



Sexually Transmitted Infections (STIs) – organisms which cause ulcers			
Organism	Disease	Comment	Diagnosis
Herpes Simplex Virus types 1 & 2 (HSV-I, HSV-II)	HSV-I: transmitted via saliva causing oropharyngeal infection in children. HSV-2: sexually transmitted causing genital herpes.	<ul style="list-style-type: none"> • HSV-2 is usually asymptomatic. • Consists of vesicles that soon break down to form painful shallow ulcers. • Infection can be transmitted from mother to infant during delivery. 	<ul style="list-style-type: none"> • Detection of HSV DNA by vesicle fluid or ulcer swab. • Immunofluorescence.
Chlamydia trachomatis (obligate intracellular parasite)	L1, L2, L3 serotypes (lymphogranuloma venereum)	<ul style="list-style-type: none"> • Symptomatic infection is more common in men. • Ulcerating papule at the site of inoculation accompanied by fever, headache and myalgia. • Causes inguinal lymph node enlargement (inguinal buboes). 	<ul style="list-style-type: none"> • Culture. • Nucleic acid-based tests are also available.
Haemophilus ducreyi	Chancroid	<ul style="list-style-type: none"> • Painful non-indurated genital ulcers and local lymphadenitis. 	<ul style="list-style-type: none"> • Gram stain: gram-negative rods and chains. • Culture: rich medium.
Calymmatobacterium granulomatis	Donovanosis	<ul style="list-style-type: none"> • Characterized by nodules, almost always on the genitalia, which erode to form granulomatous ulcers that bleed readily on contact. 	<ul style="list-style-type: none"> • Gram stain: gram negative rods. • Donovan bodies appear as clusters of blue- or black-stained organisms in the cytoplasm of mononuclear cells.
Treponema pallidum	Syphilis	<ul style="list-style-type: none"> • Chancre (painless ulcers). • Sexually transmitted and from mother to fetus via transplacental infection. 	<ul style="list-style-type: none"> • Serologic test. • Enzyme-linked immunosorbent assay.

Sexually Transmitted Infections (STIs) – organisms which cause discharge			
Organism	Disease	Comment	Diagnosis
Neisseria gonorrhea A human pathogen transmitted sexually or during childbirth (causing ophthalmia neonatorum in infant).	Gonorrhea	<ul style="list-style-type: none"> • Women are usually asymptomatic. • Site of entry: vagina-urethral mucosa of penis-throat-rectal mucosa. • Causes dysuria & urethral discharge in men – vaginal discharge in females (risk of PID & infertility). • The discharge is: thick, yellowish-greenish, purulent and abundant. 	<ul style="list-style-type: none"> • Gram stain: gram negative intracellular diplococci. • Culture: chocolate blood agar. • Nucleic acid-based approaches.
Chlamydia trachomatis (obligate intracellular parasite: elementary body adapted for extracellular survival and reticulate body adapted for intracellular multiplication)	Serotypes D-K (non-gonococcal urethritis)	<ul style="list-style-type: none"> • Sexually transmitted or during childbirth (resulting in conjunctivitis or pneumonitis in infant) • Women usually asymptomatic. • Causes urethritis, epididymitis, proctitis in men and urethritis, cervicitis, salpingitis in women. • The discharge is: mucoid, scarce and usually present in the morning. 	<ul style="list-style-type: none"> • Culture. • Direct immunofluorescence. • Nucleic acid amplification test.
Mycoplasma (M.hominis – M.genitalium – Ureaplasma urealyticum)	Non-gonococcal urethritis	<ul style="list-style-type: none"> • Colonize the genital tracts of healthy sexually active men and women. 	<ul style="list-style-type: none"> • Culture: fried-egg appearance.
Trichomonas vaginalis (protozoan parasite)	Trichomoniasis	<ul style="list-style-type: none"> • Sexually transmitted, inhabiting vagina in women and urethra in men. • Frothy, profuse, foul-smelling vaginal discharge with bubbles. 	<ul style="list-style-type: none"> • Microscopic examination shows actively motile trophozoites. • Culture. • Nucleic acid detection.
Candida Albicans	Candidiasis	<ul style="list-style-type: none"> • Vaginitis with cottage-cheese vaginal discharge accompanied by urethritis and dysuria. 	<ul style="list-style-type: none"> • Microscope examination: clusters of thread-like branching monilia organisms. • Culture.

Other concerns			
Organism	Disease	Comment	Diagnosis
Anaerobes and Gardnerella vaginalis	Bacterial vaginosis	<ul style="list-style-type: none"> • Characterized by at least three of the following signs and symptoms: <ul style="list-style-type: none"> ✓ Excessive malodorous vaginal discharge. ✓ Vaginal pH > 4.5 ✓ Presence of clue cells. ✓ A fishy amine-like odour when adding potassium hydroxide. • The discharge is: milky or creamy. 	<ul style="list-style-type: none"> • Culture: human blood agar.
Human Papilloma Virus (HPV)	Genital warts and cervical cancer in females	<ul style="list-style-type: none"> • High-risk types for cervical cancer: 16,18 • Low-risk types: 6,11 	