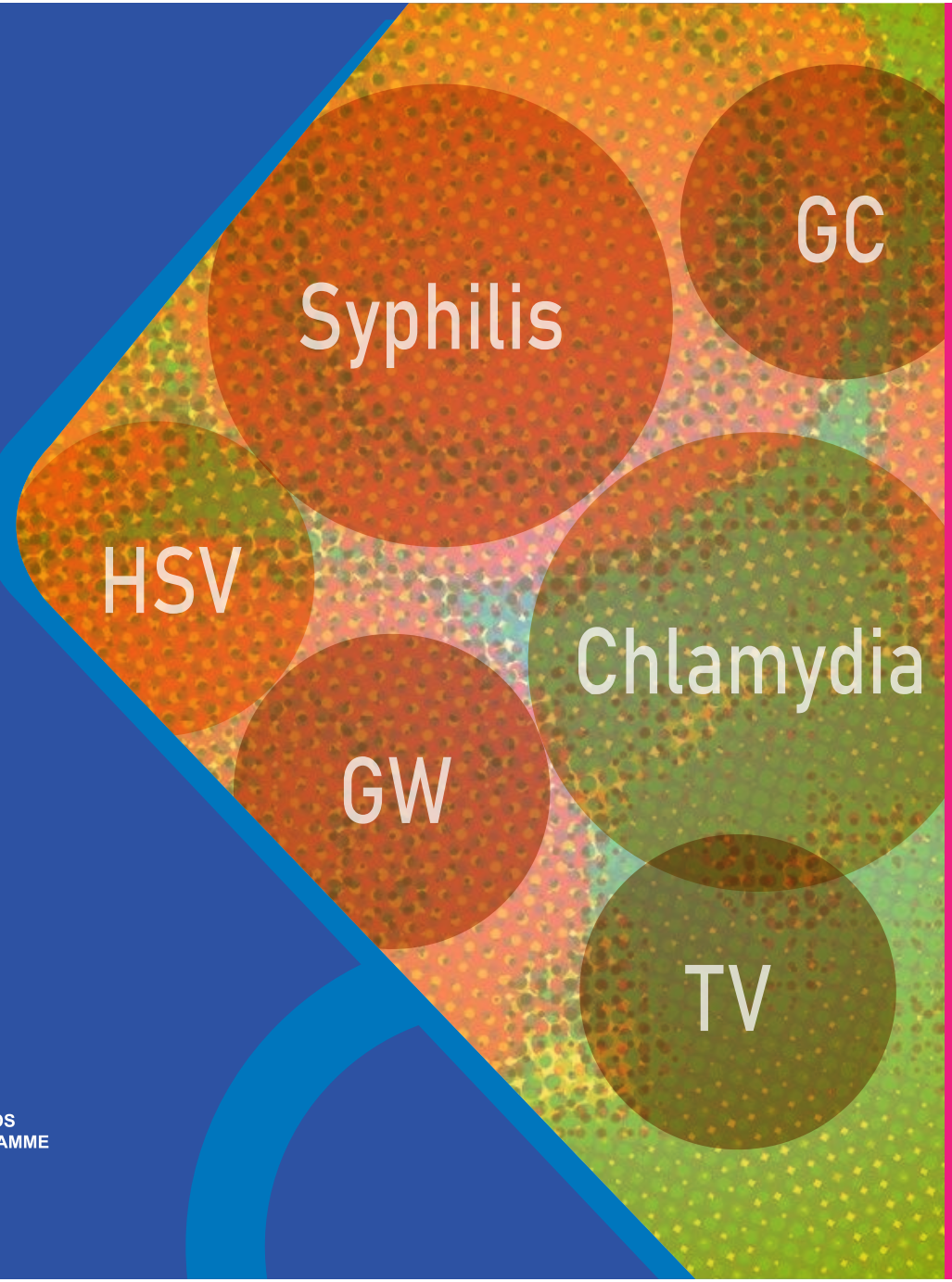
Sexually Transmitted Infections



MINISTRY OF HEALTH

NATIONAL STD/AIDS
CONTROL PROGRAMME

Acknowledgement

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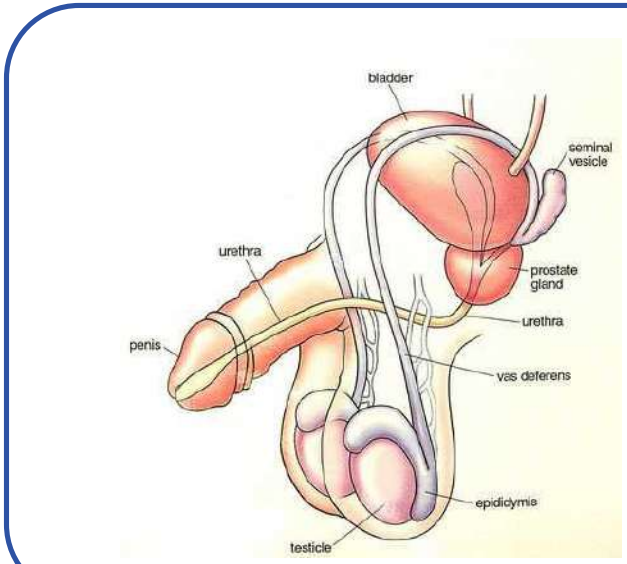
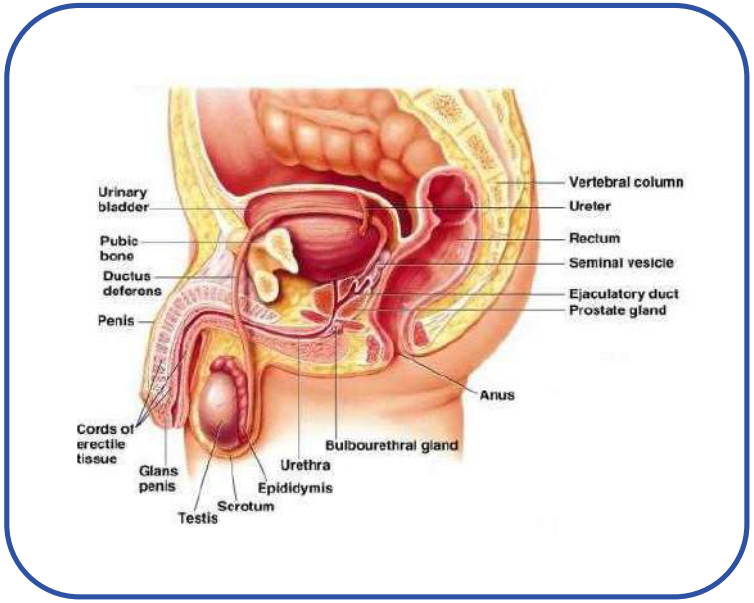
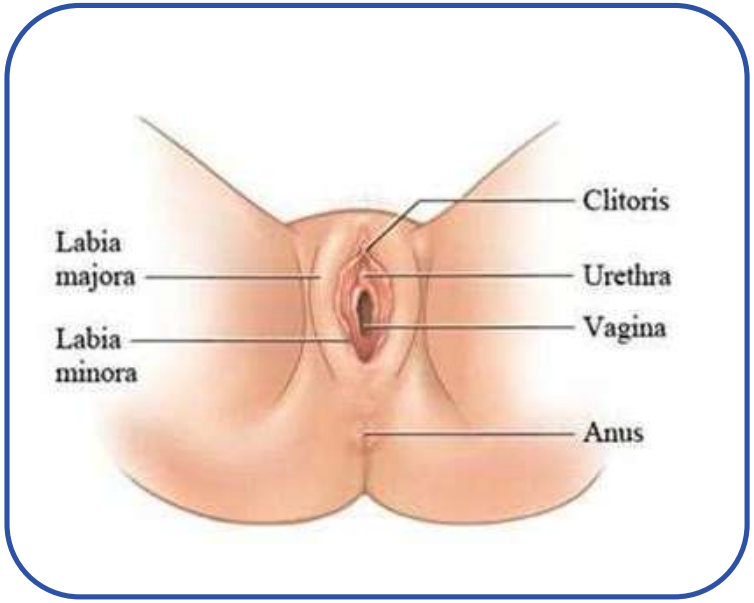
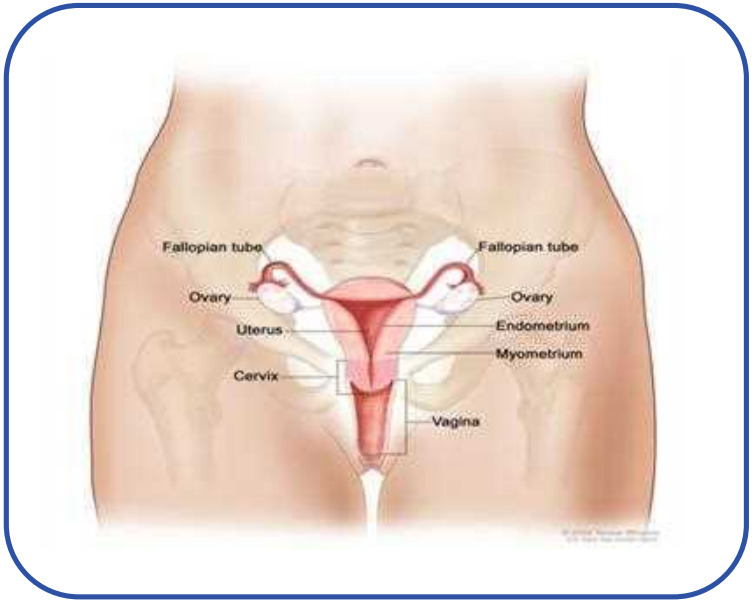
Internal and external male genital organs





Internal and external female genital organs





What are sexually transmitted infections (STIs) ?

- **Sexually Transmitted Infections:**
  are a group of communicable diseases that are transferred predominantly by sexual contact (some STIs can also spread through non-sexual means).

Viral STIs	Bacterial STIs	Protozoal STIs	Ectoparasites
Genital Herpes Genital Warts HIV Hepatitis B	Gonorrhoea Chlamydia Mycoplasma Syphilis, Chancroid, LGV, Donovanosis	Trichomoniasis	Pthirus pubis Scabies

Outline the nature of STIs considering following points

- **Asymptomatic nature:** Many STIs have no symptoms. Therefore, healthy looking people or genitals may have STIs.
- **Curability:** Some STIs are completely curable while viral STIs are not curable but can be suppressed.
- **Detect early:** If exposed to a risk, It's important to get tested.
- **Adverse pregnancy outcome:** You can transmit STIs to your loved partners and they can result adverse pregnancy outcome.
- **Complications:** If left untreated, can cause complications or serious health problems.
- **Psychological impacts:** Upon receiving diagnosis a person may experience psychological impacts such as loss of faithfulness, shame, relationship issues, embarrassment, anxiety, depression or isolation in a relationship.
- **STIs are preventable diseases:** There are several ways to avoid or reduce your risk of STIs (Explain A, B, C, D of prevention).

Modes of transmission of sexually transmitted infections

Sexual transmission

Peno-vaginal
Peno-anal (high risk)
Peno-oral (fellatio)
Oro-vaginal (cunnilingus)

Blood and blood products

Sharing needles
Percutaneous injuries by contaminated instruments
Unscreened organ, blood or blood products

Mother to child

During pregnancy
During delivery
During Breast feeding

Means of Prevention of STIs

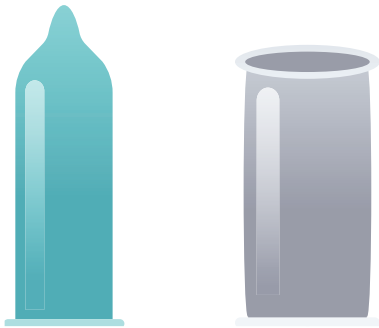
Behavioural means of prevention

- **A. Abstinence:**
  Abstain sex till you marriage or Abstain extramarital sex (For MSM/LGBT: Abstain sex till you find a stable partner and Abstain sex with multiple partners)
- **B. Be mutually faithful:**
  Sex only with mutually faithful one partner (includes MSM/LGBT communities)
- **C. Condom:**
  Use correct and consistent condom use with all sexual partners
- **D. Detect early:**
  Seek STI care and test for infection for early diagnosis and treatment

Additional behaviour modifications for Key populations

- **Psychoactive substances:**
  Avoid the influence in sex (because it forgets to practice prevention, reduce pain threshold and lengthen sex time
- **Number of clients:**
  Reduce the number of clients
- **Sex sites and duration:**
  Reduce the penetrative sex (try to avoid all three oral, vaginal and anal sex) and duration of penetrative sex (have short sessions)
- **Romantic partners and high paying partners:**
  Do not skip the use of protection (Condoms etc.)
- **In HIV patients:**
  Sero sorting and sero positioning, condom use, HIV PrEP etc
- **Avoid micro abrasions:**
  Use lubricants esp. for anal sex
- **Orgasm delaying medications:**
  Avoid the use such as sprays, creams, pills etc.

Means of Prevention of STIs



Biological means of prevention

- **Condom (male or female):**
  Encourage the correct and consistent use of condoms as a dual protection method.
- **Dental dam for oro-vaginal sex:**
  Not used commonly but can introduce as an option.
- **Pre exposure prophylaxis:**
  HIV PrEP: Taking ARV drugs before having exposed to potential risk.

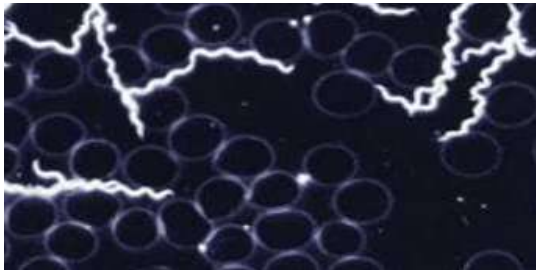
  Pre-exposure vaccination for vaccine-preventable STIs: HPV vaccination, Hepatitis B vaccine, (HSV vaccine and HIV vaccines are on the process of development).
- **Post exposure prophylaxis:**
  HIV PEP (oPEP, nPEP/PEPSI): Taking ARV drugs after having exposed to potential risk (within 72 hours).

  STI PEP: Ceftriaxone to prevent incubating gonorrhea and syphilis, Azithromycin 1 g for Chlamydia, Metranidazole or tinidazole 2g single dose for TV and BV (all these are prescribed after case by case assessment usually following a sexual assault).
- **Need of continuing ART drugs and SVR in PLHIV (U=U) as means of prevention:**
  Describe the importance of maintaining sustained viral response (SVR) with ART and educate that Undetectable = Untransmittable.

Structural means of prevention

- **Make the clinic environment enabling for different clients:**
  Avoid stigma, discrimination, homophobia, transphobia, assurance of privacy and confidentiality of patients and create a cultural sensitive staff. Prepare local circulars, and guidelines, SOPs etc. to improve access to services.

Acquired Syphilis



Treponema pallidum pallidum in dark field microscopy 10x40

Primary syphilis (chancre)

Skin rash

Palmer syphilis

Mucus patches

(Snail track ulcers)

Condylomata lata

Alopecia

Acquired Syphilis

- **Introduction:**
  Syphilis is divided into stages (primary, secondary, latent, and tertiary). There are different signs and symptoms associated with each stage.

- **Mode of transmission:**
  By direct contact with a syphilis lesions during vaginal, anal, or oral sex. Syphilis can spread from an infected mother to her unborn baby.

- **Aetiology:**
  Treponema pallidum pallidum (TP)

- **Incubation period:**
  Variable generally 9 – 90 days

- **Presentation:**
  Primary syphilis (S_1, S_2): Painless ulcer/s (chancre) at the site of the entry of organism and enlarged inguinal lymph nodes. Secondary syphilis (S_3): S_3 develop after 4-10 weeks of appearance of primary lesions. Systemic infection can lead to develop alopecia, red eye (uveitis), mouth lesions, skin rashes, wart like growth, generalized lymphadenopathy, hepatosplenomegaly, uveitis, meningitis and cranial nerve palsies, etc. The signs and symptoms of primary and secondary syphilis can be mild or asymptomatic.

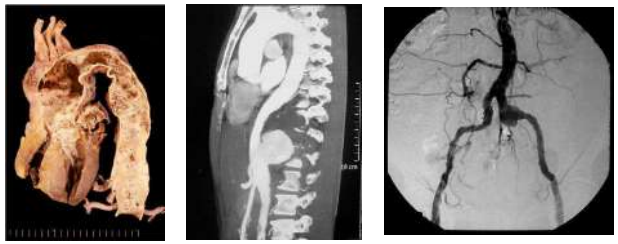
- **Latent syphilis (S_4E, S_4L):**
  No signs or symptoms, Tertiary syphilis (S_5, S_6, S_7): Currently tertiary syphilis disease is rare. If it does occur, there are three patterns of presentations gummatous syphilis (late benign syphilis), cardiovascular syphilis (80-85%), and neurosyphilis (5-10%).

- **Complications:**
  If left untreated syphilis; about 40% progress to the tertiary stage as complications.

- **Diagnosis:**
  Compatible clinical picture with reactive VDRL/RPR and positive TPPA/TPHA. Other Investigation: dark ground microscopy, TP-PCR, TP47 antigen ELISA.

Gummatous syphilis

Cardiovascular syphilis
(aneurysm formation)



Neurosyphilis There are four different forms of neurosyphilis:
Asymptomatic
General paresis
Meningovascular
Tabes dorsalis

Syphilitic eye disease

Charcot joints

General paresis of insane (GPI)

Acquired Syphilis

- **Management:**
  Course of Penicillin injection or oral antibiotics for those who are allergy to penicillin.

- **Prevention:**
  Avoid sex until you and your partner complete the treatment. Correct and Consistent condom use will reduce the transmission. Contact tracing and partner treatment (all the partners within last 3 months should be screened). Discuss and promote means of prevention.

- **Important advice:**
  Completely curable disease and maintaining treatment compliance is very important for complete resolution.

  Syphilis can transmit from mother to child and cause serious complications. All pregnant mothers in Sri Lanka are screened for syphilis (VDRL) in early pregnancy.

  Congenital syphilis can be eliminated by identifying and treating the infected mothers early or before the pregnancy.

  TPPA remains positive for life long.

Early congenital syphilis (CS)

Palmer and planter skin eruptions

Syphilitic snuffles

Wimberger sign

Periosteal reactions

Hepatosplenomegaly
Failure to thrive
Aphonic cry

Congenital syphilis (CS)

- **Introduction:**
  Congenital syphilis (CS) is a disease that occurs when a mother with syphilis passes the infection to her baby during pregnancy.

- **Aetiology:**
  Transplacental transmission of *Treponima pallidum pallidum* during pregnancy (at any time). However, the overall chance of transmission depends on the mother's stage of syphilis.

- **Presentation:**
  Chance of foetal infection in mothers with untreated early syphilis is around 80% (20% babies will be healthy), and in untreated late syphilis is around 20% (80% babies will be healthy). Probability of transmission is high during the second half of pregnancy. The foetal infection can occur during feotal development or during labour and delivery. Early foetal infections lead to spontaneous abortion, stillbirth, premature delivery, or perinatal death.

  Early congenital syphilis (<2 years of life): commonly manifests during the first 3 months of life. Manifestations include skin eruptions (vesiculobullous eruptions, macular rash on the palms and soles etc.) generalized lymphadenopathy, hepatosplenomegaly, failure to thrive, syphilitic snuffles. A few infants develop CNS manifestations (meningitis, choroiditis, hydrocephalus, or seizures, intellectual disabilities). Within the first 8 months of life, can appear bone and joint manifestations (pseudo paralysis, dactylitis, skeletal abnormalities with characteristic radiological changes).

Saddle nose

"Sabre tibia" anterior bowing of the mid portion of tibia

Hutchinson incisors

Interstitial keratitis: produce corneal opacities, Ghost vessels

Scaphoid shape of the scapula

Mulberry/Moon's molars

Perforated hard palate

Congenital syphilis (CS) cont.

- **Late congenital syphilis (>2 years of life):**
  Typically manifests after 2 years of life and causes gummatous ulcers, periosteal lesions that result in saber shins and bossing of the frontal and parietal bones. CNS involvement (Neurosyphilis, juvenile paresis, and tabes) Eye manifestations (optic atrophy, Interstitial keratitis, corneal scarring) Sensorineural deafness, Hutchinson incisors, mulberry molars, perioral fissures (rhagades), and maldevelopment of the maxilla resulting in “bulldog” facies are characteristic.

- **Diagnosis:**
  Early congenital syphilis: compatible clinical picture, dark field microscopy of lesions, placenta, or umbilical cord; serologic testing of mother and neonate (VDRL titre, TPPA); possibly cerebrospinal fluid (CSF) analysis.

  Late congenital syphilis: compatible clinical picture, serologic testing of mother and child (VDRL, TPPA).

- **Treatment:**
  If CS is diagnosed, 10-day course of IV Aqueous crystalline penicillin is needed to be given.

- **Prevention:**
  Early detection by universal screening of antenatal mothers and treatment. Family screening and treatment. Discuss means of prevention of STIs with parents.

Genital Herpes






Genital Herpes

- **Introduction:**
  Genital herpes is a common sexually transmitted viral infection characterized by multiple, painful, superficial ulcerations on affected skin or mucous membranes. These episodes can recur in the life with varying frequency.

- **Aetiology:**
  Herpes simplex virus (type 2 and 1)

- **Incubation period:**
  2 days to 2 weeks

- **Presentation:**
  Only one-third of individuals appear to develop symptoms following the acquisition of infection.
  The classical disease presents with multiple, painful, superficial vesication or blistering with ulcerations over the affected sites. Common sites would be ano-genital areas but rarely affect non genital sites (oro-labial, eye, fingers etc.) these lesions are associated with tender lymphadenopathy, fever, myalgia, headache which are more common with primary infections.

  Most people who catch herpes don't develop any sores and so don't realize they've been infected but they transmit the virus to others.

- **Diagnosis:**
  Mainly clinical diagnosis, presence of multinuclear giant cells in a scrapings of a lesion (Tzanck test). Virus detection and typing with NAAT (HSV PCR) is the test of choice. Serological positivity of antibodies useful in certain occasions only.

Complications of Genital Herpes

Adhesions following HSV

Keratitis in HSV

Neonatal HSV

- **Sitz bath:**
  15-20 minutes baths 2-3 times a day to keep wound clean.

- **Preparation:**
  Fill a wide mouth container (basin or bathtub with lukewarm water up to 4-6 inches and add table spoons of salt (till reaching cooking taste).

  Warm water increases blood flow to the perineum and increases healing.

Genital Herpes cont.

- **Management:**
  Analgesics, saline(salt water) washes, antivirals.

- **Complications:**
  Bacterial and fungal superinfection of the lesions, vulval adhesions, phimosis, paraphimosis, urinary retention, autoinoculation of the other sites, keratitis, aseptic meningitis.

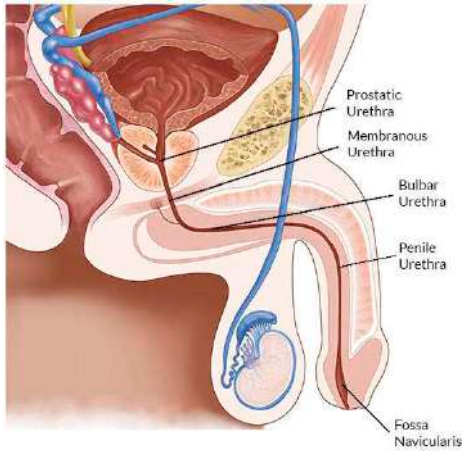
- **Prevention:**
  Introduce and promote means of prevention (Correct and consistent use of condoms might reduce the transmission). Abstinence from sexual contact during lesions, recurrences or prodromes is important.

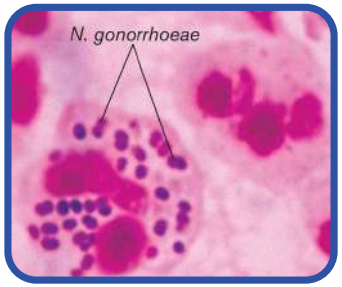
- **Important advice:**
  Virus becomes latent in sensory ganglia and periodically reactivating with symptomatic or asymptomatic viral shedding. In some people the herpes sores come back (recur). However, such recurrences are usually much less painful and less severe.

- **Sitz bath:**
  Saline or salt water (salt + lukewarm water of taste for cooking) can be used 2 to 3 times a day and keep the area clean and dry.

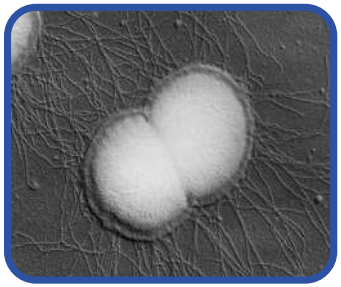
- **HSV in Pregnancy:**
  HSV can transmit from mother to child during pregnancy and vaginal delivery.
  This might result adverse pregnancy outcomes. Management differs according to the stage of the disease and the trimester of the disease acquisition. Proper follow up at sexual health clinic during pregnancy is important to deliver a healthy baby.

Gonococcal Urethritis (male)





Intracellular diplococci in light microscopy (1000x)



Gonococci in Scanning electron microscopy

Gonococcal complications

Gonococcal urethritis

Epididymo-orchitis

Peri urethral cellulitis

Tysonitis

Gonococcal urethritis (male)

- **Introduction:**
  Inflammation of the male urethra due to gonococcal infection.

- **Aetiology:**
  Neisseria gonorrhoea (a Gram negative intracellular diplococci).

- **Incubation period:**
  1-10 days.

- **Presentation:**
  Urethral discharge, dysuria or discomfort.

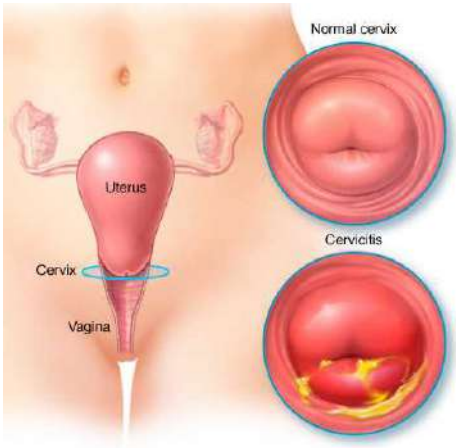
- **Complications:**
  Prostatitis, periurethral cellulitis, seminal vesiculitis, epididymitis, orchitis, tysonitis, Disseminated gonococcal infection (DGI). Reactive arthritis (SARA). Explain the MTCT risk.

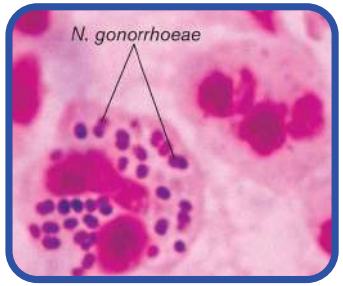
- **Diagnosis:**
  Compatible clinical presentation with detection of *Neisseria gonrrhoea* in urethral smears by Gram stain, culture or CT/NG NAAT.

- **Management:**
  Uncomplicated cases treat with, cefixime plus doxycycline/Azithromycin. Ensure the treatment is effective by doing test of cure (TOC).

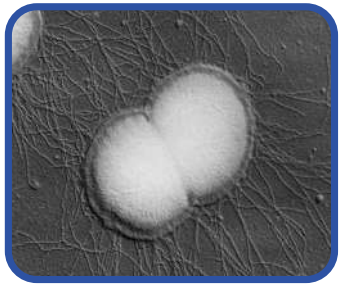
- **Prevention:**
  All partners within the interview period (2 weeks) are tested and treated accordingly. Abstain sex until patient and partner have finished their treatment. Discuss and promote means of prevention.

Gonococcal cervicitis





Intracellular diplococci in light microscopy (1000x)



Gonococci in Scanning electron microscopy

Normal cervix

Gonococcal Cervicitis

Gonococcal culture

Pelvic inflammation with adhesion

Gonococcal cervicitis

- **Introduction:**
  Cervicitis is the inflammation of the cervix, when it is caused by the Gonocooal infection it is called "Gonococcal cervicitis".

- **Aetiology:**
  Neisseria gonorrhoeae (a Gram negative intracellular diplococci).

- **Incubation period:**
  2-10 days.

- **Presentation:**
  Most common presentation is unusual vaginal discharge. Women can present with lower abdominal pain, dyspareunia, dysuria and inter menstrual bleeding . Some women remain asymptomatic.

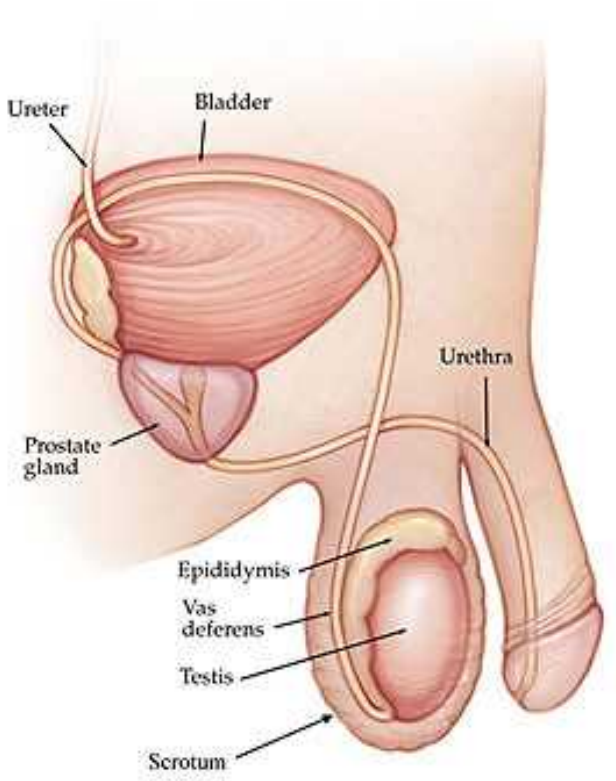
- **Complications:**
  Pelvic Inflammatory Disease, Bartholin abscess, Sexually acquired reactive arthritis (SARA), Sub fertility, Disseminated gonococcal infections (DGI). Possibility of MTCT.

- **Diagnosis:**
  Endo cervical swab for Gram stain, Gonococcal culture or NAAT.

- **Management:**
  Uncomplicated cases treat with locally sensitive antibiotics (cefixime or ceftriaxone) and it should be coupled with Chlamydia treatment. Test of cure is needed to confirm that the treatment is complete.

- **Prevention:**
  All partners of women within the interview period (3 months) are tested and treated accordingly. Abstinence from sex until patient and partner have finished their treatment. Discuss and promote means of prevention.

Non gonococcal urethritis (male)



Urethritis

Epididymitis, Orchitis

Non-gonococcal urethritis

- **Introduction:**
  Inflammation of the male urethra due to sexually transmitted infections (STI) or other causes.

- **Aetiology:**
  The STIs causes include *Chlmydia trachoa* (D-K) in 11-43%, *Mycoplasma genitalium* (in 9-25%), *adenovirus* (2-4%), *Trichomonas vaginalis*, HSV, Other causes: *Candida*, foreign bodies etc.

- **Incubation period:**
  2-6 weeks.

- **Presentation:**
  Urethral discharge, dysuria or discomfort.

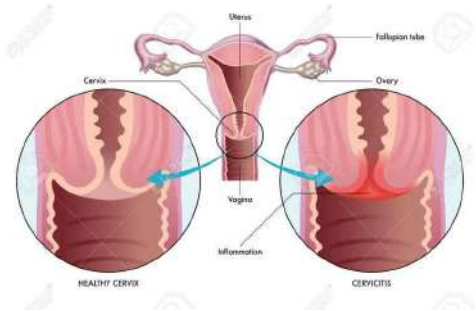
- **Complications:**
  Prostatitis, seminal vesiculitis, epididymitis, orchitis, Explain the MTCT risk.

- **Diagnosis:**
  Compatible clinical presentation with detection of pus cells in Gram stained urethral smear (>5pus cells) or DGS of first void urine (>10 pus cells). Investigation for the aetiology: CT/NG NAAT, TV NAAT, *Mycoplasma genitalium* NAAT.

- **Management:**
  Uncomplicated cases are treated with oral antibiotics.

- **Prevention:**
  All partners within the interview period (3 months) are tested and treated accordingly. Abstain sex until patient and partner have finished their treatment. Discuss and promote means of prevention.

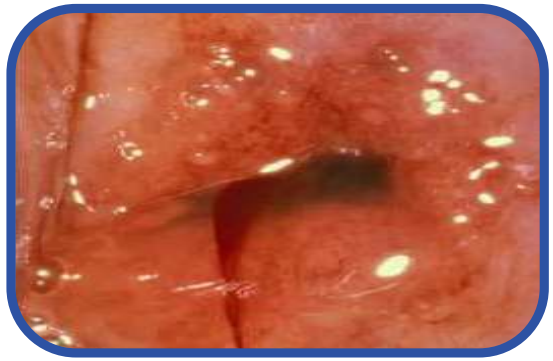
Non gonococcal cervicitis



Nomal cervix

Cervicitis

Nomal cervix



Cervicitis

Non gonococcal cervicitis

- **Introduction:**
  Cervicitis is the inflammation of the cervix which may be due to sexually transmitted infections or other reasons.

- **Aetiology:**
  STI causes: *Chlamydia trachomatis, Mycoplasma genitalium, Ureaplasma, Herpes simplex virus, Trichomonas vaginalis*, etc.
  Non-STI causes: include allergies, bacterial overgrowths (BV), reactions to IUCD etc.

- **Incubation period:**
  1-5 weeks (some people never develop obvious features).

- **Presentation:**
  Most common presentation is unusual vaginal discharge. Women can present with intermenstrual bleeding, lower abdominal pain and dyspareunia. Some women remain asymptomatic.

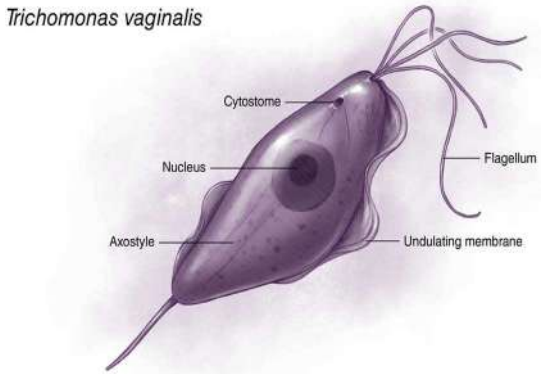
- **Complications:**
  Pelvic Inflammatory Disease (PID), Sexually acquired reactive arthritis (SARA), Sub fertility, Perihepatitis.

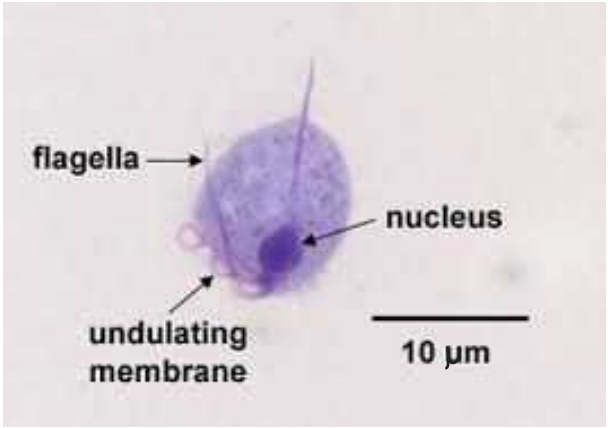
- **Diagnosis:**
  Compatible clinical features with >30 pus cells in Gram stained smear from endocervix. Investigation for the cause: Gonococcal culture, CT/NG NAAT, TV NAAT, *Mycoplasma genitalium* NAAT.

- **Management:**
  Uncomplicated cases are treated with oral antibiotics.

- **Prevention:**
  All partners of women within the interview period (6 months) are tested and treated accordingly. Avoid sex until patient and partner have finished their treatment. Discuss and promote means of prevention.

Trichomonas infection





frothy yellow vaginal discharge

Strawberry cervix

Trichomonas infection

- **Introduction:**
  Trichomoniasis is a sexually transmitted infection (STI) caused by a motile parasitic protozoan *Trichomonas vaginalis*. It can cause vaginitis in females and urethritis in males (NGU).

- **Aetiology:**
  Trichomonas vaginalis (a flagellated protozoon).

- **Incubation period:**
  5-28 days.

- **Presentation:**
  Nearly half of infected females and nearly all infected males are asymptomatic.
  Women: Common presentation is abnormal vaginal discharge which is classically fishy smelling, thin, scanty to profuse frothy yellow. Additional features include vulval itching, dysuria, offensive odour, dyspareunia, postcoital bleeding, lower abdominal pain.
  Men: Mostly asymptomatic, when symptomatic commonest presentation is urethral discharge or dysuria. (NGU).

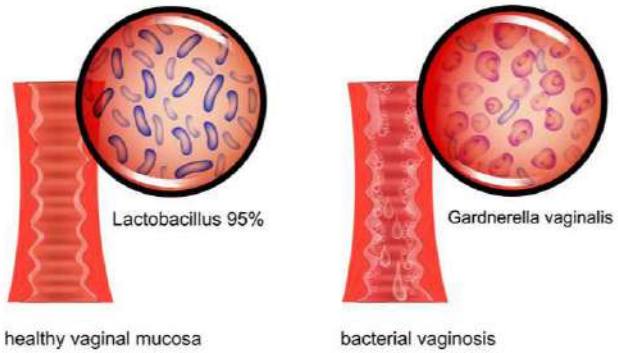
- **Complications:**
  Women: preterm delivery, low birth weight, PID, postpartum sepsis
  Men: epidydimitis, prostatitis

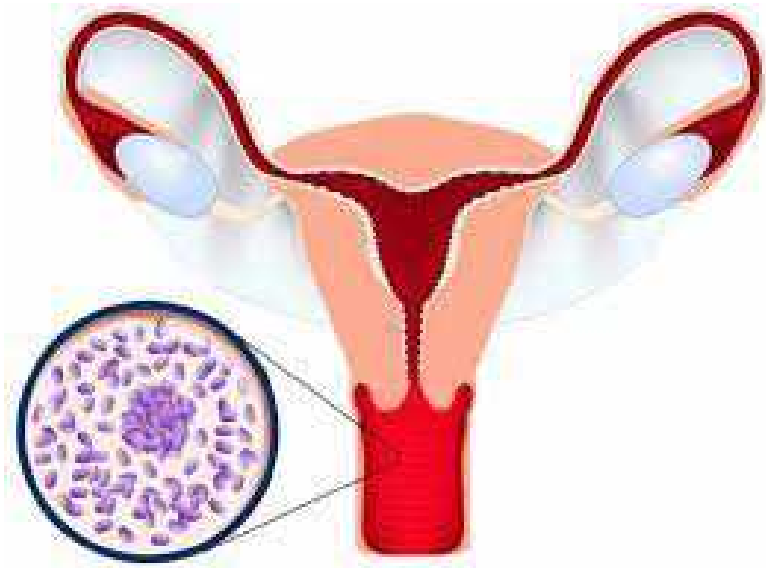
- **Diagnosis:**
  Compatible clinical features with the visualization of TV in vaginal smears. TV can be detected by saline mount, Gram stain or dark field microscopy. TV NAAT.

- **Treatment:**
  Oral nitroimidazoles (metronidazole, tinidazole) for 5-7 days.

- **Prevention:**
  Test and treat all partners within the interview period (4 weeks). Avoid sex until patient and partner have finished their treatment is important. Discuss and promote means of prevention.

Bacterial Vaginosis





Thin, white, homogenous discharge coating the walls of the vagina and vestibule

Bacterial Vaginosis

- **Introduction:**
  Bacterial vaginosis is a type of condition that has a vaginal odour and mild to moderate increase in vaginal discharge due to the change in microbial environment of the vagina. BV is not a sexually transmitted infection.

- **Aetiology:**
  Change in microbial environment of the vagina with relative abundance of anaerobes such as *Gardnerella vaginalis, Atopobium vaginalis Prevotella, Mobiluncus, Bacteroids*, etc). Risk factors: IUCD, Douching, recent antibiotics, reduced oestragen, multiple partners, new or change of partners.

- **Presentation:**
  Most common presentation is vaginal odour (offensive fishy smell) with mild to moderate increase in vaginal discharge which is not generally associated with soreness, itching or irritation. Vaginal odour is the often initial symptom recognized after sexual intercourse. On examination: discharge is thin, homogenous and adherent to vaginal mucosa.

- **Complications:**
  Late miscarriage, preterm premature rupture of membranes, preterm birth, postpartum endometritis,PID.

- **Diagnosis:**
  Clinical and microscopic evaluation of the vaginal smear. Different criteria are used for the diagnosis such as Amsel criteria or Hay/Ison criteria or Nugent scores.

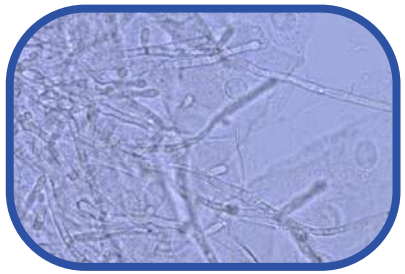
- **Management:**
  Oral antibiotics or intravaginal gel.

- **Prevention:**
  Discuss and promote means of prevention (avoidance of douching, shower gels, antiseptics, shampoo in bath, behaviour modifications such as avoidance of multiple partners etc).

Genital Candidiasis

Candida in Gram stain

Candida in 10% KOH



Candida in saline

Candida balanoposthitis

Candida vaginitis

Genital Candidiasis

- **Introduction:**
  Candidiasis is a fungal infection caused by a yeast called Candida. Candida is a normal commensal found on skin and mucous membranes. Overgrowth or out of control growth of commensal candida is the reason of the infection. Candida is not an STI.

- **Aetiology:**
  Most often *Candida albicans*
  Rarely by non albicans: *C.glabrata, C.tropicalis, C.krusei, C.parapsilosis*

- **Common Presentation:**
  Females: Vulval and vaginal itching and soreness, redness and vulval swelling, non offensive vaginal discharge, superficial dyspareunia, external dysuria.

  Males: Local rash (scaly or crack like ulcerations or fissuring on foreskin and glans penis), soreness, odour, inability to retract the foreskin.

- **Complications:**
  Recurrent candidiasis, severe candidiasis fissuring ulcerations and secondary infection, increase probability of STI transmission, phimosis, non albicans candidiasis.

- **Diagnosis:**
  Compatible clinical features and the evaluation of vaginal smear (Gram stain, Saline, 10% KOH preparation) ,

- **Treatment:**
  Treated with topical (vaginal pessary or cream) or oral antifungals.

- **Prevention:**
  Discuss and promote means of prevention such as avoidance of tightly fitting synthetic clothing, avoid local irritants. If partner is symptomatic recommend partner treatment.

Genital Warts

Penile warts

Vulval warts

Anal warts

Oral warts

Meatal warts

Genital Warts (GW)

- **Introduction:**
  Genital warts are abnormal skin growths found mainly on ano-genital skin and mucous membranes due to a viral infection.

- **Aetiology:**
  Caused by *Human Papillomavirus* (>100 genotypes, about 35 types have affinity to sexual sites) mainly transmitted by sexual contact.

- **Incubation period:**
  Variable generally 3 weeks - 8 months.

- **Presentation:**
  Majority asymptomatic. Single or multiple lumps over the genital skin or mucosa. Internal warts can also occur in urethra, cervix, anus or pharynx.

- **Complications:**
  Disfigurement, ulceration, bleeding.

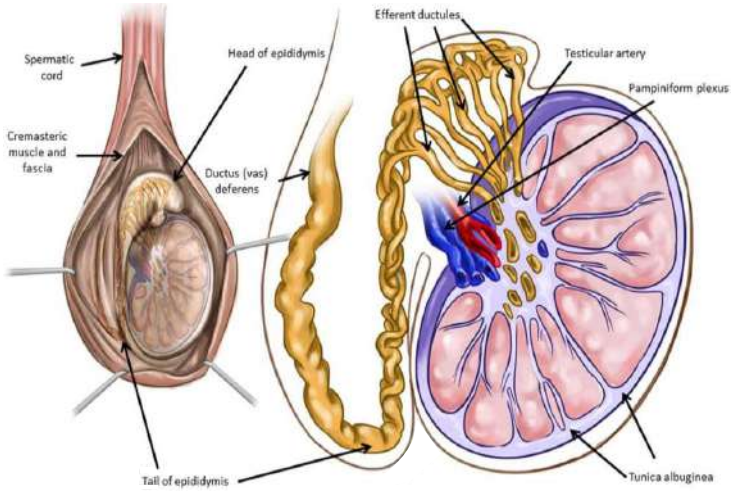
- **Diagnosis:**
  Mainly clinical, histology in difficult cases.

- **Treatment:**
  Some lesions resolve spontaneously, treatment options include surgical removal, 70-90% TCA, cryotherapy, Electrocautery, 5% imiquimod.

- **Important advice:**
  Inform that complete resolution may take several weeks or months, explain the recurrence nature of lesions in some patients. Some high risk types HPV (e.g. 16,18) can be associated with premalignant and malignant lesions of vulvo vaginal, cervix, anal, and penile areas.

- **Prevention:**
  Importance of regular pap smear check-ups. Vaccination against HPV offer protection for HPV genital infection and associated diseases. Vaccines are not recommended for existing HPV infection and diseases. Discuss and promote means of prevention.

Epididymo-orchitis



Epididymitis, Orchitis

Epididymo-orchitis

- ## Introduction:
  Epididymo-orchitis is the unilateral or bilateral inflammation of the testis and epididymis.

- ## Aetiology:
  More frequently due to STIs such as *Neisseria gonorrhoeae, Chlamydia trachomatis* and *Mycoplasma genitalium* among sexually active men (usually <35years of age). However, urinary pathogens such as *Escherichia coli, Klebsiella, Pseudomonas aeruginosa,* etc can be a cause of inflammation.

- ## Common Presentation:
  Acute onset unilateral testicular pain with or without swelling. Additional symptoms are urethral discharge, urethral irritation, dysuria, frequency and urgency.

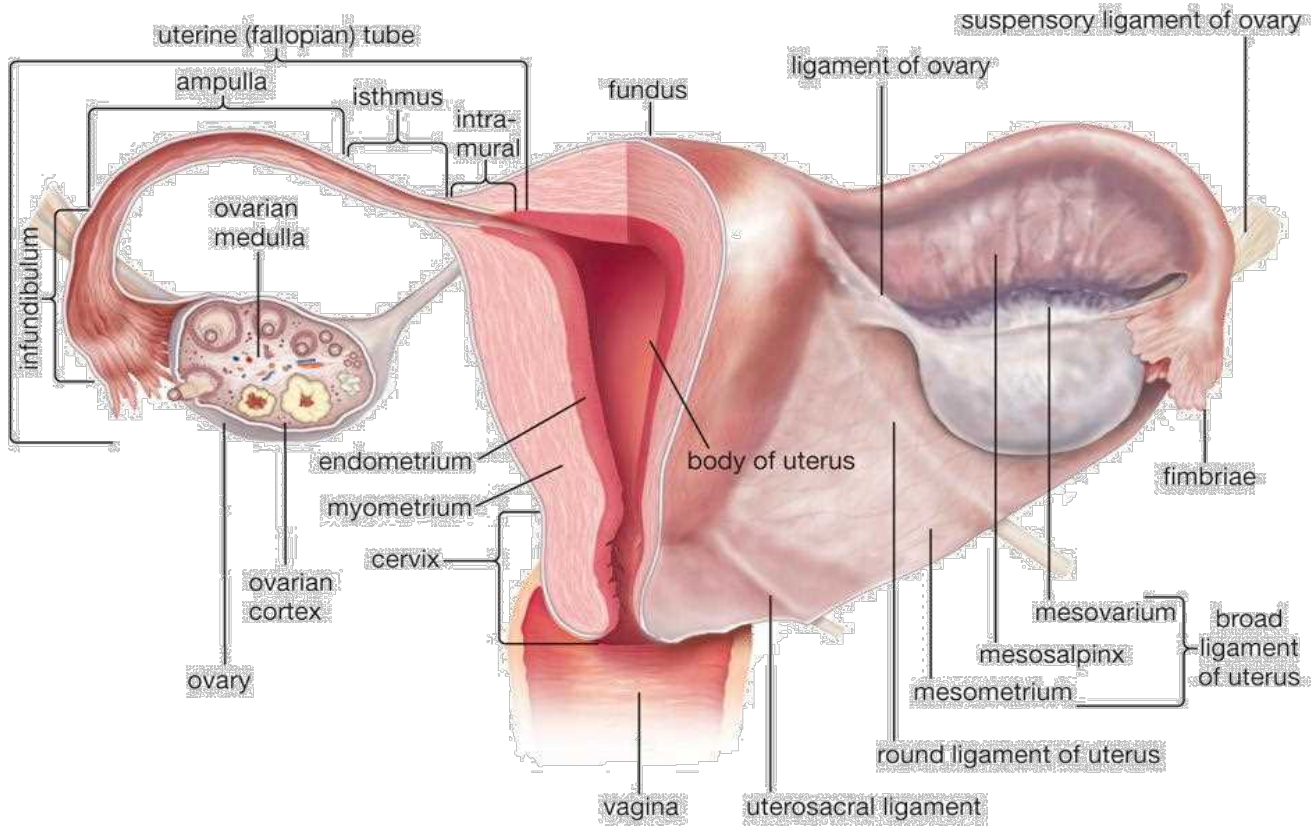
- ## Complication:
  Reactive hydrocele, Abscess formation.

- ## Diagnosis:
  Clinically (Imaging in difficult cases) **exclude torsion of the testis first, then Investigate for aetiology:** Urethral smears for microscopy, GC culture, CT/NG PCR, NAAT for other causes, Investigate for exclusion: UFR and culture (to exclude UTI)

- ## Treatment:
  Antibiotics for 2 weeks to cover the most likely infections e.g. CT/NG. Adequate rest, scrotal support with adequate analgesics.

- ## Prevention:
  If it is due to STI causes, test and treat all partners during the interview period (3 months). Avoid sex until patient and partner have finished their treatment. Introduce and promote means of prevention.

Pelvic Inflammatory Disease (PID)



Pelvic Inflammatory Disease (PID)

- **Introduction:**
  Pelvic inflammatory disease refers to inflammation of the female upper genital tract.

- **Aetiology:**
  May be caused by STIs such as *Neisseria gonorrhoeae, Chlamydia trachomatis, Mycoplasma genitalium* or non-STIs such as anaerobic organisms found in high levels in vagina or cervix.

- **Presentation:**
  Usually present with lower abdominal pain and unusual vaginal discharge, fever (>38° C), dyspareunia, abnormal uterine bleeding and dysmenorrhea.
  On examination: cervical motion tenderness, uterine or adnexal tenderness.

- **Complications:**
  Ectopic pregnancy, tubo-ovarian abscess, tubal blockage, infertility, pelvic abscess, chronic pelvic pain.

- **Diagnosis:**
  Endo cervical swab for Gram stain, Gonococcal and Chlamydia testing.

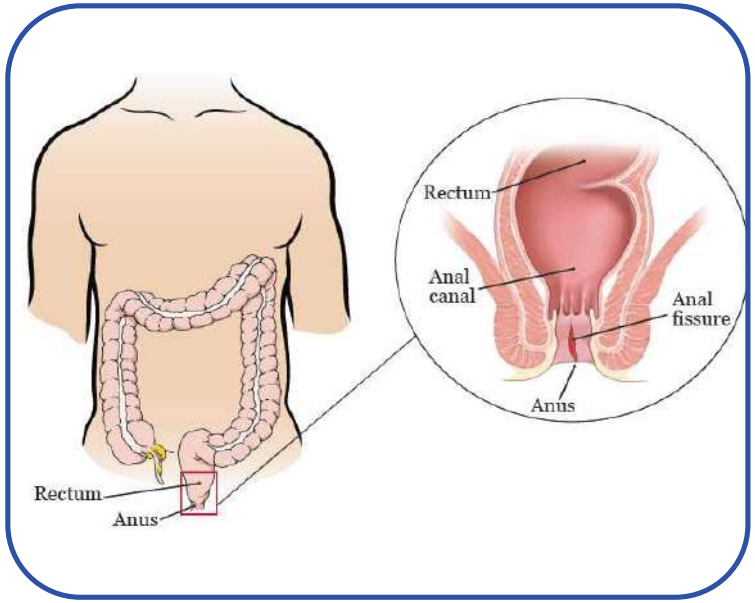
  Diagnosed mainly using low threshold clinical criteria: cervical motion tenderness or uterine tenderness or adnexal tenderness.

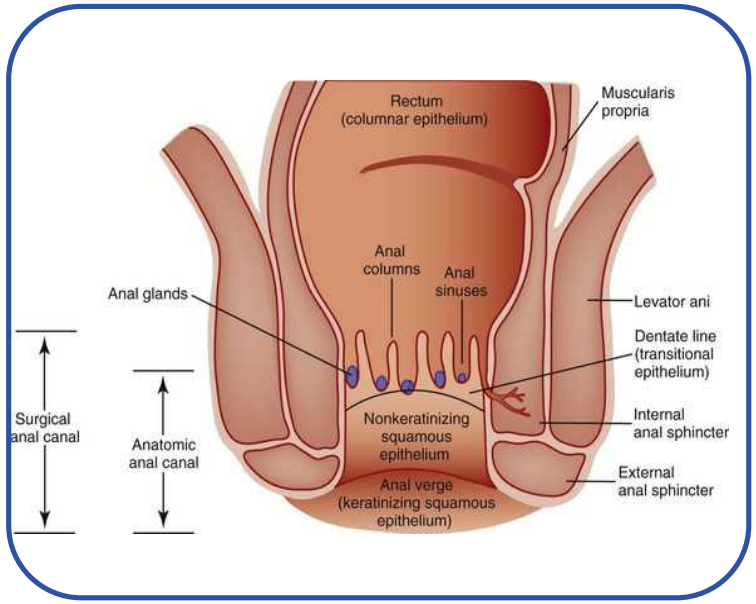
  Additional criteria to increase specificity: fever > 38.3 °C, elevated ESR or CRP
  Exclusion of ectopic pregnancy, gynecological and surgical emergencies are important.

- **Treatment:**
  Consider early and low threshold diagnosis to avoid complications. Treat with mixture of antibiotics to cover the most likely infections and usually includes an injection as well as tablets. The treatment course is usually for 2 weeks. Adequate rest is also important.

- **Prevention:**
  Current male partners of women with PID should be contacted and offered health advice and STI screening and epidemiological treatment. Tracing of contacts within a 6 month period since onset of symptoms is recommended. Abstinence until patient and partner have finished their antibiotics is important.

Proctitis


Rectum
Anus
Rectum
Anal canal
Anal fissure
Anus


Rectum (columnar epithelium)
Muscularis propria
Anal columns
Anal sinuses
Anal glands
Levator ani
Dentate line (transitional epithelium)
Surgical anal canal
Anatomic anal canal
Nonkeratinizing squamous epithelium
Internal anal sphincter
External anal sphincter
Anal verge (keratinizing squamous epithelium)

Proctitis

- **Introduction:**
  This is due to inflammation of the lining of the rectum (Proctitis).

- **Aetiology:**
  Sexually transmitted infections such as *Neisseria gonorrhoeae, Chlamydia trachomatis* (including LGV serovars), syphilis, *human papillomavirus* and *herpes simplex virus*. Non STD pathogens like *shigella* and *salmonella* can cause proctitis among MSM .

- **Presentation:**
  Mucoid rectal discharge, anal pruritus, anorectal bleeding, rectal pain, tenesmus, constipation.

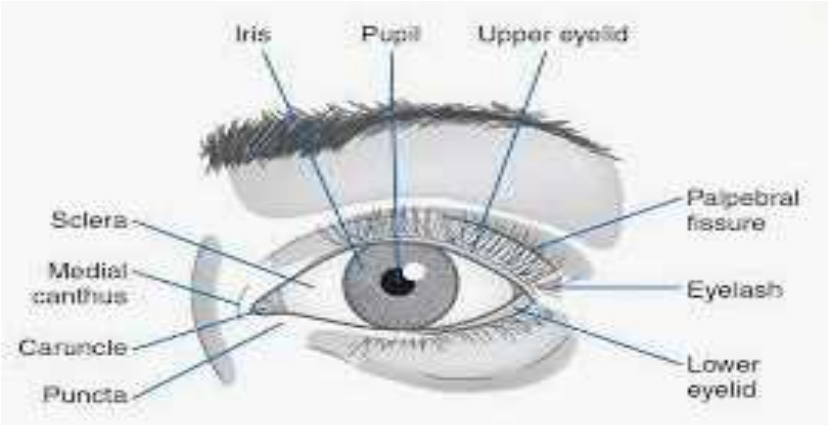
- **Complications:**
  Untreated proctitis can result anal stricture and fistulae. Rectal mucosal inflammation is associated with increase risk of HIV transmission among people who practice receptive anal sex.

- **Diagnosis:**
  Compatible clinical features and investigations for causes such as rectal smears for microscopy, CT/NG PCR, HSV PCR, syphilis serology (VDRL, TPPA).

- **Treatment:**
  Treat with antibacterial or antiviral agents based on the aetiological diagnosis. If diagnostic facilities are limited, treat for the best clinical diagnosis or use syndromic approach.

- **Prevention:**
  If proctitis resulted from sexually transmitted infection it is important that all the sexual partners in the last 3 months are tested and treated accordingly, Abstinence until patient and partner have finished their treatments. Introduce and promote means of prevention.

Neonatal Conjunctivitis (ophthalmia neonatorum)



Conjunctivitis (NG)

Follicular reaction

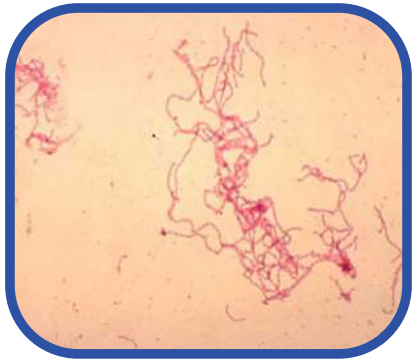
Pseudomembrane

Conjunctivitis (CT)

Neonatal Conjunctivitis

- **Introduction:**
  Neonatal conjunctivitis refers to conjunctival inflammation with associated discharge. Onset is within the first 28 days of life.
- **Mode of transmission:**
  From infected mother to baby during the passage through birth canal.
- **Aetiology:**
  Main STI organisms include *Neisseria gonorrhoeae* (NG), *Chlamydia trachomatis* (CT) and *Herpes simplex* (rare in infants).
- **Incubation period:**
  NG 2-6 days, CT 5-12 days, HSV-6-14 days.
- **Common Presentation:**
  Bilateral or unilateral conjunctival inflammation with eye discharge. Inflammatory reaction could be purulent, pseudomembranous or follicular reaction.
- **Complication:**
  Pan ophthalmitis, corneal perforation scarring, Impaired vision or blindness.
- **Diagnosis:**
  Specimens for Gram stained smear and GC culture from everted eye lids seperately,GC culture from nasopharynx and rectum,HSV PCR, Chlamydia testing if available.
- **Treatment:**
  Parent education, Eye irrigation technique using normal saline initially every 10-30 minutes and thereafter every 2 hours untill purulent discharge clear. Hand hygiene.
  Drug treatment: ceftriaxone IM injection, syrup erythromycin and regular Ophthalmologocal assessment by ophthalmologist.
- **Prevention:**
  Screening for both parents and their partners for Gonorrhoea, and other STIs and epidemiological treatment for GC and Chlamydia for the parents.(Refer GC and Chlamydia flip chart). Safe sex counselling to parents and advice to undergo STI screening during future pregnancies.

Chanchroid



Microscopic appearance of Haemophillus ducreyi (a Gram negative coccobacilli)

Vaginal chanchroid

Penile Chancroid with bubos

School of fish appearance

Soft sore with ragged undermined edges

Chancroid

- **Introduction:**
  A bacterial sexually transmitted infection (STI) characterized by painful genital ulcers that may be accompanied by inguinal lymphadenopathy.

- **Aetiology:**
  Haemophilus ducreyi (Gram-negative, facultative anaerobic cocobacilli that is highly infective.

- **Incubation period:**
  5-7 days (range 1-14 days).

- **Presentation:**
  The disease begins as a small inflammatory papule at the site of entry of the organism then the papule may erode to form an extremely painful deep ulceration (single or multiple) and may be accompanied by inguinal lymphadenopathy (unilateral and occur in 50% after 1-2 weeks). On examination: Ulcer is soft and non-indurate with ragged undermined edge with grey or yellow base with contact bleeding.

- **Complication:**
  Phimosis and partial loss of tissues (Phagedenic ulcers), Ulcer healing is slow and may take months or years sometimes.

- **Diagnosis:**
  Compatible clinical features with the results of investigation of ulcer or bubo samples by microscopy and culture.

- **Treatment:**
  Erythromycin or Azithromycin or IM ceftriaxone and Aspiration of bubo (optional).

- **Prevention:**
  Test and treat all partners during the interview period (10 days before onset of symptoms through date of treatment). Avoid sex until patient and partner have finished their treatment. Introduce and promote means of prevention.

Lymphogranuloma Venereum

Primary stage

Secondaray stage

Tertiary stage (genito-anorectal syndrome)

Peno-scrotal lymphoedema

Vulval Lymphoedema and inguinal bubo

Lymphoedema vulvar (esthiomene)

Lymphoedema of the scrotum

Lymphogranuloma Venereum

- **Introduction:**
  LGV is a systemic disease caused by sexually transmitted lymphotrophic bacteria mainly affect inguinal or femoral and rectal lymphatic system (including lymphatic vessels and nodes) based on the site of primary infection.

- **Aetiology:**
  Chlamydia trachomatis (serovars L1,L2,L3).

- **Incubation period:**
  Extremely variable (range 3-30 days).

- **Presentation:**
  Primary stage: is a transient and often imperceptible, painless papule or pustule or shallow erosion.
  Secondary stage: Cause tender inguinal or femoral lymphadenopathy after 10-30 days (rarely months) of primary which then progress to bubo formation.
  Tertiary stage (genito ano rectal syndrome): proctitis, acute proctocolitis, fistulae, strictures following spread to anogenital tissues and lymphatic system.

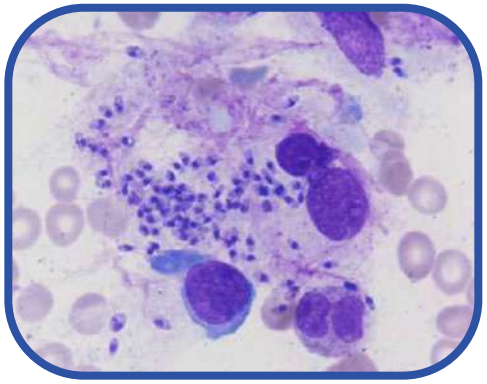
- **Complication:**
  Seen in the tertiary stage and include disruption of lymphatic architecture causing lymphoedema, persistent suppuration, fistula formation, pyoderma etc.

- **Diagnosis:**
  Compatible clinical features and ruling out of other causes. Additionally, cellular material obtained from ulcer base or aspiration of fluctuant buboes for DNA PCR or Culture.

- **Treatment:**
  Doxycyclin or erythromycin for 3 weeks, Aspiration of bubo (optional), Emphasize on drug compliance to avoid complications.

- **Prevention:**
  Test and treat all partners during the interview period (3 months). Avoid sex until patient and partner have finished their treatment. Discuss and promote means of prevention.

Donovanosis (Granuloma inguinale)



Organisms within the histiocytes

Safety pin appearance of the organism within the histiocytes

Granuloma inguinale in different sites

Donovanosis (Granuloma inguinale)

- **Introduction:**
  Granuloma inguinale (GI) is a genital ulcerative disease caused by the intracellular gram-negative bacterium *Klebsiella granulomatis* a rare, chronic granulomatous disease.

- **Aetiology:**
  Klebsiella granulomatis, (a Gram-negative pleomorphic bacillus formerly known as *Calymmatobacterium granulomatis*)

- **Incubation period:**
  Exact IP is unknown, it ranges from a day to a year (median time being 50 days).

- **Presentation:**
  Commonly present as a papule or nodule that become itchy, erythematous and ulcerate which may slowly expand as suppurative ulcers (beefy-red). Extra genital lesions are not uncommon (6%). There are 4 types of lesions; Ulcerogranulomatous, hypertropic, Necrotic and sclerotic.

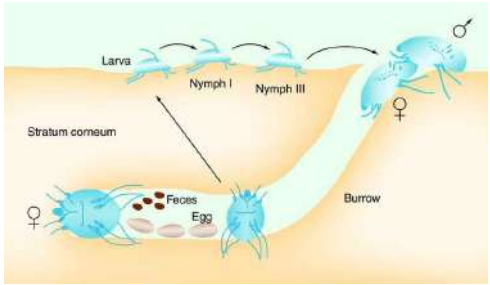
- **Complication:**
  Healing can cause extensive fibrosis, stricture formation, and phimosis, leading to significant deformity and functional disability.

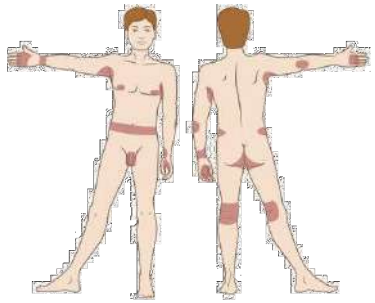
- **Diagnosis:**
  Demonstration of Donovan bodies in cellular material obtained from base of the ulcers/tissue biopsy.

- **Treatment:**
  Azithromycin or Doxycyclin or Erythromycin. Antibiotics should be given for at least 3-week course and continued until re-epithelialization of the ulcer occurs.

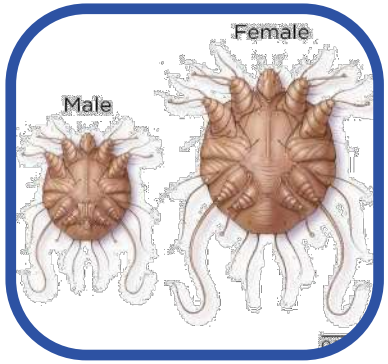
- **Prevention:**
  Test and treat all partners during last 6 months. Avoid sex until patient and partner have finished their treatment. Discuss and promote means of prevention. Possibility of transmission to baby during birth, therefore prophylaxis antibiotic for neonate is recommended.

Scabies





Distribution: interdigital webs, wrist, elbows, axillary folds, genital skin, penis and scrotum, nipples, umbilicus, thighs and buttocks



Nodular scabies

Nodular scabies

Secondary eczematization

Scabies

- **Introduction:**
  Human scabies is an intensely pruritic skin infestation caused by a host-specific tiny burrowing mite. Transmitted predominantly through direct skin-to-skin contact.

- **Aetiology:**
  Sarcoptes scabiei var hominis (human itch mite).

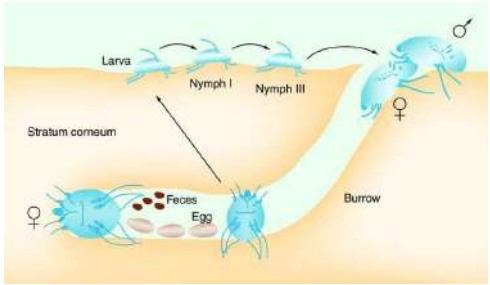
- **Incubation period:**
  3-6 weeks after primary infestation, but in re-infestation IP is short.

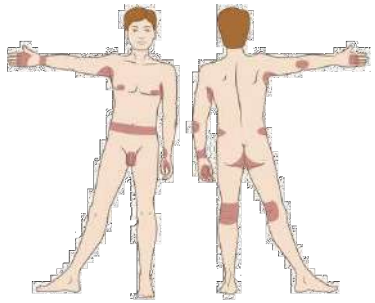
- **Presentation:**
  Intense pruritus which worsens at night, Scabies rash can present as erythematous papulo-vesicular rash, nodular scabies or crusted scabies. Burrows are pathognomonic. Face, palms and soles are spared in adults but can affect in infants and young children. (distribution sites are shown on the image).

- **Complication:**
  Scratching leading to ulcerations, secondary bacterial infection, secondary eczematization, post-streptococcal glomerulonephritis, crusted scabies.

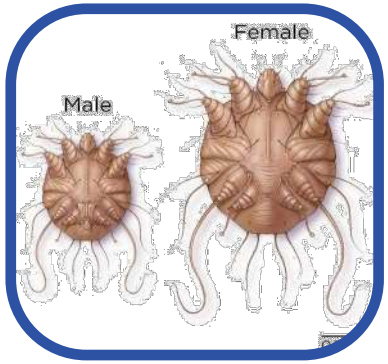
- **Diagnosis:**
  Usually clinical, can confirm by light microscopic identification of mites, larvae, ova, or scybala (feces) in skin scrapings in liquid paraffin or immersion oil.

Scabies





Distribution: interdigital webs, wrist, elbows, axillary folds, genital skin, penis and scrotum, nipples, umbilicus, thighs and buttocks



Nodular scabies

Nodular scabies

Secondary eczematization

Scabies

- **Treatment:**

  Permethrin 5% cream: Apply on whole body below chin and ears . Need to reapply the cream if washed out during hand washing. Allow cream to have a contact period of 8-12 hours. Then wash and clean the body thoroughly and dressed up with washed and cleaned clothes. Used clothing, bed linen and towels need to be boiled in water, wash and get dried under hot sun. Clothes which cannot be washed can be sealed in a plastic bag for 72 hours. Reapply the cream after 1 week.

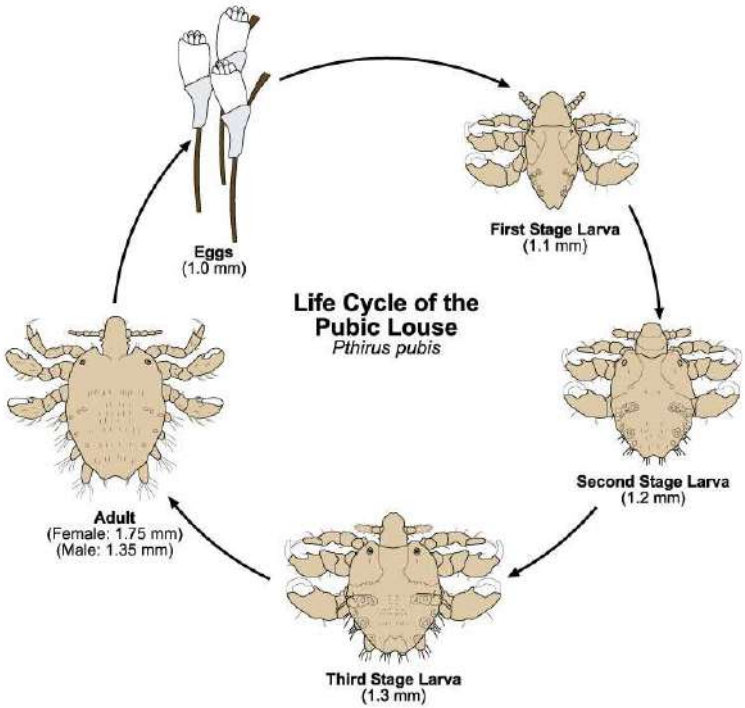
  Benzyl benzoate 25% cream- Apply to whole body like mentioned above for 3 consecutive days. Itching can persist up to 2 weeks even after treatment.

  Other options: **5-10% sulfur, 1% lindane lotion, Ivermectin**

- **Prevention:**

  All the house hold contacts should use the treatment and avoid close body contact with others (partners, children etc.) till treatment completion.

Pediculosis pubis (Pthirus pubis)



Pthirus pubis eyelash infestation

Pthirus pubis in genital area

Crab louse egg on human body hair

Pediculosis pubis (Pthirus pubis)

- **Introduction:**
  Infestation of the pubic area by an obligate blood sucking ectoparasite of humans. mainly transmitted by sexual contact and rarely through fomites.

- **Aetiology:**
  Pthirus pubis (the pubic or crab louse, or just “crabs”).

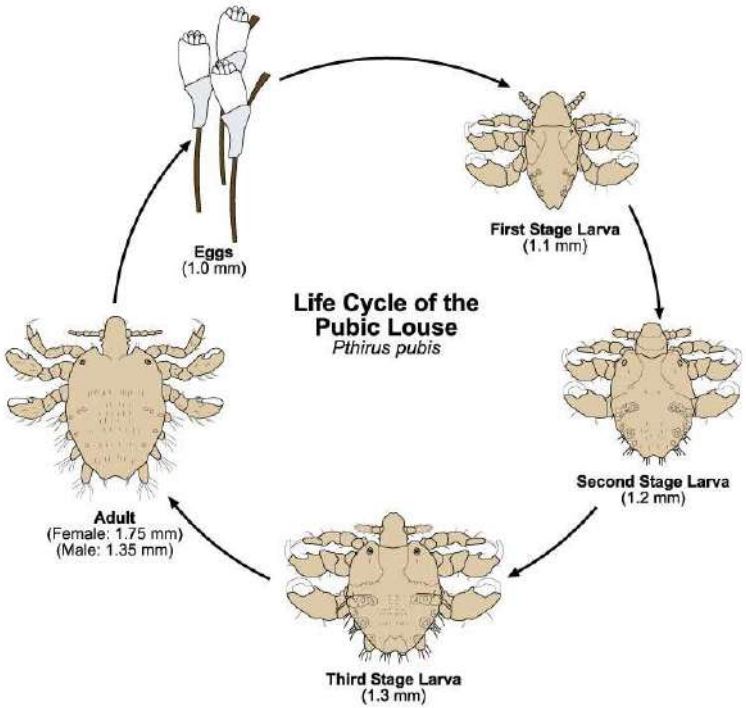
- **Incubation period:**
  Usually between 5 days and several weeks.

- **Presentations:**
  Majority are asymptomatic. Symptomatic patients will have tickling sensations, itching, irritability or pruritus due to allergic reaction to louse bites. Infestation of the eyebrows or eye lashes can cause conjunctivitis or blepharitis. On examination eggs (nits) laid on hair shaft and flattened adults are visible.

- **Complications:**
  Secondary bacterial infections such as impetigo, furanculosis, If eye lashes affected conjunctivitis or blepharitis can result.

- **Diagnosis:**
  Mainly clinical, confirmed by microscopic examination of egg, nymph or adult.

Pediculosis pubis (Pthirus pubis)



Pthirus pubis eyelash infestation

Pthirus pubis in genital area

Crab louse egg on human body hair

Pediculosis pubis (Pthirus pubis)

- **Management:**

Permethrin 1% cream; should be applied to all body hair including the beard and moustache. Allow cream to have a contact period of 10 minutes. Then wash and clean the body thoroughly and dressed up with washed and cleaned clothes. Used clothing, bed linen and towels should be washed in boiling water and dried them under hot sun. Clothes which cannot be washed can be sealed in a plastic bag for 72 hours. Reapply the cream after 1 week.

Malathion 0.5% lotion; apply to dry hair and wash out after at least 2 hours, preferably overnight (12 hours) Second application in 3-7 days is advised.

Shaving of pubic hair is useful.
Re-examine for absence of lice after 1 week .

For infestation of eye lashes : Mites can be removed manually with forceps or a nit comb. 1% permethrin lotion can be used on closed eyes for 10 minutes.

- **Prevention:**

Trace and treat partners during the interview period (3 months) Avoid close body contact until the patient and all the partner(s) have completed treatment.

Molluscum contagiosum

Molluscum contagiosum

- **Introduction:**
  Molluscum contagiosum is a skin infection caused by the virus Molluscum contagiosum. It produces benign raised bumps, or papular lesions, on the upper layers of your skin that may appear anywhere on the body including genital area. Transmitted through close skin to skin contact or by fomites (linen/clothes).

- **Aetiology:**
  Pox virus, Molluscum contagiosum virus (there are I-IV sub types), MCV II is a common cause in HIV positive individuals.

- **Incubation period:**
  Average between 2-8 weeks

- **Presentation:**
  Single or multiple painless, flesh colored papules of 2-5 mm size with central umbilication, sometime associated with itching.

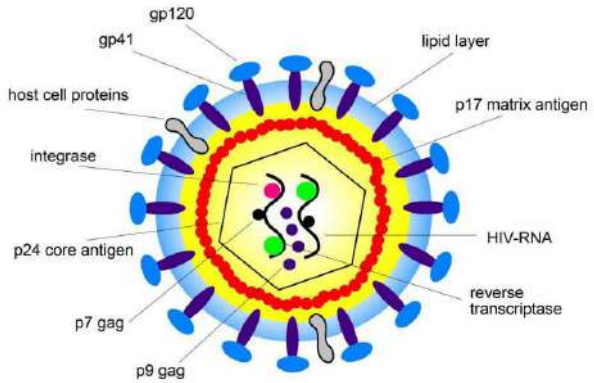
- **Complications:**
  Secondary bacterial infection, secondary eczematization, Extensive infection occur in immunocompromised or late stage HIV.

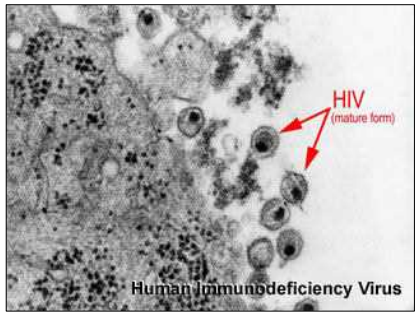
- **Diagnosis:**
  Mainly a clinical diagnoses, In doubt cases histologic examination and MCV PCR are useful and adults with genital molluscum should screen for other STIs.

- **Management:**
  Self limiting among healthy individuals. Physical removal may include cryotherapy, curettage (piercing of the core and scraping), patient applied or provider applied topical applications.

- **Important advice:**
  Risk of auto inoculation and can spread with shaving and waxing. Complete resolution may take several weeks to month.

Human Immunodeficiency Virus (HIV)





H Human
I Immunodeficiency
V Virus

A Acquired
I Immune
D Deficiency
S Syndrome

Test and treat is our policy

Human Immunodeficiency Virus (HIV)

- **Introduction:**
  Is a sexually transmitted viral infection that attacks the body's immune system. If HIV is not treated, it can lead to AIDS (Acquired Immune Deficiency Syndrome).

- **Aetiology:**
  Human immunodeficiency virus (HIV)

- **Presentation:**
  Primary HIV infection (PHI): Usually refers to the first six months after infection.
  Acute HIV infection *is the earliest stage of HIV infection.*
  Some may be symptomatic (about 50-90%) and give rise to flu like illness (viral fever like illness) which is called **seroconversion illness (Acute retroviral syndrome).** This generally develops within 2 to 4 weeks after infection with HIV.
  HIV viral load is vey high during this period and risk of transmission is also high.

  Chronic HIV infection: After six months, HIV enters to the chronic phase. This phase usually progresses slowly but infectious. Many people can go for years without complications without HIV treatment, but risk of serious infections are possible.
  Acquired Immune Deficiency Syndrome (AIDS): The most severe phase of HIV infection with severely damaged immune system. They get an increasing number of severe illnesses. Highly infectious in transmission.

- **Complications:**
  If left untreated; disease can progress to life threatening opportunistic infections and malignancies and eventually death.

If not taking treatment (consequences)

Clinical stage 2

Weight loss | R.URTI | PPE | Angular chelitis | Zoster | R. Oral ulcerations | Fungal Nail Infection

Clinical stage 2

Unexplained fever | Persistent O. CAN | Oral Hairy Leucoplakia | A NUG | Severe infections at any site (pneumonia etc.)

Clinical stage 4 AIDS

Oes. candidiasis | Recurrent pneumonia | Wasting syndrome | PCP | CNS toxo | CMV retinitis

Human Immunodeficiency Virus

- **Diagnosis:**

  HIV is diagnosed by doing blood tests. These tests include screening tests and confirmatory test. **Window period (WP)** - The time between exposure to infection and the detection of HIV infection. WP varies from test to test and from person to person. It is safe to consider WP as 3 months, but newer tests WP is short as 6 weeks (HIV ELISA Ag/Ab combo).

- **Management:**

  HIV can be effectively controlled by a combination of drugs called antiretroviral therapy (ART). PLHIV can live quality, long and healthy life with ART. Adherence to treatment protect the patient as well as their partners.

- **Prevention:**

  Secondary prevention: Adherence to treatment and maintenance of undetectable viral load is the main way of preventing complications.

  Partner services:
  Offer HIV test, all partners during the **interview period** (from the last HIV negative test to start of treatment plus 6 months or from seroconversion illness to time of treatment plus 6 months or all partners during the potential estimated period).

  Discuss and promote means of prevention

  Create enabling environment to access care: Minimize stigma and discrimination for those who are affected and infected with HIV.

Important points for discussion about medications

- **Medication compliance:**
  Educate the patient about the conformity with the recommended dose, time, frequency and duration.

- **Storage:**
  Store in a closed container at room temperature.

- **Missing doses:**
  If you missed a dose, take it as soon as you remember, unless it's nearly time for your next dose. In this case, just skip the missed dose and continue with your next one as usual. Never have 2 doses at the same time. If you often forget doses, it may help to set an alarm to remind you.

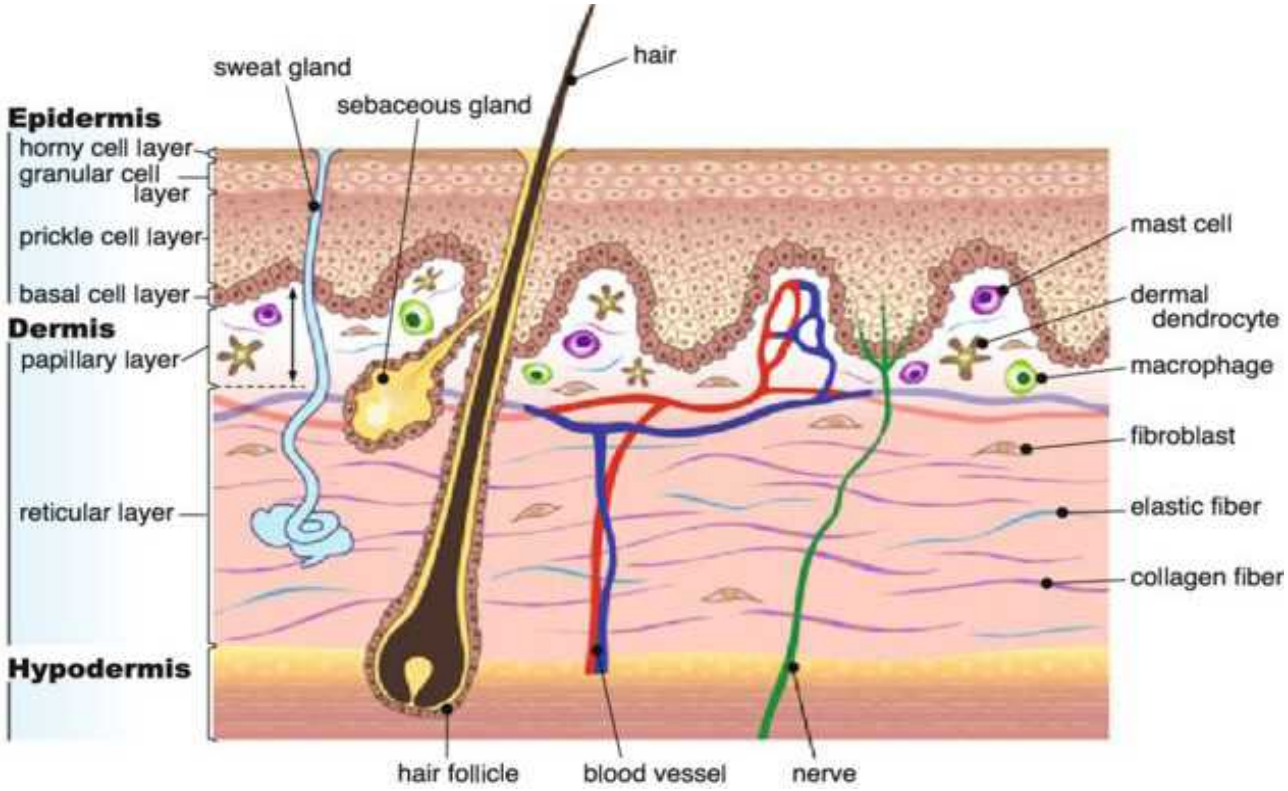
- **Special considerations:**
  Inquire from females about pregnancy, breast feeding, or potential for conception (LMP), hormonal contraceptives, ask commonly from both males and females about allergies to drugs, food etc, and other drugs currently on and the renal and liver health (which may need renal dose or liver dose calculations) . Doxycyclin is contraindicated in pregnancy , breast feeding and in children. Avoid Fluconazole in pregnancy.

- **Unwanted effects of drugs:**
  Discuss briefly about unwanted effects and treatment advantage over the risk (discuss risk benefit).

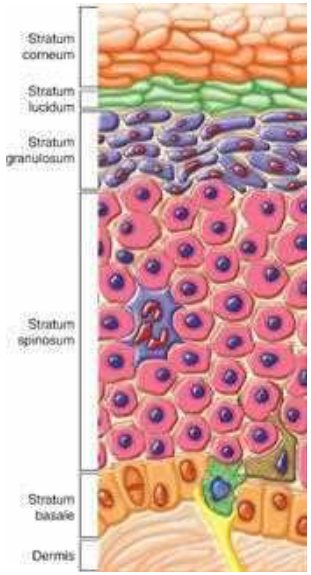
- **Life threatening effects:**
  In rare cases, medication can lead to serious life-threatening allergic reactions (itching, skin rash, swelling of lips/ tongue, difficulty in breathing, stomach pain etc.). Go to the nearest hospital immediately.

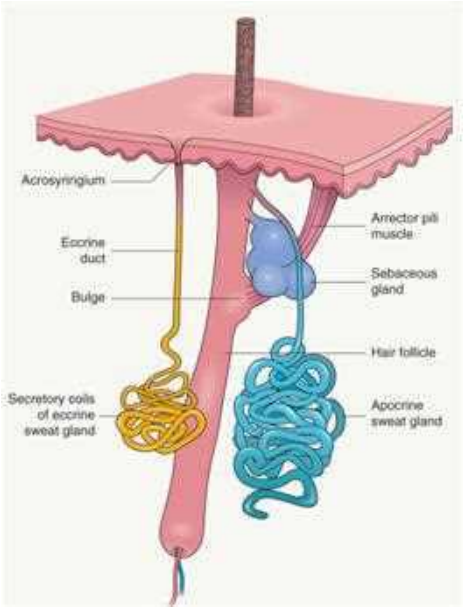
Drug	Common side effects			
Doxycycline	Nausea or vomiting	Headache Buzzing in your ears	Chest pain, acid reflux, sore throat	Skin being sensitive to sunlight
Azithromycin	Nausea	Headache feeling dizzy or tired	Diarrhoea	Loss of appetite
Cefixime	Nausea	Drowsiness	Diarrhoea	Skin rashes
Fluconazole	Nausea or vomiting	Headache	Stomach pain Diarrhoea	Skin rash
Metranidazole	Nausea or vomiting		Metallic taste in mouth, Diarrhoea	Disulfiram Reaction
Acyclovir	Nausea or vomiting	Headache Feeling dizzy	Diarrhoea	Skin being sensitive to sunlight
Penicillin injection	Pain and redness of the injection site	Headache	Fever, muscle pain, and fast heart beat	Hypersensitivity reactions

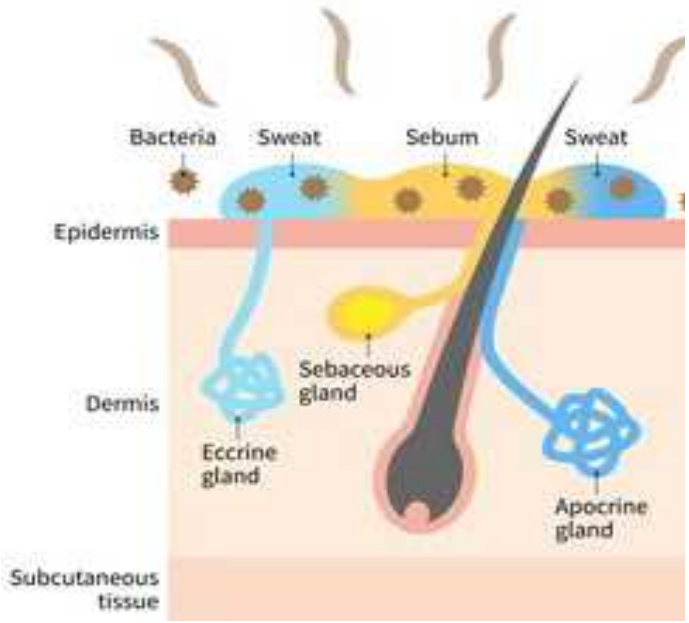
Skin anatomy



Skin anatomy







Genital dermatoses

Variants of pearly penile papillae

Candidiasis
(note satellite lesions)

Tinea cruris

Impetigo in diaper area

Folliculitis

Folliculitis

Furuncle (Boil)

Carbuncle

Genital dermatoses

Corona of the glans penis	**Pearly penile papules (hirsuties corona glandis or hirsutoid papillomas, form of acral angiofibroma):** Clinically: present as flesh,coloured, pink, smooth, rounded, dome shaped papules, or projection occurring predominantly around the coronal margin of the glans, rarely on the glans. They are common and found in up to 50% and relatively common in uncircumcised men. They are described as a vestigial remnants of penile spikes in other animals which are believed to contribute to sexual pleasure. A similar variant in female vestibule known as **hirsuties papillaris vulvae (vulval papillae).**Management: reassurance, for those insist on removal can do CO_2 laser, cryotherapy even careful TCA application by provider.
Superficial layers of the skin	**Tinea:** superficial layer of the skin (show in the graph) is infected with dermatophytes (fungus) **Tenia incognito:** Is an altered appearance of a fungal skin infection due to inappropriate treatment, usually a topical steroid cream in which the original infection slowly extends. **Candidiasis:** superficial layers of the skin is infected with a fungus called Candida.**Impetigo:** one of the most common bacterial skin infections among kids, usually produces blisters or sores on the face, neck, hands, and diaper area. Cause: one of two bacteria, Staphylococcus aureus or Streptococcus pyogenes (group A strep). Clinically: There are two types, non-bullous impetigo (crusted) and bullous impetigo (large blisters). Bullous impetigo nearly always caused by S. aureus.
Hair follicle diseases	**Folliculitis:** inflammation of the hair follicles (show in the graph), Discuss the most relevant cause: bacterial (staph), fungal (Pityrosporum, candida), viral infection (HSV), eosinophilic folliculitis (immunosuppressed such as HIV and cancer patients), parasitic (scabies), Folliculitis due to contact reactions (chemicals, creams, ointments, plasters, overuse of topical steroids) **Furuncle (boil):** Is a deep form of bacterial folliculitis (infection of a hair follicle). **Carbuncle:** Group of furuncles.

Genital dermatoses

Steatocystoma multiplex

Sebaceous cysts

Vitiligo

Genital hydradenitis

ectopic sebaceous glands of Fordyce (Fordyce spots)

Nevus depigmentosa

Melanocytic nevus

Genital dermatoses

Sebaceous gland diseases (oil gland)	Sebaceous gland prominence, Tyson glands, sebaceous hyperplasia and ectopic sebaceous glands of Fordyce (Fordyce spots): all virtually synonymous, common, normal variants of the skin of the scrotal skin and penile shaft, on the inner aspects of the labia majora and labia minora.Sebaceous cyst: accumulation of sebum due to occlusion of the gland ducts. Steatocystoma simplex/multiplex: malformations of the pilosebaceous duct junction (hair follicle unit). If a single cyst-simplex, multiple cysts-multiplex.
Sweat glands (Eccrine and Apocrine)	Hidradenitis suppurativa: It is a chronic inflammatory skin disease that affects apocrine gland-bearing skin in the axillae or groin. Genital hyperhidrosis: can occur in groins like in arm pits (e.g sweaty vagina).
Melanocytic disorders	Vitiligo: Depigmented skin patches which can appear in genital areas such as the penis, foreskin and shaft. Vitiligo is thought to be a systemic autoimmune disorder which results in the loss or destruction of melanocytes, that produce melanin which determines the colour of skin, hair, and eyes. Genital pigmented lesions: arise mainly on the vulva (labia majora, labia minora, and clitoris), although they may occur less often on the perineum, pubic region, and male genitalia (penis and scrotum) Genital pigmented lesions include lentiginosis, blue nevus, common melanocytic nevus, Spitz nevus, dysplastic melanocytic nevus, (DMN), and cutaneous melanoma (CM). Nevus depigmentosa (nevus achromicus): is a common congenital disorder characterized by focal nonprogressive hypopigmentation that remains stable throughout life. They typically presents at birth (0.5%-1.25% of neonates) or at a very early age, usually before 3 years.

Angiokeratoma of Fordyce scrotal skin and penis

Median raphe cysts

Scrotal calcinosis

(A) Oral aphthous lesion (B) Genital ulceration (arrow) and scar (arrow head) (C) Erythema nodosum (D) Pustular lesion (E) Uveitis (F) Difference in diameter between extremities suggesting deep vein thrombosis in a patient with Behçet's disease.

Genital dermatoses

Blood vessels	**Angiokeratoma of Fordyce:** Lesions appear as small, red and scaly papules (older patients, lesions tend to be larger, blue/black and scaly). Usually symptomless and may only be noticed when they bleed after scratching or intercourse. Most commonly found on the scrotum also found on the shaft of the penis, labia majora of the vulva, inner thigh and lower abdomen. Lesions composed of surface blood vessels (dilated capillaries). **Behcet's disease:** is virtually involve blood vessels of nearly all sizes and types, ranging from small arteries to large ones, and involving veins too. Therefore, manifestations of Behcet's may occur at many sites throughout the body. However, the disease has a predilection for certain organs and tissues; these are described in Eye, Mouth, Skin, Lungs, Joints, Brain, Genitals, Gastrointestinal Tract. Genital lesions Male: painful genital lesions that form on the scrotum, similar to oral lesions, but deeper. Female: painful genital ulcers that develop on the vulva.
Scrotal skin	**Scrotal calcinosis (SC)** is a rare, benign entity defined as the presence of multiple calcified nodules within the scrotal skin.
Median raphe disorders	**Median raphe cyst:** is a very rare, benign congenital lesion occurring anywhere in the midline between the external urethral meatus and anus. It is an embryologic fusion abnormality of the median raphe.

Genital dermatoses

Lichen Planus (LP)

Erosive Lichen Planus (ELP)

Lichen nitidus

Lichen simplex chronicus

Lichen sclerosis

Psoriasis

Genital pyoderma gangrenosum (genital PG)

Genital dermatoses

Lichen planus	**Lichen planus:** is an autoimmune disorder (T-cell mediated), in which inflammatory cells attack an unknown protein within the skin and mucosal keratinocytes.
Lichen nitidus	**Lichen nitidus:** Is asymptomatic, flat-topped, skin-colored micro papules where the etiology is not known. Usually no treatment is required, as lichen nitidus does not usually cause any symptoms and resolves within 12 months in two-thirds of cases.
Lichen sclerosis	**Lichen sclerosus:** is a common chronic skin disorder that most often affects genital and perianal areas. (Older names for lichen sclerosus (LS) include lichen sclerosus et atrophicus, kraurosis vulvae (in women) and balanitis xerotica obliterans (in males).The cause is multifactorial (may include genetic, hormonal, irritant, traumatic and infectious components). Lichen sclerosus is often classified as an autoimmune disease associated with antibodies to a specific protein {e.g. Extracellular matrix protein-1 (ECM-1)}.
Lichen simplex	**Lichen simplex chronicus (LSC):** is a localized, well-circumscribed area of thickened skin (lichenification) resulting from repeated rubbing, itching, and scratching of the skin. It can occur on normal skin of individuals with atopic, seborrheic, contact dermatitis, or psoriasis.
Psoriasis	**Psoriasis:** is a complex, chronic, multifactorial, immune-mediated inflammatory disease (IMID) that involves hyperproliferation of the keratinocytes in the epidermis, with an increase in the epidermal cell turnover rate (up to 10 times faster than normal). This makes the skin build up into bumpy red patches covered with white scales. It does sometimes happen in members of the same family. The five main morphotypes of psoriasis are plaque, guttate, inverse, pustular, and erythrodermic.
Pyoderma ganagrenosum	**Pyoderma gangrenosum (PG):** is defined as an inflammatory, reactive, noninfective, nonneoplastic skin disease. The four main clinical types of PG are ulcerative, pustular, bullous, and vegetative. Genital PG is rare.

Genital dermatoses

Penile pemphigus

Paraneoplastic pemphigus

Mucous membrane pemphigoids

Genital dermatitis

Fixed drug eruptions

Genital dermatoses

Vesicobullus disorders of genitalia	These can be classified into following types depending upon the etiology. **Autoimmune bullous disorders:** Pemphigus vulgaris (PV), pemphigus vegetans, paraneoplastic pemphigus, bullous pemphigoid (BP), mucous membrane pemphigoid, linear IgA disease, and epidermolysis bullosa acquisita (EBA). **Genetic bullous disorders:** Epidermolysis bullosa (EB) and Hailey-Hailey disease (HHD). **Inflammatory disorders:** Contact dermatitis (CD). **Drug induced:** Acute disseminated epidermal necrolysis (ADEN) and bullous fixed drug eruption. **Infectious:** Herpes simplex and herpes zoster. **Miscellaneous:** Lymphangiectasia, lymphangioma, mucinous cysts, erythema multiforme (EM)
Dermatitis	Dermatitis is the inflammation of the skin which includes **Atopic dermatitis (eczema):** is a condition that makes the skin red and itchy. It can occur at any age. Atopic dermatitis is long lasting (chronic) and tends to flare periodically. It may be accompanied by asthma or hay fever. **Allergic contact dermatitis:** Allergic contact dermatitis is a form of dermatitis caused by an allergic reaction to a material, called an allergen, in contact with the skin. **Irritant contact dermatitis:** Irritant contact dermatitis is a form of contact dermatitis, in which the skin is injured by friction, environmental factors such as cold, over-exposure to water, or chemicals such as acids, alkalis, detergents and solvents. **Seborrhoeic dermatitis:** is a common, chronic or relapsing form of dermatitis that mainly affects the sebaceous gland-rich regions of the scalp, face, trunk, armpit and groin.
Drug eruptions	Drug eruptions are acute or subacute adverse cutaneous reactions to a medicine which can take any morphological types. Common types include morbilliform (like measles), urticarial, papulosquamous, pustular, and bullous. **Fixed drug eruption (FDE):** Fixed drug eruption is a distinctive cutaneous allergic reaction that characteristically recurs at the same site(s) on re-exposure to the medication or other chemical agent. FDE can appear on different parts of the body. The sites of predilection are the lips, genitalia, and sacral area.

Hotlines and contact details

Province	Clinic	Contact Number
Central	Kandy	081-2203622
	Matale	066-2053746
	Nuwara Eliya	052-2223210
	Dambulla	061-2284761
	Nawalapitiya	054-2222261
Estern	Ampara	063-2224239
	Batticaloa	065-2057078
	Kalmunai	067-2223660
	Trincomalee	026-2222563
North central		
	Anuradhapura	025-2236461
	Polonnaruwa	027-2225787
North western		
	Chilaw	032-2220750
	Kurunegala	037-2224339
	Kuliyapitiya	037-2281261
	Puttalam	0322 265 261
Nothern	Jaffna	021-2217756
	Vavuniya	024-2224575
	Kilinochchi	021-2283709
	Mullaitivu	021-2061414
	Mannar	023-2250573

Province	Clinic	Contact Number
Sabaragamuwa	Kegalle	035-2231222
	Rathnapura	045-2226561
	Embilipitiya	047-2230261
Southern	Balapitiya	091-2256822
	Galle	091-2245998
	Hambanthota	047-2222247
	Matara	041-2232302
	Thangalle	047-2240261
Uva	Badulla	055-2222578
	Monaragala	055-2276826
	Mahiyanganaya	055-4936779
Western	Colombo	011-2667163
	Kalubowila	011 -2763893
	Awissawella	036-2222003
	Ragama	011-2960224
	Gampaha	033-2234383
	Negombo	031-2239016
	Wathupitiwala	033-2280261
	Kalutara	034-2236937
	Panadura	038-2232261
	Homagama	011-2855200

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MINISTRY OF HEALTH

NATIONAL STD/AIDS
CONTROL PROGRAMME