESTIGATIONS
- TREATMENT OF VARIOUS SEXUALLY TRANSMITTED INFECTIONS
- NACO AND CDC GUIDELINES FOR MANAGEMENT
- GENERAL MEASURES IN TREATMENT AND PREVENTIONS
- SYNDROMIC APPROACH TO TREATMENT OF STIs

TYPES OF STI

- BACTERIAL – SYPHILIS, CHANCROID, GONORRHOEA, DONOVANOSIS, NON GONOCOCCAL URETHRITIS, LGV, BACTERIAL VAGINOSIS
- VIRAL- HERPES, WARTS, MOLLUSCUM
- MISCELLANEIOUS- SCABIES, PEDICULOSIS, CANDIDIASIS, TRICHOMONIASIS
- STD ASSOCIATED SYNDROMES- PELVIC INFLAMMATORY DISEASE, EPIDIDYMITIS AND PROSTATITIS etc.

HERPRES GENITALIS



- ☐ CAUSATIVE ORGANISM- HSV 1 & HSV 2 (MORE COMMON AND SEVERE)
- ☐ INCUBATION PERIOD- 2-12 DAYS
- ☐ ONCE INFECTED VIRUS REMAINS IN SACRAL DRG LIFELONG- REACTIVATES- RECURRENT EPISODES
- ☐ PRIMARY EPISODE- FEVER MALAISE BODY ACHE MULTIPLE GROUPED VESICLES ON ERYTHEMATOUS BASE WHICH FORM EROSIONS AND ULCERS HEAL IN 2-3 WEEKS
- ☐ RECURRENT-FEW GROUPED VESICLES- HEAL EARLY
- ☐ INVESTIGATION
- TZANCK SMEAR FROM VESICLES- GIANT CELLS
- CONFIRMATORY- NAAT/PCR/VIRAL CULTURE
- IgG & IgM- PERSIST FOR LIFE ONLY USEFUL TO DIFFERENTIATE PRIMARY AND RECURRENT EPISODE AND BETWEEN HSV 1 & HSV 2

TREATMENT

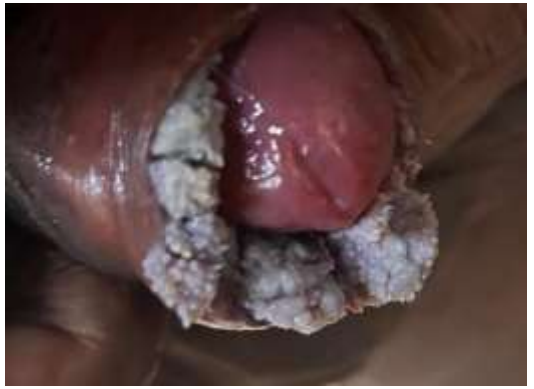
- Primary episode-
- Tab Acyclovir 400 mg three times a day for 7-10 days
- Recurrent episodes-
- Tab Acyclovir 400 mg three times a day for 5 days
- SUPPRESIVE THERAPY (>6 EPISODES PER YEAR)- FOR 1-2 YEARS
- **Acyclovir** 400 mg orally 2 times/day
- **Valacyclovir** 1 gm orally once a day (>10 EPISODES PER YEAR)

In immunocompromised continue till lesions heal

- PREGNANCY AND HERPES
- If herpes acquired in second half of pregnancy or active lesions/prodromal symptoms during labor- caesarian section
- Other wise suppressive therapy-
- **Acyclovir** 400 mg orally 3 times/day
  OR
  Valacyclovir 500 mg orally 2 times/day

* Treatment recommended starting at 36 weeks' gestation.

ANOGENITAL WARTS



- Commonest STI (up to 50% of sexually active adults may have HPV infection)
- Causative organism- human papilloma virus (upto 30 serotypes can spread by sexual route)
- 90% are caused by non-oncogenic HPV types 6 or 11
- HPV types 16, 18, 31, 33, and 35 also are occasionally identified in anogenital warts (usually as infections with HPV 6 or 11) and can be associated with foci of high-grade squamous intraepithelial lesion (HSIL)
- Usually asymptomatic; however, depending on the size and anatomic location, they can be painful or pruritic
- They are usually flat, papular, or pedunculated growths on the genital mucosa
- Diagnosis is mainly clinical, biopsy for histopathology can be used for confirmation/ to rule out malignancy

TREATMENT

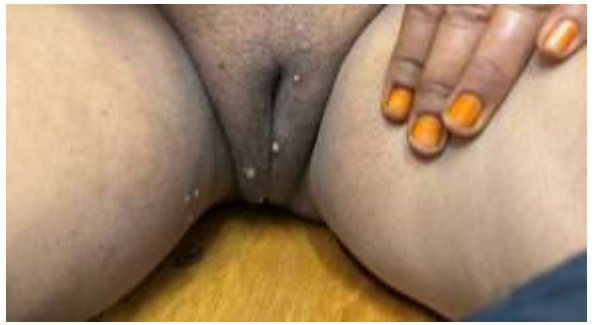
- Patient applied-
- Imiquimod 5% cream 3 times/week – up to 16 weeks, carefully applied over lesions and washed off next morning, use new sachet every time
- 5 fluorouracil 1%cream- applied carefully over lesions wash of after 4-6 hours- upto 6-8 weeks
- Provider administered-
- Podophyllin resin 20%- to be applied by physician only over lesions while protecting normal mucosa and washed off with soap and water after 4-6 hours, can be repeated after 1-2 weeks
- Electrocautery / RF /CO2 laser ablation
- TCA cautery
- Surgical excision
- Cryotherapy with liquid nitrogen

Safer in pregnancy and lactation

Pregnancy

- Cesarean delivery is indicated for women with anogenital warts if the pelvic outlet is obstructed or if vaginal delivery would result in excessive bleeding.
- Pregnant women with anogenital warts should be counselled about the low risk for warts on the larynx of their infants or children (recurrent respiratory papillomatosis).

MOLLUSCUM

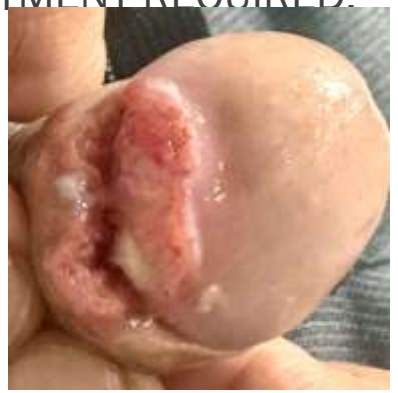


- Caused by Molluscum contagiosum virus (IP- 2-3 months)
- Asymptomatic small firm dome shaped umblicated papule, giant lesions in immunosuppressed
- Diagnosis is clinical- biopsy for histopathology can be done for confirmation
- Treatment – self limiting in immunocompetent individuals (3-6 months)

- Removal by electrocautery, laser, RF, Curettage
- Cryotherapy with liquid nitrogen
- Topical – tretinoin, KOH
- Chemical cautery
- Oral cimetidine / ranitidine

SYPHILIS

- CAUSATIVE ORGANISM –TREPONEMA PALLIUDUM, IP-9-90 DAYS
- FOR TREATMENT CLASSIFIED AS EARLY SYPHILLIS (FIRST 1 YEAR OF INFECTION) AND LATE SYPHILLIS (AFTER 1 YEAR IN UNTREATED PATIENTS)
- VDRL/RPR TITRE <1/8 ARE SIGNIFICANT IN UNTREATED PATIENTS-
- FOUR FOLD DECREASE IN TITRE IN 6-12 MONTHS (SUCCESFUL TREATMENT)
- MAY TAKE 2 YEARS TO BECOME NEGATIVE
- IF TITRES DON'T FALL- FAILURE OF TREATMENT/REINFECTION/HIV/UNRECOGNISED CNS INFECTION
- TPHA/FTA-ABS- IF NEGATIVE THEN CONSIDERED BIOLOGICAL FALSE POSITIVE REACTION- NO TREATMENT REQUIRED. EVEN IN TREATED PATIENT REMAIN POSITIVE FOR LIFE

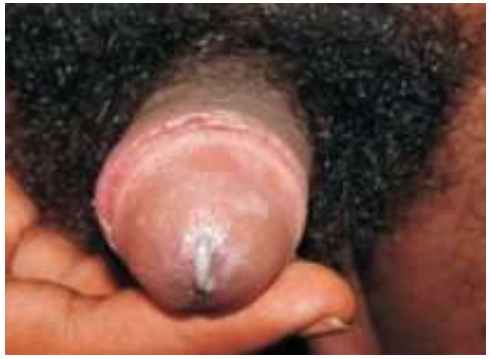


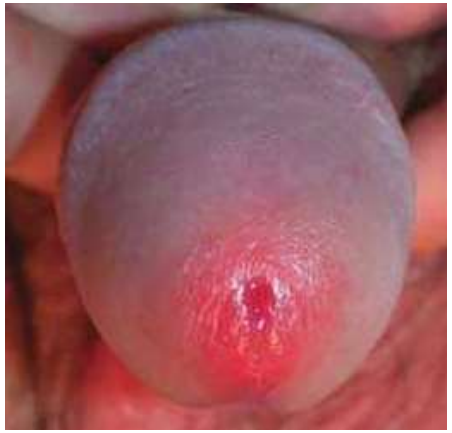
SYPHILIS- TREATMENT

- **ADULTS-Benzathine penicillin G** 2.4 million units IM in a single dose(early syphilis) 3 doses 1 week apart each (in late syphilis)
- **INFANTS AND CHILDREN-Benzathine penicillin G** 50,000 units/kg body weight IM, up to the adult dose of 2.4 million units in a single dose
- **PENICILLIN ALLERGY**-Doxycycline (100 mg orally 2 times/day) and tetracycline (500 mg orally 4 times/day) 2 weeks in early syphilis and 4 weeks in late/neurosyphilis
- OTHER OPTIONS-inj. ceftriaxone (1-2 g daily either IM or IV for 10-14 days). Azithromycin as a single 2-g oral dose (NOT RECOMMENDED IN ROUTINE PRACTISE)
- Pregnancy-Pregnant women who are allergic to penicillin should be desensitized and treated with penicillin G

URETHRITIS

	GONORRHEA	NON-GONOCOCCAL
ETIOLOGY	Neisseria Gonorrhoeae	Chlamydia (commonest), Ureaplasma, Mycoplasma
Time of presentation	Within 1 week	1-3 weeks
Burning micturition	Very severe and intense	Mild to moderate
Urethral discharge	Thick, purulent, profuse	Clear to creamy white
Gram's stain (discharge)	Gram negative diplococci with PMNL	>5 PMNL/HPF, no bacilli
Confirmatory	NAAT, Culture	NAAT, cell culture
Treatment	Ceftriaxone 500 mg IM in a single dose Cefixime 800 mg orally in a single dose Gentamicin 240 mg IM in a single dose (cephalosporin allergy)	Doxycycline 100 mg orally 2 times/day for 7 days Azithromycin 1 g, orally in a single dose OR Azithromycin 500 mg orally in a single dose; then 250 mg orally daily for 4 days





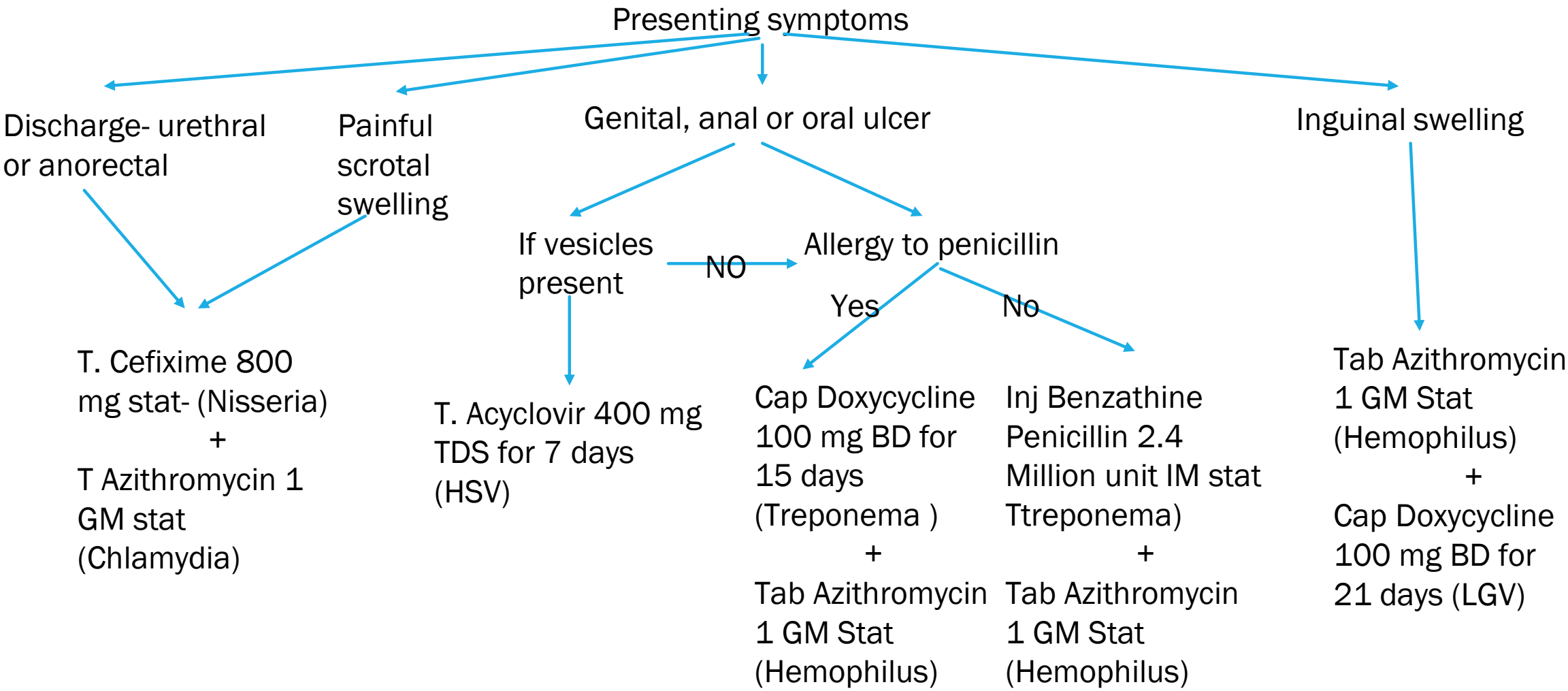
- Recurrent and persistent urethritis in males- less profuse and less purulent
- Consider Trichomonas vaginalis- Tab Metronidazole 400 mg TDS for 1 week

CHACROID (SOFT CHANCRE, ULCUS MOLLE)

- ☐ CAUSATIVE ORGANISM- HEMOPHILUS DUCREYI
- ☐ IP- 1-14 DAYS, MEDIAN-7 DAYS
- ☐ MULTIPLE VERY PAINFUL WELL CIRCUMSCRIBED ULCERS WHICH BLEED ON TOUCH
- ☐ PAINFUL UNILATERAL INGUINAL BUBO
- ☐ INVESTIGATION-
- DIAGNOSIS ID MAINLY CLINICAL
- SMEAR FROM UNDER EDGES OF ULCER- GRAM'S STAIN- GRAM NEGATIVE COCCOBACILLI IN PARALLEL CHAINS- SCHOOL OF FISH APPEARANCE
- CULTURE- CONFIRMATORY (NOT AVAILABLE COMMERCIALLY)
- TREATMENT-
- **Azithromycin 1 gm orally in a single dose**
- **Ceftriaxone** 250 mg IM in a single dose
- **Ciprofloxacin** 500 mg orally 2 times/day for 3 days
- **Erythromycin** base 500 mg orally 3 times/day for 7 days

SYNDROMES AND THEIR MANAGEMENT

- WHO and NACO promote syndromic approach to management of STIs
- A cluster of symptoms and signs are taken together to form a syndrome.
- More than one organism can be implicated in a syndrome
- All are treated in a combined approach
- Patient treated for all organisms in one visit
- Easier when clear diagnoses is difficult and laboratory facilities are not available/feasible
- Prevents further spread of STI

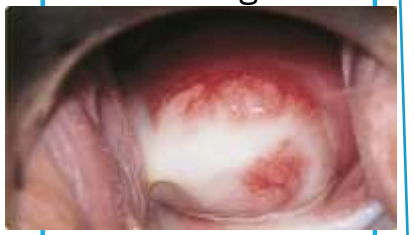

Presenting symptoms
Discharge- urethral or anorectal
Painful scrotal swelling
Genital, anal or oral ulcer
Inguinal swelling
T. Cefixime 800 mg stat- (Nisseria)
+
T Azithromycin 1 GM stat (Chlamydia)
If vesicles present
NO
Allergy to penicillin
Yes
No
T. Acyclovir 400 mg TDS for 7 days (HSV)
Cap Doxycycline 100 mg BD for 15 days (Treponema)
+
Tab Azithromycin 1 GM Stat (Hemophilus)
Inj Benzathine Penicillin 2.4 Million unit IM stat Ttreponema)
+
Tab Azithromycin 1 GM Stat (Hemophilus)
Tab Azithromycin 1 GM Stat (Hemophilus)
+
Cap Doxycycline 100 mg BD for 21 days (LGV)

Female with vaginal discharge

SPECULUM EXAMINATION

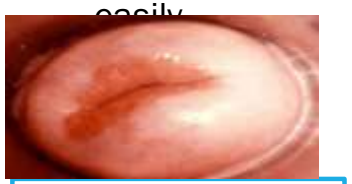
Cervical discharge

- Thick purulent
- Perimeatal erythema and edema
- Zone of bleeding

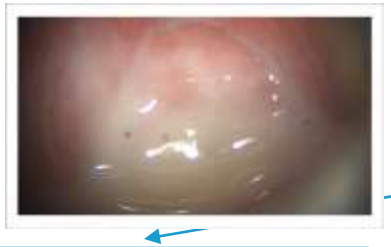


Gonorrhea – Cefixime 800mg stat

- Mucopurulent
- hypertrophic ectopy (edematous congested and bleed easily



Non gonococcal – Azithromycin 1 gm stat



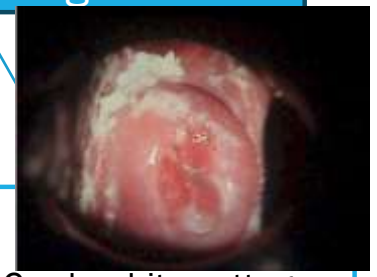
- Excessive homogenous uniformly adherent
- Foul smelling
- Grey white

Bacterial vaginosis- metronidazole 400mg bd for 7 days

Discharge from vaginal wall

- Frothy green discharge
- Puctate mucosal hemorrhages and ulcerations over cervix (strawberry cervix)

Tinidazole 2gm single dose



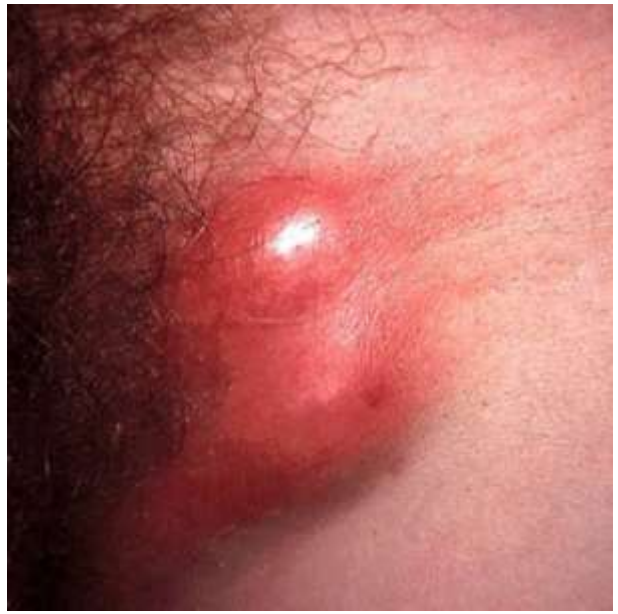
- Curdy white cottage cheese like discharge
- Severe itching and mucosal erythema

Vaginal candidiasis- fluconazole 150 mg stat

OTHER MEASURES TO BE FOLLOWED IN ALL PATIENTS

- Privacy and confidentiality is of utmost importance- separate examination
- Comfortable environmental, non judgmental and professional attitude- treat it just like any other infection
- Detail history of sexual exposure and partners
- History of symptoms other than patient presenting ex. Burning micturition in chancroid
- Complete examination from umbilicus to knees including PV and PR examination to rule out other STIs
- Counselling regarding spread of STIs, risk factors, how to prevent reinfection
- Clear any myths or doubts regarding STIs
- Abstinence from further exposure till treatment is completed
- Being faithful to one partner
- Consistent and correct use of condoms
- All patients should undergo HIV elisa, VDRL, TPHA, HbsAg and ANTI-HCV testing
- Review after 1 week or sos
- If symptoms don’t improve/worsen- refer to specialist
- All contacts in last 3 months(ideally) should be examined and tested and treated accordingly

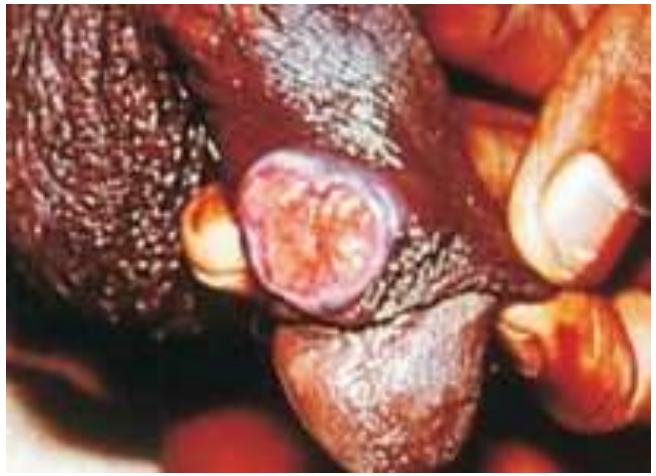
LYMPHOGRANULOMA VENEREUM



- ☐ Climatic bubo
- ☐ Etiological agent- Chlamydia trachomatis (serotypes-L1, L2, L3)
- ☐ IP- 3-12 days, median-7 days
- ☐ Painful inflammatory inguinal lymph node swelling (bilateral in 1/3)
- ☐ Diagnosis- mainly clinical, Giemsa stain of pus from bubo- elementary and inclusion bodies seen, cell culture- confirmatory
- ☐ Treatment-

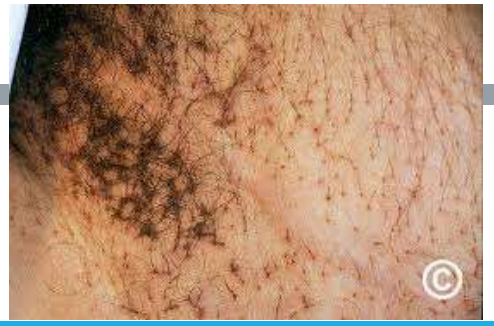
- **Doxycycline 100 mg orally 2 times/day for 21 days**
- **Azithromycin** 1 gm orally once weekly for 3 weeks
- **Erythromycin** base 500 mg orally 4 times/day for 21 days

DONOVANOSIS



- Klebsiella granulomatis
- IP- 3days to 3 months, avg-40-50 days
- Painless beefy granulomatous ulcer that bleed on touch
- Investigations
- Giemsa stain of crushed tissue- Donovan bodies
- Biopsy for histopathology and culture in yolk sac or HEP-2 cells
- Treatment
- **Azithromycin 1 gm orally once weekly or 500 mg daily for > 3 weeks and until all lesions have completely healed**
- **Doxycycline** 100 mg orally 2 times/day for at least 3 weeks and until all lesions have completely healed
- **Erythromycin** base 500 mg orally 4 times/day for >3 weeks and until all lesions have completely healed
- **Trimethoprim-sulfamethoxazole** one double-strength (160 mg/800 mg) tablet orally 2 times/day for > 3 weeks and until all lesions have completely healed

SCABIES AND PEDICULOSIS



	Scabies	PEDICULOSIS PUBIS
CAUSATIVE ORGANISM	Sarcoptus scabiei var hominis	Pthirus pubis
Symptoms	Severe generalised itching more at night	Prickly itchy and discolouration in hairy areas
Signs	Papules and excoriations all over body, nodules over genitalia	Excoriations and purpuric macules in pubic region, axillae, beard
Diagnosis	Demonstration of burrow	Visualization of lice
Treatment	Permethrin 5% all over body repeat after 1 week	Permethrin 1% all over body repeat after 10 days Opthalmic petrolatum for eyelashes
Care	Wash all clothes and bedding in hot water	Wash all clothes and bedding in hot water, keep clothes in ziplock for 2 weeks

THANK YOU

REFERENCES

- IADVL textbook of dermatology, fifth edition
- Sexually transmitted diseases and HIV/AIDS second edition by Dr V K Sharma
- WWW.CDC.GOV
- https://naco.gov.in