

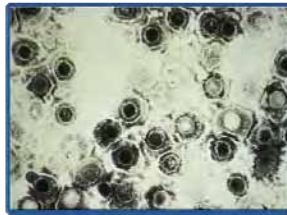
Genital Ulcer



Treponema pallidum



Hemophilus ducreyi



Herpes simplex virus

The Genital Ulcer Syndrome

- consists of ulcers, sores or vesicles in the genital area
- is frequently associated with unilateral or bilateral inguinal lymphadenopathy (also known as a bubo)

Appearance of the Genital Ulcers

- single or multiple
- vesicular or ulcerative
- superficial or deep
- painful or painless
- have a clean or “dirty” base which may bleed easily
- have smooth or ragged edges

Causes of Genital Ulcer Disease

The most common causes are :

- Primary or recurrent genital herpes
- Chancroid
- Primary syphilis
- Drug intake (fixed drug eruption), trauma and scabies

Other causes include :

- Donovanosis (granuloma inguinale)
- Lymphogranuloma venereum (LGV)

Common pathogens:

Herpes simplex virus, Hemophilus ducreyi and Treponema pallidum

Classical Presentation of Genital Herpes

- caused by the herpes simplex virus (HSV)
- incubation period 2-7 days
- multiple small painful vesicles or superficial erythematous erosions which may coalesce
- cannot be cured and lesions often recur
- the first episode is usually associated with bilateral tender inguinal lymphadenopathy
- treatment is palliative

Classical Presentation of Chancroid

- caused by *Hemophilus ducreyi*
- incubation period 3-10 days
- the lesions appear as papules that drain leaving “soft chancres”
- associated with unilateral, tender, fluctuant inguinal lymphadenopathy (*bubo*) which may suppurate

Characteristics of Chancroid Lesion

- multiple, often coalescing
- soft and painful (except when intra-vaginal or cervical)
- irregular or ragged edges
- “dirty” base (yellow/gray purulent necrotic material)
- bleeds easily on scraping

Classical Presentation of Primary Syphilis

- caused by *Treponema pallidum*
- incubation period about 3 weeks
- appears as a single papule which develops into a “hard chancre”
- associated with bilateral, firm, non-tender lymphadenopathy

Characteristics of the Syphilitic Chancre (Primary Syphilis)

- single
- firm and painless
- well-demarcated, regular, “rolled” borders
- base looks “clean” (red, smooth and non-purulent)

Stages of Syphilis

Early syphilis (less than 2 years after infection):

- Primary syphilis (about 3 weeks after infection)
- Secondary syphilis (2-4 months after infection)
- Early latent syphilis (2-24 months after infection)

Late syphilis (2 years and over after infection):

- Late latent syphilis (2 years after infection)
- Late/tertiary syphilis (10 years or more after infection in 25% of untreated patients)

Patients who have acquired syphilis are highly infectious for weeks or months and most transmission occurs during the first year

Secondary Syphilis

The most common clinical manifestations:

- maculopapular rash affecting the palms and the soles
- condyloma lata
- mucous patches in the mouth

Other manifestations include:

- generalized lymphadenopathy
- patchy alopecia (loss of hair)

Maculopapular Rash of Secondary Syphilis

- appears 3-6 weeks after the primary chancre
- starts as non-itchy fine pink macular eruption on the trunk and flexor surfaces of arms
- gradually becomes darker and papular and spreads to the entire body including palms and soles

Condyloma Lata of Secondary Syphilis

- flat, raised, wart-like lesions that arise from the papules of secondary syphilis in the warm moist areas such as: the vulva, anus, scrotum, axillae or beneath the breasts
- they should not be confused with genital warts (condyloma accuminata) which they resemble
- they are highly infectious

Natural Course of Primary and Secondary Syphilis

- The clinical manifestations of both primary and secondary syphilis will resolve spontaneously without treatment
- The only evidence of infection during the latent period will be a positive serologic test

Consequences of Untreated Syphilis

Left untreated, syphilis has serious consequences:

- late/tertiary syphilis: neurosyphilis and cardiovascular syphilis
- transmission to the fetus: stillbirth, premature delivery & congenital syphilis
- increased risk acquiring and transmitting HIV infection

Other Cause of Genital Ulcer Disease

Lymphogranuloma venereum (LGV):

- caused by *chlamydia trachomatis* (L1, L2, L3)
- incubation period 3 -12 days or longer
- Primary Stage: ulcer is rarely noticed
 - inconspicuous
 - painless
 - heals rapidly without leaving a scar
- Secondary stage:
 - 10-30 days and up to 6 months after the initial infection
 - associated with tender, inguinal adenopathy (bubo) which may suppurate

If Bubo without ulcer, please follow the Inguinal Swelling Syndrome

Diagnosis of Genital Ulcer Disease

Why clinical findings alone are not sufficient?

- mixed infections are common
- patients often delay seeking treatment until advanced stage
- secondary infections alter the appearance of the lesions
- systemic and topical antibiotics, corticosteroids and other applications
 - alter the appearance of the lesions
 - can mask incubating infection (treatment of chancroid may mask incubating syphilis)
- presentation is often atypical, particularly in the presence of HIV

Diagnosis of Genital Ulcer Disease

Laboratory Diagnosis

Syphilis

- False positive
- Late seronegativity (1-4 weeks)
- Needs confirmatory test (TPHA)

Chancroid

- Reliable test: expensive and not always available

Management of Associated Lymphadenopathy (bubo)

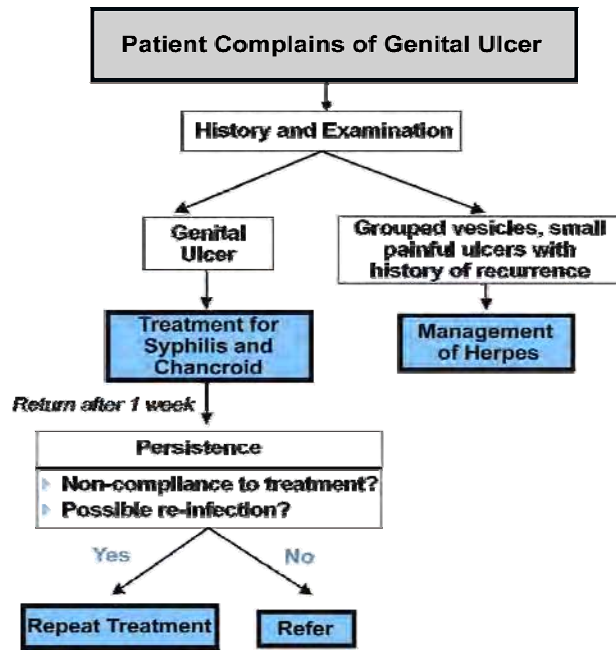
- if bubo becomes fluctuant, it may burst and create more complications
- a fluctuant bubo should always be managed by a trained practitioner
- it should never be excised but drained using a large bore sterile needle through healthy neighboring skin

Management of Genital Ulcer Syndrome

- **Since** it is not possible to make a conclusive clinical distinction between genital ulcers
- **Since** mixed infections are common
- **Since** syphilis and chancroid are the most common curable causes
- **Since** the treatment of chancroid alone may mask the manifestations and clinical course of incubating syphilis
- **Since** untreated primary and secondary syphilis resolve on their own leaving no physical sign of ongoing infection
- **Since** untreated syphilis has serious consequences

It is recommended: To treat all cases of genital ulcer disease for both syphilis and chancroid simultaneously at first visit

GENITAL ULCER



Treatment Regimen for Herpes

Management of Herpes:

- ▶ Patients should be reassured and warned that a recurrence of ulceration is possible
- ▶ Inform patients to refrain from sexual intercourse while lesions are present
- ▶ Advise patients to keep the lesions clean and dry; wash lesions with soap and water
- ▶ Start antiviral treatment within 48 hours of appearance of the lesions

Provide or prescribe specific antiviral herpes treatment:

- ▶ Acyclovir, 200 mg orally 5 times daily for 5 days
or
- ▶ Acyclovir, 400 mg orally, 3 times daily for 5 days
or
- ▶ Famciclovir, 125 mg orally, twice daily for 5 days
or
- ▶ Valaciclovir, 500mg orally, twice daily for 5 days

Note:

- ▶ For pregnant females, during the first clinical episode of genital herpes, treat with acyclovir.
- ▶ Vaginal deliveries in women who develop primary genital herpes shortly before delivery puts babies at risk for neonatal herpes. Babies born to women with recurrent disease are at very low risk. History taking and examination guide providers on recommending caesarean sections.

Treatment Regimen for Genital Ulcer

Recommended Treatment for Early Syphilis (primary, secondary and early latent):

- ▶ Benzathine Penicillin G 2.4 million units in a single IM dose

Alternative Treatment for Early Syphilis:

- ▶ Tetracycline 500 mg orally 4 times daily for 15 days
or
- ▶ Doxycycline 100 mg orally twice daily for 15 days
or
- ▶ Erythromycin 500 mg orally 4 times daily for 15 days
(for penicillin allergic pregnant women)

Note: Tetracycline and Doxycycline should not be used by pregnant/lactating women.

PLUS

Recommended treatment for Chancroid:

- ▶ Erythromycin 500 mg orally 4 times daily for 7 days
or
- ▶ Azithromycin 1g orally in a single dose

Alternative treatment for Chancroid:

- ▶ Ciprofloxacin 500 mg orally in a single dose
(not for pregnant and lactating women)
or
- ▶ Ceftriaxone 250 mg IM in a single dose

Single doses of treatment should be administered during the initial clinic visit.



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Case Study 5

A 34 years old prostitute complains of sores and burning when she urinates. She has washed her private parts with **antiseptic** and applied **antibiotic** ointment to the sores but the sores are getting bigger, more painful and there is a lot of pus now.

On examination she has several deep purulent painful sores on her labia and a right fluctuant inguinal node.

- a) What is your diagnosis?
- b) What is the appropriate management?

Case Study 6

A man in his mid-30s complains of small painful sores on the shaft of his penis. He says he hasn't had sexual contact with any woman other than his wife for the last 3 months.

You examine him and find numerous small superficial erosions. The man explains that he has had this problem before. It always starts with tingling and then painful little blisters full of water.

- a) What is your diagnosis?
- b) What is the appropriate management?



Institute for HIV/AIDS

Case Study 7

A 28 years old road construction worker tells you he must have contracted “sore” from one of the women he had contacted in the past month.

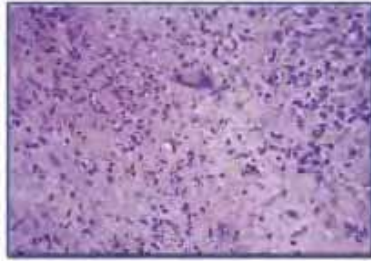
The capsules (**ampicillin**) he is taking aren't working this time, neither is the topical ointment he obtained from a “quack” doctor.

He is going back home next week and wants to be cured.

On examination you find multiple shallow ulcers with irregular borders. The ulcers are covered with a whitish paste. He has bilateral inguinal lymphadenopathy.

- a) What is your diagnosis?
- b) What is the appropriate management?

Inguinal Swelling (Bubo)



*Lymphogranuloma
venereum chlamydia*



Hemophilus ducreyi

The Inguinal Swelling Syndrome (Bubo)

- consists of the unilateral or bilateral enlargement of inguinal lymph nodes
- is associated with genital ulcer disease

Common pathogens:

Lymphogranuloma venerum, *chlamydia*, *Hemophilus ducreyi*

Differential Characteristics of Buboes Associated with Genital Ulcers or TB

- Lymphogranuloma venereum (LGV): unilateral, tender, fluctuant, can rupture
- Chancroid: unilateral, tender, fluctuant, can rupture
- Syphilis: bilateral, non-tender, firm
- Genital herpes: bilateral, tender, firm (first episode)
- Tuberculosis: bilateral, non-tender, firm, matted

Bubo of Chancroid versus LGV

- the primary genital lesion (ulcer) is usually absent or inconspicuous in LGV
- the characteristic “groove” sign (cleavage of swollen inguinal and femoral lymph nodes by inguinal ligament) is rare for chancroid but pathognomonic for LGV

Treatment Regimen for Inguinal Swelling (Bubo)

Treatment of Lymphogranuloma Venereum:

- ▶ Doxycycline 100 mg orally twice daily for 14 days
(not for pregnant and lactating woman)
- or
- ▶ Erythromycin 500 mg orally four times daily for 14 days

Alternative treatment for Lymphogranuloma Venereum:

- ▶ Tetracycline 500 mg orally four times daily for 14 days

PLUS

Surgical aspiration of fluctuant bubo:

- ▶ Aspirate the pus with a needle through the adjacent healthy skin
- ▶ Repeat aspiration after 2 to 3 days if necessary
- ▶ Never incise a bubo

Case Study 8

A 35 years old married man presents with painful swelling in his right groin which started five days ago and has gotten progressively worse.

He says he had contact with a sex worker but this was well over a month ago and he hadn't developed any discharge, burning or genital lesions.

On examination you note a right inguinal bubo. There is a depression along the inguinal ligament and the swelling looks like it is divided into two portions by the inguinal ligament. The genital examination is otherwise normal.

- a) What is your diagnosis?
- b) What is the appropriate management?

Case Study 9

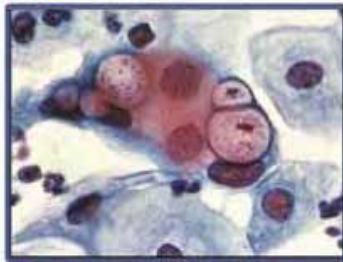
A 40 years old man comes to you with a painful swelling in his left groin which has been present for at least a week.

He was treated five days ago for painful sores on his penis. He was given some tablets to take for one week but stopped taking them after 3 days because they made him feel very nauseated. He does not know that the drug was but it was expensive. In any case, the sores had gotten much better while the swelling in his groin had gotten worse.

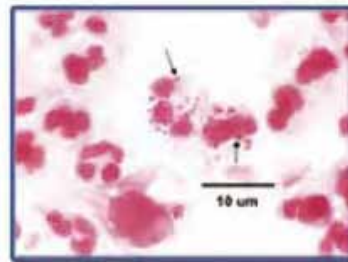
On examination you find a fluctuant left inguinal bubo which is about to rupture and suppurate, and a number of healing ulcers on his prepuce.

- a) What is your diagnosis?
- b) What is the appropriate management?

SCROTAL SWELLING AND PAIN



Chlamydia trachomatis



Neisseria gonorrhoea

The Syndrome of Scrotal Swelling

- involves inflammation of the testis and epididymis
- is most often unilateral
- may be associated with mild constitutional symptoms such as fever, myalgia and malaise
- often associated with urethral discharge or dysuria
- may represent a surgical emergency which must be ruled out in all cases (more common in youth)

Common pathogens: *Neisseria gonorrhoea*
 Chlamydia trachomatis

Causes of Scrotal Swelling

The differential diagnosis includes:

- epididymitis and orchitis due to infectious organisms
- torsion of the testis (surgical emergency)

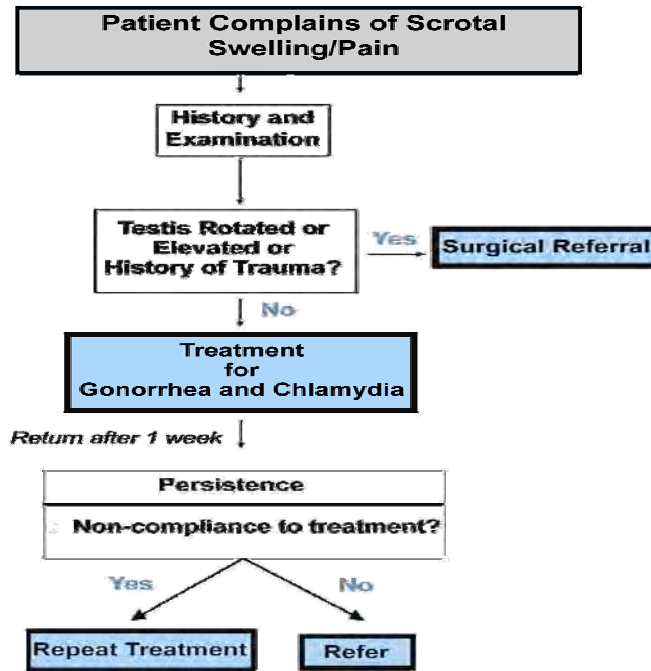
Infectious Causes of Scrotal Swelling:

- sexually transmitted organisms such as *N. gonorrhoea*, *C. trachomatis* or both (more common in men under 35)
- enteric bacteria which cause urinary tract infections (more common in men over 35)
- chronic infections such as tuberculosis and filariasis (often bilateral involvement)

History and Examination for Scrotal Swelling and Pain Syndrome

- To confirm the presence of swelling and pain in the testis
- To exclude rotation or torsion or trauma to the testis
- To exclude inguinal hernia
- To confirm presence of urethral discharge
- To detect other STIs

SCROTAL SWELLING AND PAIN



Treatment Regimen for Scrotal Swelling and Pain

Recommended Treatment for Gonorrhea:

- ▶ Ceftriaxone 250 mg IM in a single dose.

Alternative Treatment for Gonorrhea:

- ▶ Ciprofloxacin 500 mg orally in a single dose
- or
- ▶ Spectinomycin 2 g IM in a single dose

PLUS

Recommended treatment for Chlamydia:

- ▶ Azithromycin 1g orally in a single dose
- or
- ▶ Doxycycline 100 mg orally twice daily for 7 days

Alternative treatment for Chlamydia:

- ▶ Tetracycline 500 mg orally four times daily for 7 days
- or
- ▶ Erythromycin 500 mg orally four times daily for 7 days

Single doses of treatment should be administered during the initial clinic visit.

Case Study 10

Several days after he had sex with an unknown woman, a 28 years old man started to have slight burning when he passes urine.

He took two capsules of antibiotic from a pharmacy and the symptoms improved but did not resolve completely. After 10 days he started to experience pain and swelling in his right testicle along with mild fever, body ache and malaise. Today he comes to consult you.

- a) What is your diagnosis?
- b) What is the appropriate management?

Case Study 11

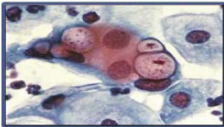
A 35 years old single driver complains of swelling and tenderness in his right testicle which got much worse during his long drive last night. He admits that he has suffered from gonorrhoea in the past but denies any burning or discharge since his last episode 4 months before. He denies taking medication and trauma.

- a) What is your diagnosis?
- b) What is the appropriate management?

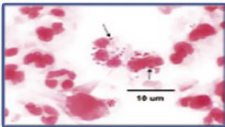
The patient returns after 7 days and his symptoms have not improved. He has completed the full course of antibiotics you prescribed, has taken a week off work and has abstained from sexual intercourse.

- c) What is the appropriate management?

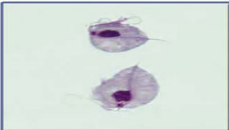
VAGINAL DISCHARGE



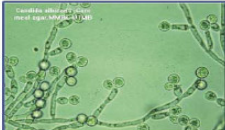
Chlamydia trachomatis



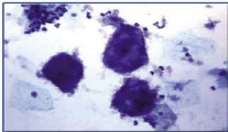
Neisseria gonorrhoea



Trichomonas vaginalis



Candida albicans



Bacterial vaginosis

Vaginal Discharge Syndrome

- is one of the most common gynecological complaints
- is frequently associated with vaginal irritation, itching and soreness
- is suggestive of pelvic inflammatory disease (PID) when associated with lower abdominal pain

Vaginal Discharge May Be Physiological

- A variable amount of clear or white vaginal discharge consisting of normal cervical secretions and vaginal fluids is normal
- On microscopy: epithelial cells and normal flora (lactobacilli predominate)
- An increase in the amount is common:
 - during the mid-cycle
 - oral contraceptive pills (OCP)
 - intrauterine device (IUD)

Vaginal Discharge May Be Pathological

Reproductive tract infection should be suspected

- when there is a change in the quantity, consistency, color or smell of the discharge
- when there is one or more of the following signs or symptoms
 - irritation & itching in the genital area
 - external or internal burning when passing urine
 - intermenstrual bleeding
 - pain on intercourse (dyspareunia)
 - lower abdominal pain suggestive of pelvic inflammatory disease (PID)

Causes of Pathological Vaginal Discharge

- Vaginitis: candidiasis, trichomoniasis and bacterial vaginosis
- Cervicitis: gonorrhoea and chlamydia

Candidiasis and Bacterial vaginosis are not STIs

Common pathogens: *Candida albicans*
Trichomonas vaginalis
Non specific pathogens
Neisseria gonorrhoea
Chlamydia trachomatis

Characteristics of Vaginal Discharge in Case of Infections

- Profuse, watery, frothy, yellow or green discharge is suggestive of trichomoniasis
- Moderate, white, thick or curd-like discharge is suggestive of candidiasis
- Scant, white, adherent, homogenous, malodorous discharge is suggestive of bacterial vaginosis (*Gardenella vaginalis*, *Mycoplasma hominis* and anaerobic bacteria)

Speculum Examination

- To confirm the origin of the discharge:
from the vagina, the endocervix, or both
- To confirm if the discharge is vaginal:
white curd-like (Candidiasis)
- To confirm if the discharge is cervical:
cervical mucopus and friability of the cervix
- To make sure the patient does not have other STIs
- To screen for other abnormalities:
cervical dysplasia and carcinoma (PAP smear)

STIs Risk Assessment

- A positive risk assessment increases the probability that the patient has a cervical infection that should be treated
- An STIs risk assessment is considered positive if:

the patient or her partner has an STI or high-risk behavior

Cervicitis is diagnosed by any of the following:

- Cervical mucopus
- Friability of the cervix
- Positive STIs risk assessment

Gonococcal Versus Chlamydial Cervicitis

In the absence of Advanced laboratory tests, it is not possible to make a reliable distinction between gonococcal and chlamydial cervicitis

- the signs and symptoms of gonococcal and chlamydial cervicitis overlap
- coexisting gonococcal and chlamydial infections are common

Role of Laboratory in Vaginal Discharge Syndrome

Wet mount/gram stain to diagnose vaginitis

- Trichomoniasis: mobile trichomonads
- Candidiasis: budding yeasts or pseudohyphae
- Bacterial vaginosis:
 - Clue cells
 - plus pH > 4.5 or KOH positive

Complications of Gonococcal and Chlamydial Cervicitis

Left untreated chlamydial and gonococcal cervicitis can lead to serious consequences :

- pelvic inflammatory disease (PID)
- infertility
- ectopic pregnancy
- acquisition and transmission of HIV infection
- neonatal infections (ophthalmia neonatorum, pneumonitis)

Management of the Vaginal Discharge Syndrome

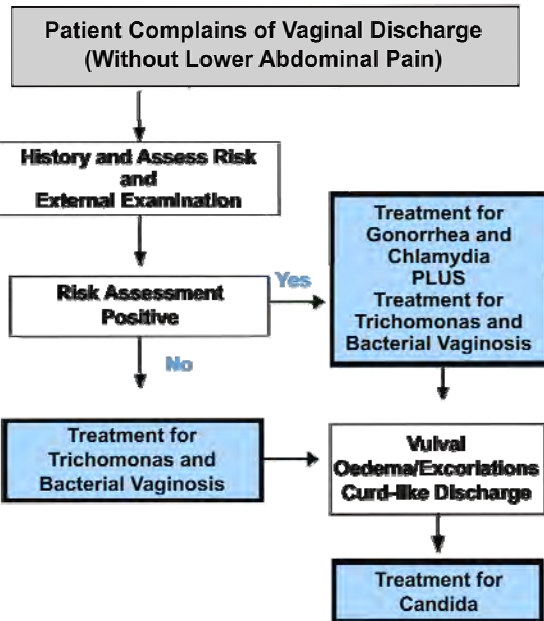
- **Since** cervical infections are frequently asymptomatic
- **Since** it is not possible to distinguish clinically between gonococcal and chlamydial cervicitis
- **Since** mixed gonococcal and chlamydial infections are common
- **Since** a significant proportion of women with cervicitis will develop complications

It is recommended:

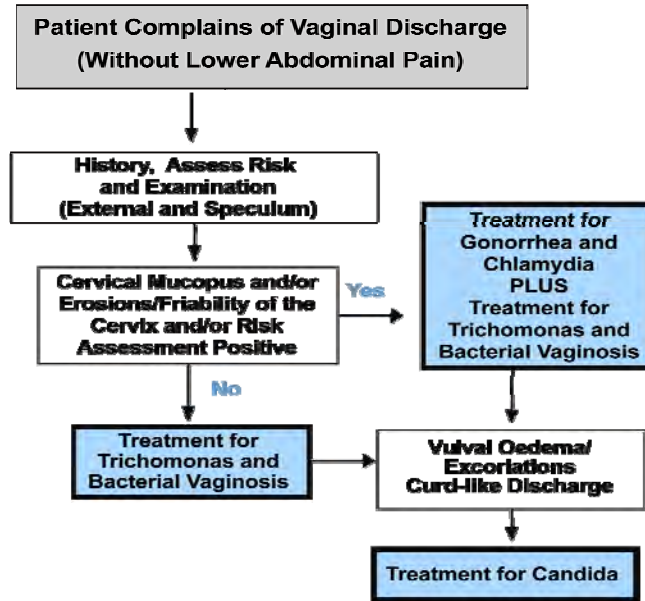
All women with a vaginal discharge should be treated for cervicitis (both gonococcal and chlamydial infections):

- After speculum examination or/and
- A positive STIs Risk Assessment

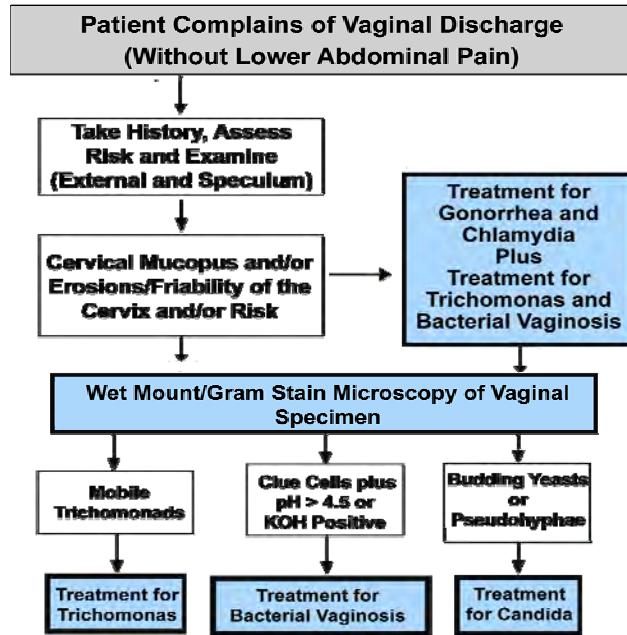
VAGINAL DISCHARGE (Without Speculum)



VAGINAL DISCHARGE (With Speculum)



VAGINAL DISCHARGE (With Speculum and Microscope)



Treatment Regimen for Vaginal Discharge (Vaginitis)

Recommended Treatment for Trichomoniasis and Bacterial Vaginosis:

- ▶ Metronidazole 2g orally in a single dose
(not during the first trimester of pregnancy)

Alternative Treatment for Trichomoniasis and Bacterial Vaginosis:

- ▶ Metronidazole 500 mg orally twice daily for 7 days
(not in the first trimester of pregnancy)

Note: Patients receiving metronidazole should be cautioned to avoid alcohol.

PLUS

Recommended treatment for Vaginal Candidiasis:

- ▶ Clotrimazole 500 mg inserted into the vagina once only
or
- ▶ Clotrimazole 200 mg inserted into the vagina once daily for 3 days
or
- ▶ Miconazole 200 mg inserted into the vagina once daily for 3 days
or
- ▶ Nystatin 100,000 units (one pessary), inserted into vagina once daily for 14 days

Single doses of treatment should be administered during the initial clinic visit.

Treatment Regimen for Vaginal Discharge (Cervicitis)

Recommended Treatment for Gonococcal Cervicitis:

- ▶ Ceftriaxone 250 mg IM in a single dose

Alternative Treatment for Gonococcal Cervicitis:

- ▶ Ciprofloxacin 500 mg orally in a single dose
(not for pregnant / lactating women)
- or
- ▶ Spectinomycin 2g IM in a single dose

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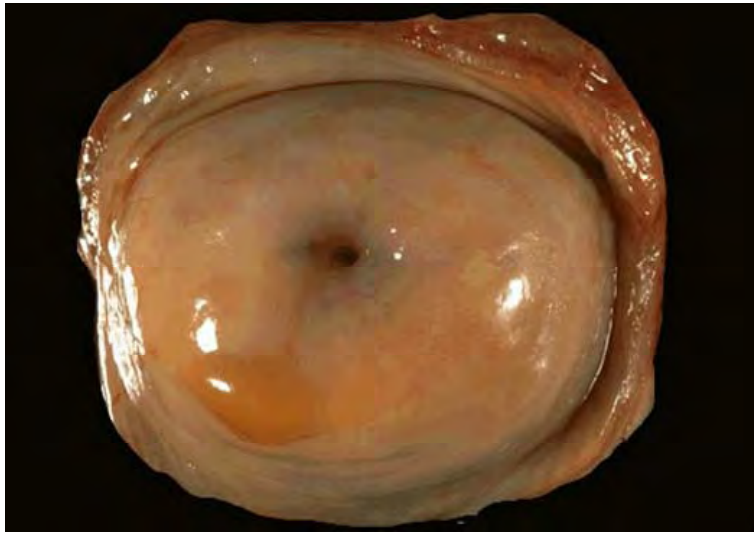
Recommended treatment for Chlamydial Cervicitis:

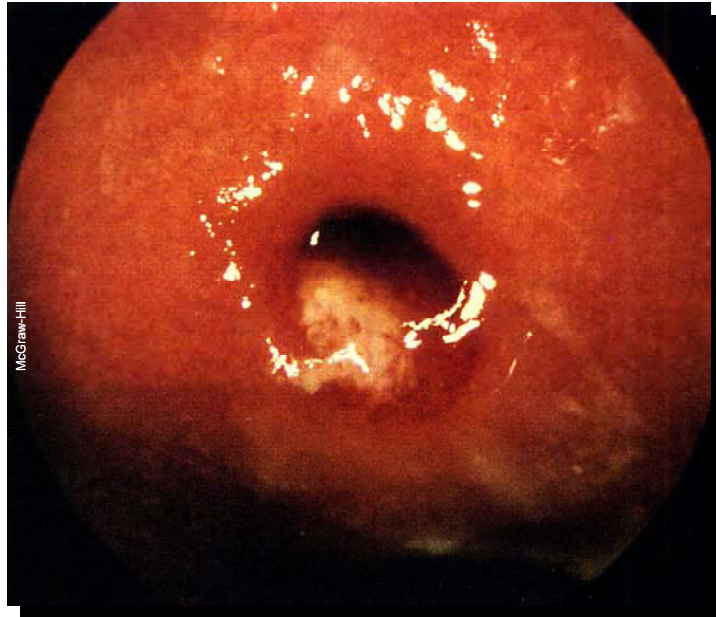
- ▶ Azithromycin 1 g orally in a single dose
- or
- ▶ Doxycycline 100 mg orally twice daily for 7 days
(not for pregnant / lactating women)

Note: Preliminary data indicates that Azithromycin is safe for pregnant woman (Pregnancy Category B).

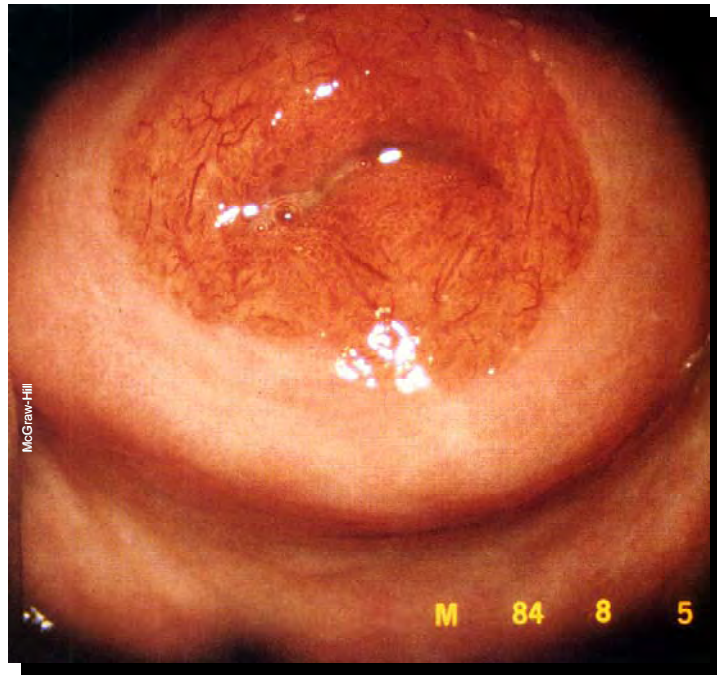
Alternative treatment for Chlamydial Cervicitis:

- ▶ Tetracycline 500 mg orally four times daily for 7 days
(not for pregnant/ lactating women)
- or
- ▶ Erythromycin 500 mg orally 4 times daily for 7 days



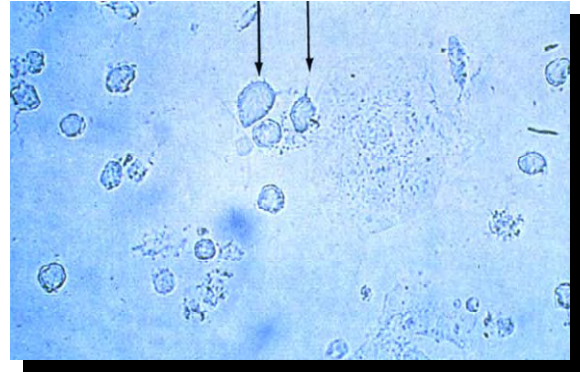


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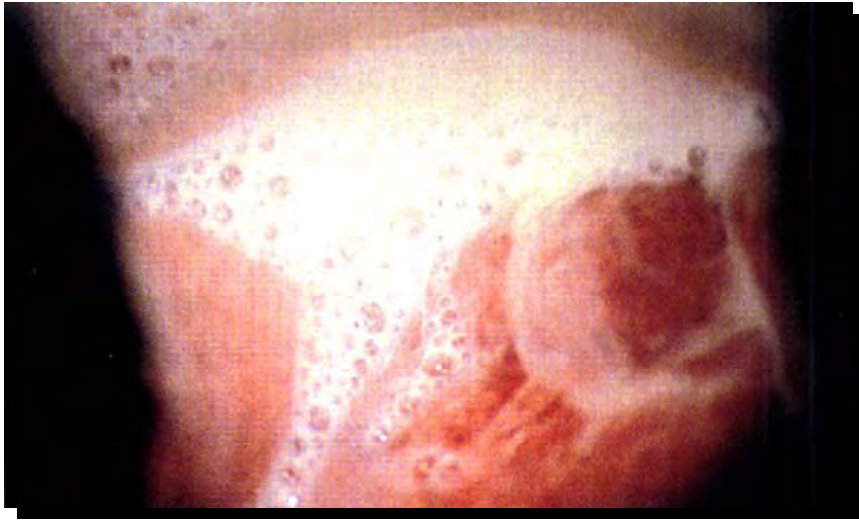


Trichomoniasis

Saline wet mount of vaginal secretions in trichomonal vaginitis, showing two *T. vaginalis* (arrows), leukocytes and a normal vaginal epithelial cell



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Case Study 12

A 24 years old woman complains of burning, itching and white vaginal discharge. She says it started about 10 days ago and is foul smelling. Her husband has also complained of the smell.

On examination you find white, curd-like, malodorous discharge. Her risk assessment is negative as best as you can tell. There is minimal vulvo-vaginal irritation and no evidence of cervicitis on speculum examination. Pelvic examination is normal.

- a) What is your diagnosis?
- b) What is the appropriate management?

Case Study 13

A 20 years old woman complains of burning, itching and vaginal discharge of about one week in duration. Her husband is a migrant worker who returned almost 2 weeks ago. He denies any sexual contacts or discharge. She adds that intercourse has become painful.

On examination the vulva is irritated. There is a profuse, watery, frothy, yellow discharge. The endocervix looks inflamed and bleeds easily on contact. she is not pregnant or breastfeeding.

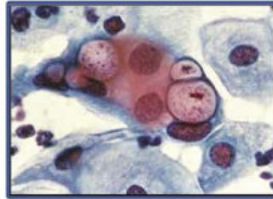
- a) What is your diagnosis?
- b) What is the appropriate management

Case Study 14

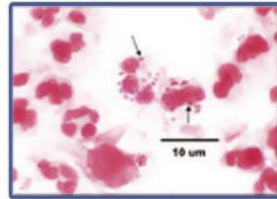
A 23 years old woman has had a vaginal discharge and itching. It has been there for two weeks and is getting worse. She does not know if her partner has a discharge or not because she has not seen him for two weeks. She refuses to have a genital examination. She is not pregnant or breastfeeding.

- a) What is the most likely diagnosis?
- b) What is the appropriate management?

LOWER ABDOMINAL PAIN IN WOMEN



Chlamydia trachomatis



Neisseria gonorrhoea

The Syndrome of Lower Abdominal Pain in Women

- The primary complaint is lower abdominal or pelvic pain, usually bilateral and of recent onset
- The presence of Pelvic Inflammatory Disease (PID) should be evaluated (salpingitis, endometritis)
- Other complaints may include painful intercourse, irregular bleeding and an abnormal vaginal discharge
- Systemic signs such as fever may be present

Common pathogens: *Neisseria gonorrhoea*
Chlamydia trachomatis
Anaerobic pathogens

Differential Diagnosis of Lower Abdominal Pain in Women

The differential diagnosis includes :

- Pelvic Inflammatory Disease (PID)
- Surgical emergencies such as acute appendicitis, peritonitis, abdominal abscess and ectopic pregnancy
- Other medical conditions

Etiology of Pelvic Inflammatory Disease

- PID implicates a wide spectrum of bacteria including STI agents and endogenous flora of the lower genital tract :
 - *Neisseria gonorrhoea*
 - *Chlamydia trachomatis*
 - *Anaerobic bacteria*
 - *Gram negative rods*
 - *Streptococci*
- Therapy for PID must therefore provide broad spectrum coverage of likely pathogens.

Clinical Criteria for Treatment of Pelvic Inflammatory Disease

Treatment for PID is indicated when a woman with lower abdominal pain has any one of the following physical findings:

- cervical motion tenderness, *or*
- abnormal vaginal / cervical discharge and lower abdominal tenderness

Intrauterine Device (IUD):

If the patient has an intrauterine device (IUD) in place, there is no evidence that removing it will benefit

Clinical Examination for Lower Abdominal Pain

- To confirm:
- elevated temperature (indicates infection)
 - abnormal vaginal discharge
 - pain during examination

To make sure that there are no other STIs

- Palpation:
- Tenderness: Superficial palpation
 - Rebound Tenderness: Deep palpation
 - Guarding: Rigid abdominal muscles

- Bimanual Examination:
- Swelling
 - Lower abdominal tenderness
 - Cervical mobilization

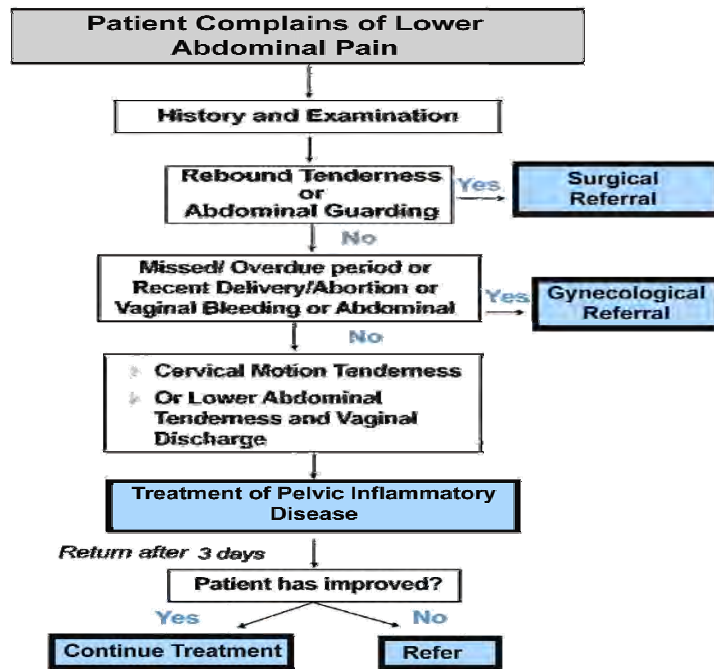
Surgical and Gynecological Referral

- Surgical Referral
 - Rebound Tenderness
 - Abdominal guarding
- Gynecological Referral
 - Missed overdue period
 - Recent delivery
 - Abortion
 - Vaginal bleeding
 - Abdominal mass

Hospitalization Should be Considered

- The diagnosis is uncertain
- Surgical emergencies: appendicitis, ectopic pregnancy
- Suspected pelvic abscess
- Pregnancy
- Failure of outpatient therapy

LOWER ABDOMINAL PAIN IN WOMEN



Treatment Regimen for Pelvic Inflammatory Disease

First Regimen:

- Ceftriaxone 250 mg IM in a single dose **Plus**
- Doxycycline 100 mg orally twice daily or Tetracycline 500 mg orally 4 times daily for 14 days (not for pregnant/lactating women) **Plus**
- Metronidazole 500 mg orally or IV twice daily for 14 days (not during the first trimester of pregnancy).

Second Regimen:

- Clindamycin 900 mg IV every 8 hours
or
- Gentamycin 1.5 mg/kg IV every 8 hours.

Treat for at least 48 hours then evaluate the condition. Consider possibly shifting to another oral regimen.

Third Regimen:

- Ciprofloxacin 500 mg orally in a single dose **Plus**
- Doxycycline 100 mg orally twice daily or Tetracycline 500 mg orally 4 times daily for 14 days (not for pregnant/lactating women) **Plus**
- Metronidazole 500 mg orally or by intravenous (IV) injection, twice daily for 14 days (not during the first trimester of pregnancy)

Note: No pain killers should be used since they may mask serious complications.
Patients receiving Metronidazole should be cautioned to avoid alcohol.

Case Study 15

A 25 years old married woman complains of a dull pain in her lower abdomen that she has been experiencing for the last 3 days. She also complains of increased vaginal discharge which she noticed one week after her husband returned from Bangkok about four weeks ago.

Her last menstrual period was 9 days ago and she uses an IUD. She denies any irregular bleeding. Her abdominal examination is difficult because she is embarrassed but there is no evidence of peritonitis.

On speculum examination you note a purulent discharge from the endocervical os, and cervical motion tenderness on bimanual examination.

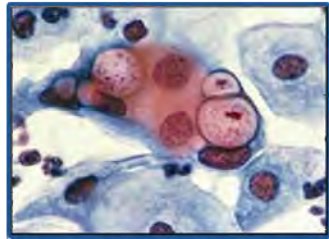
- a) What is your diagnosis?
- b) What is the appropriate management?

Case Study 16

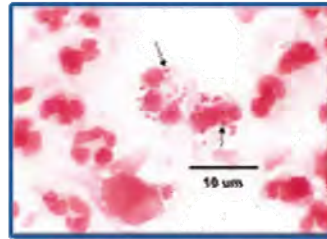
A 30 years old woman complains of pain in her lower abdomen for 10 days. Her husband is a frequent traveler and comes home to her every two weeks. He was home last night and intercourse was very painful for her. The last time she had intercourse with her husband before last night was four weeks ago. She denies any fever or vaginal discharge. She is not using any form of family planning. She refuses to be examined by you.

- a) What is your diagnosis?
- b) What is the appropriate management?

NEONATAL CONJUNCTIVITIS



Chlamydia trachomatis



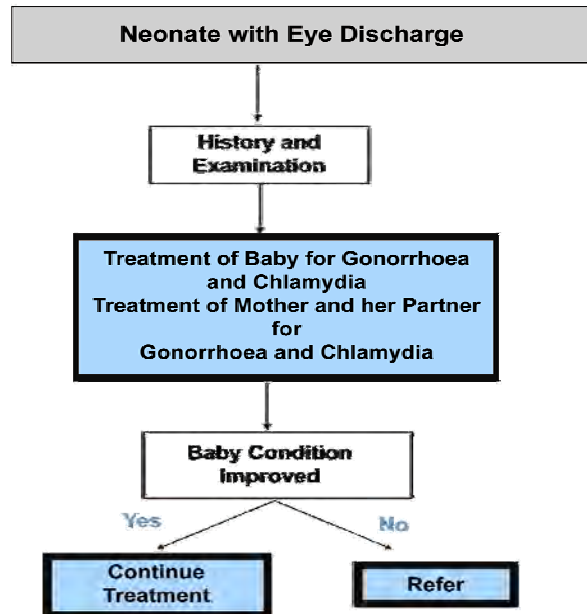
Neisseria gonorrhoea

Syndrome of Neonatal Conjunctivitis

- presence of purulent conjunctival discharge
- one or both eyes may be involved
- baby's eyes are usually closed
- eyelids are usually swollen
- when eyelids are separated or pressed, pus pours out

Common pathogens: *Neisseria gonorrhoea*
Chlamydia trachomatis

NEONATAL CONJUNCTIVITIS



Treatment Regimen for Neonatal Conjunctivitis
Recommended Treatment of Baby for Gonococcal Ophthalmia: ▶ Ceftriaxone 50 mg/kg (maximum 125 mg) IM in a single dose
Alternative Treatment of Baby for Gonococcal Ophthalmia: ▶ Kanamycin 25 mg/kg (maximum 75 mg) IM in a single dose or ▶ Spectinomycin 25 mg/kg (maximum 75 mg) IM in a single dose
PLUS
Recommended treatment of Baby for Chlamydial Conjunctivitis: ▶ Erythromycin syrup 50 mg/kg/day orally 4 times daily for 14 days
Alternative treatment of Baby for Chlamydial Conjunctivitis: ▶ Cotrimoxazole syrup 1 teaspoon orally twice daily for 14 days
PLUS
Cleaning of baby's eyes: ▶ Clean baby's eyes with saline or clean water, using a clean swab for each eye ▶ Clean from inside to the outside edge of each eye ▶ Wash your hand carefully afterwards.
<i>Single doses of treatment should be administered during the initial clinic visit.</i>

Mother and partner(s) must receive treatment even if asymptomatic



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Other STIs

Condyloma Accuminata (Anal and Genital Warts)

- caused by the human papilloma virus (HPV)
- are nearly always transmitted by sexual contact
- Incubation period: 1- 6 months
- soft fleshy growths with cauliflower appearance
- recurrences after removal is common
- women with genital warts should have an annual PAP smear (cervical cancer)
- can be confused with condyloma lata, granulating lesions of donovanosis or carcinoma



Treatment of Condyloma Accuminata

- Podophyllin resin (10-25% in Tincture of Benzoin):
 - Apply once or twice weekly until resolved.
 - Should be washed off 2 hours after the first application.
 - Contraindicated in pregnancy
- Electro-cauterization
- Cryotherapy with liquid nitrogen
- Surgical removal
- Laser surgery

Molluscum Contagiosum

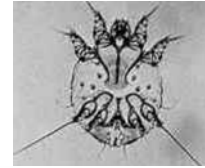
- It is caused by a pox virus
- Pearly white umbilicated papules (2-5 mm) that appears in the genital area
- If transmission is non-sexual, they may also be found in any part of the body



Treatment of Molluscum Contagiosum

- Curettage (often followed by iodine)
- Unroof lesions with a needle and express the central materials
- Electro-cauterization
- Cryotherapy

Scabies



- Infestation is caused by the mite *Sarcoptes scabiei*
- The clinical features are caused by the female burrowing into the upper most layer of the skin and laying eggs and defecating
- Usually occurs as a result of close physical, but not necessarily sexual contact
- The patient usually complains of itching, which is often unbearable and arises at night when the body is warm
- Lesions may often be found in the cleft of the fingers and on the wrists and elbows as well as on genitals.

Treatment of Scabies

- Permethrin 5% lotion, emulsion, cream
- Lindane 1% cream (Not for pregnant or lactating women nor for children less than 2 years – not after bath)
- Sulfur (5% children 10% adult) precipitated in ointment
- Ivermectin (1 tab/30 kg) single oral dose or topical solution
- Change and launder clothes and bed linens

Pediculosis pubis

- Infection is caused by the pubic louse: *Phthirus pubis*
- The insect is small and round (1-2 mm) and has three sets of legs. It is a blood sucker. The adult adheres not only to pubic hair but also to other hairy areas of the body. The female lays eggs (nits) at the base of the hair and these usually hatch within 7 days
- The adult louse is transferred from person to person during close bodily contact
- The patient may complain of itching and irritation



Treatment of Pediculosis Pubis

- Permethrin 5% lotion, emulsion and cream
- Malathion 0.5%
- Lindane 1% cream (Not for pregnant or lactating women nor for children less than 2 years - not after bath)
- Occlusive ophthalmic ointment to eyelids margins twice a day for 10 days
- Change and launder clothes and bed linens.

STIs Data

Elements of STIs Surveillance

- **Passive Data Collection**

- Case notification
- Routine screening
- Laboratory reporting

- **Specific Surveys/Studies**

- Prevalence
- Drug sensitivity
- Algorithm validation
- Syndrome etiology
- Biological and Behavioral Surveillance Survey (BSS)
- Treatment seeking behavior
- Others



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Record Keeping and Reporting

- Important questions?
 - Is it possible to monitor trends in the frequency of STIs syndromes or their incidence in the population?
 - How can the data be used locally?
 - What data might be useful to collect?
 - Who collects the data and when?
 - Who performs electronic data entry?
 - Where are the data stored?

What data to be collected?

Goal: *“to monitor the frequency of the patients treated for each STI syndrome”*

- Simple data
- Use of simple sheet or sheets for recording data
- Information on the numbers of people treated for specific syndrome
- Other Information include: gender, age, occupation, marital status, sexual behavior...

Data Management

- Regular standard collection of data
- Files should be stored in secure place
- The data should be interpreted
- Results should be available to staff at the center and also sent to the national level

How can we interpret the findings of recordings?

- The frequency and incidence of STIs syndromes
- We cannot use it to deduce the prevalence
- Usually used to refer to a proportion of the entire population of the country

The frequency: the number of infections over a given time period

The incidence: the frequency of new infections, expressed as a proportion of the population at risk

The prevalence: the proportion of a defined population with the infection at a given point or period of time

Recording the Number of STIs Patients Can Help

- Identify trends in the frequency and incidence of STIs
- Better planning for human and materials resources
- Identify ways to promote service

*“Recording alone cannot explain the reasons for trends
without epidemiological research: Biological and
Behavior Surveillance Survey (BSS)”*

Data Collection Instruments

- STIs Logbook
- STIs Client Intake Form
- Inventory Form
- Request for Referral
- Monthly report

Appendix-A:

Sample of Workshop Agenda
(Training Schedule)

Day - 1

Time	Topic	Resource person
09:00-10:30 am 10:30-11:30 am	Introduction Review of the workshop Agenda Ground rules for the workshop Pre-test The STIs Situation	
11:30-12:00 pm	Tea-Break	
12:00- 12:45 pm 12:45-1:30 pm 1:30-2:30 pm	Facts about STIs RTIs/STIs/HIV Steps of the Comprehensive Management of STIs	
2:30-3:00 pm	Discussions followed by Lunch	

Day - 2

Time	Topic	Resource person
09:00-9:45 am	Communication Skills	
9:45-10:45 am	Health Education Messages: <i>the 4 Cs</i>	
10:45-11:30 am	Approaches for STIs Case Management	
11:30-12:00 pm	Tea-Break	
12:00 -1:15pm	Urethral Discharge in Men	
1:15 - 2:30 pm	Genital Ulcer	
2:30-3:00 pm	Discussions followed by Lunch	

Day - 3

Time	Topic	Resource person
09:00-9:45 am	Inguinal Swelling (Bubo)	
09:45-10.30 am	Scrotal Swelling and Pain	
10:30-11:30 am	Vaginal Discharge	
11:30-12:00 pm	Tea-Break	
12:00-01:00 pm	Lower Abdominal Pain in Women	
1:00-1:20 pm	Neonatal Conjunctivitis	
1:20 -1:45 pm	Other STIs	
1:45-2:30 pm	STIs Data	
2:30-3:00 pm	Discussions followed by Lunch	

Day - 4

Time	Topic	Resource person
09:00-10:00 am	Introduction to practical sessions Clinical Training	
10:00-11:30 am	Clinical Training	
11:30-12:00 pm	Tea-Break	
12:00-2:30 pm	Clinical Training	
2:30-3:00 pm	Feedback followed by lunch	

Day - 5

Time	Topic	Resource person
09:00-11:30 am	Clinical Training	
11:30-12:00 pm	Tea-Break	
12:00-2:00 pm	Clinical Training	
2:00-2:30 pm	Feedback	
02:30-3:00 pm	Post-test Course evaluation Closing followed by lunch	

Appendix -B:

Sample 1 of Pre and Post-Test Questionnaires

Write True (T) or false (F)

1. STI patients are more likely to become infected when exposed to HIV virus, but are less likely to transmit HIV if they are infected.
2. Early and effective STIs treatment prevents future transmission of STIs but not HIV.
3. Non ulcerating STIs facilitate HIV transmission.
4. Recent studies showed that tetracycline is the most effective antibiotic for N. gonorrhoea.
5. Ciprofloxacin should not be given to pregnant women.
6. Tetracycline can be given to lactating and not pregnant women.
7. The syndromic approach for STI case management reduces probability of incorrect clinical diagnosis.
8. Both gonorrhoea and chlamydia should be always suspected in a woman with cervical discharge.
9. A man complaining of urethral discharge is advised to be treated with ciprofloxacin.
10. Mixed gonococcal and chlamydial infections are common.
11. It is possible to make a conclusive distinction clinically between gonococcal and chlamydial urethritis on clinical grounds.
12. Multiple small painful vesicles on genitalia is the classical appearance of genital herpes.
13. Multiple painful ulcers are specific for chancroid.
14. Syphilitic chancre and chancroid can co-exist.
15. Lymphogranuloma venereum is likely to be diagnosed in case of inguinal lymphadenopathy associated with an ulcer.
16. Chancroid is likely to be diagnosed in case of inguinal lymphadenopathy not associated with an ulcer.

17. An asymptomatic partner of a case of genital ulcer should receive treatment.
18. An asymptomatic partner of a case of urethral discharge should receive treatment.
19. A woman came to you complaining of vaginal discharge, on speculum examination there was vaginal but not cervical discharge. She stated that her partner was recently treated from an STI . Should you give her a treatment for vaginitis and cervicitis.
20. Friability of the cervix is quiet enough to diagnose cervicitis.
21. Cervical mobilization tenderness is a sign of cervicitis.
22. You would treat a woman with lower abdominal pain who had given you a history of recent abortion.
23. Gynecological referral is advised, in case of abdominal guarding detected on palpation.
24. A fluctuant bubo should be excised.
25. Frothy discharge is specific for trichomoniasis while curd like discharge is specific for candidiasis.
26. From the health center, you could work out the prevalence of a specific STI.
27. A female partner of a case of scrotal swelling should be treated for gonorrhoea only.
28. A married patient having steady sexual relation with one female sex worker, come to you suffering from urethral discharge. You shall treat him as well as his wife only.
29. The mother of a baby suffering from neonatal conjunctivitis should be treated too.
30. It is a good practice to withhold treatment from an STI patient until the diagnosis is confirmed by laboratory tests.
31. Most of the STIs patients you treat will start to use condoms just because you said so.

32. Oil-based lubricants should be used with latex condoms to prevent irritation and breakage.
33. Health workers must avoid discussing sexual matters. It is useless to try to change the behavior of your patient.

Answers of sample 1 of Pre-and Post -Test:

True: 3, 5, 7, 8, 10, 12, 14, 17, 18, 19, 20, 23, 25, 29

Sample 2 of Pre and Post-Test Questionnaires

Write True (T) or false (F)

1. The following condition is an STI:
 - a- Chlamydial Cervicitis
 - b- Vaginal Trichomoniasis
 - c- Bacterial Vaginosis
2. Gram stain microscopy is recommended to diagnose:
 - a- Gonorrhea in women
 - b- Chlamydial uretheritis in men
 - c- Chlamydial infection in women
 - d- Vaginal infection in women
 - e- Cervical infection in women
3. Chlamydia is excluded in men if urethral discharge is muco-purulent
4. Gonorrhea is excluded in men if urethral discharge is scanty and clear
5. Painful multiple ulcerations on genitalia might occur in the following conditions:
 - a- Herpes
 - b- Syphilis
 - c- Chancroid
6. In presence of syphilitic ulcer, negative serologic test is possible
7. Asymptomatic partner of an STI patient should be treated

8. Most of STI female patients are asymptomatic
9. The following drug should not be given to lactating mothers:
- a- Ciprofloxacin
 - b- Azithromycin
 - c- Metronidazole
10. Skin allergy testing should be performed prior to penicillin injections without special precautions
11. A fluctuant bubo may be caused by:
- a- Syphilis
 - b- Chancroid
 - c- Lymphogranuloma venerum
12. Pathogens causing vaginitis include:
- a- Chlamydia
 - b- Trichomonas
 - c- Gonorrhoea

Answers of sample 2 of Pre-and Post -Test:

True: 1a, 1b, 2d, 5a, 5b, 5c, 6, 7, 8, 9a, 11b, 11c, 12b

12. Inguinal Swelling (Bubo)	1	2	3	4	5
13. Scrotal Swelling	1	2	3	4	5
14. Vaginal Discharge	1	2	3	4	5
15. Lower Abdominal Pain in Women	1	2	3	4	5
16. Neonatal Conjunctivitis	1	2	3	4	5
17. Other STIs	1	2	3	4	5
18. Data Management	1	2	3	4	5
19. Clinical Slides	1	2	3	4	5
20. Case Studies	1	2	3	4	5

21. What did you like least about the workshop?

22. What did you like most about the workshop?

23. Suggestions: how could the workshop be improved?

Appendix-D:

Data Collection Instruments

1. STIs Logbook
2. STIs Client Intake Form
3. Inventory Form
4. Request for Referral
5. Monthly report

STIs LOGBOOK

	Column heading	Possible answers
	Date	Start new page by date every new working day
	Client code	
	District/Governorate	
	Gender	1 = male, 2 = female
	Age	1 = <16 years 2 = 16-24 years 3 = 25-35 years 4 = >35 years
	Complaint	
	Visit type	1= First Visit 2= Follow up Visit 3= Return visit 4= Partner referral
	Examination performed	1 = yes, 2 = no
	Treatment prescribed	1 = yes, 2 = no
	Condoms given	1 = yes, with demo 2 = yes, without demo 3 = not given 4 = refused 5 = condoms not available
	IEC materials given	1 = yes, 2 = no
	Counseling completed	1 = yes, 2 = no
	Referral	1 = yes, to VCT 2 = yes, to other services 3 = no

STIs CLIENT INTAKE FORM

Client Code

Page 2

Female:

History 1 Yes 2 No

Risk assessment 1 Pos 2 Neg

Examination

Without Speculum 1 Yes 2 No

With Speculum 1 Yes 2 No

With Speculum and Microscope:

Wet mount 1 Yes 2 No

Gram stain 1 Yes 2 No

Findings (Tick all that apply)

Curd like discharge 1 Yes 2 No

Cervical mucopus 1 Yes 2 No

Friable cervix 1 Yes 2 No

Ph > 4.5 1 Yes 2 No

KOH positive 1 Yes 2 No

Clue cells 1 Yes 2 No

Trichomonads 1 Yes 2 No

Budding yeasts 1 Yes 2 No

Cervical motion tenderness

1 Pos 2 Neg

Others findings

Condoms given? (Tick one):

- 1 Yes, with demo
- 2 Yes, without demo
- 3 No
- 4 Refused
- 5 Condoms not available

Counseling (4Cs) completed? (Tick one):

1 Yes 2 No

IEC materials given? (Tick one):

1 Yes 2 No

Final Diagnosis (Tick all that apply)

1 Urethral discharge in men

2 Genital ulcer (not Herpes)

3 Genital Herpes

4 Vaginitis:

If microscope:

4 a Trichomonas

4 b Bacterial vaginosis

4 c Candida

5 Cervicitis

6 PID

7 Scrotal swelling (non surgical)

8 Inguinal bubo

9 Genital wart

10 Other - Please specify:

STI Management/Treatment prescribed

(Tick one):

1 Yes 2 No

Intend to notify partner? (Tick one):

1 Yes 2 No

If No, Please specify:

Referred? (Tick all that apply)

1 Yes 2 No

If yes, referred to:

1 VCT services

2 Laboratory services

3 Surgery services

4 ANC services

5 FP services

6 Other - Please specify:

Follow up visit scheduled (Tick one):

1 Yes 2 No

Cured at Follow up?

(Tick one):

1 Yes

2 No due to non compliance

3 No due to re-infection

4 No without clear reason

INVENTORY FORM

Reporting Period: _____

Condoms	Number	IEC Materials	Number
Condom stocks at beginning of month	(A)	IEC Materials in stocks beginning of month	(A)
New condom stocks received during the month	(B)	New IEC stocks received during the month	(B)
Condom stocks at end of month	(C)	IEC Materials in stocks at end of month	(C)
Number of condoms distributed	(A) + (B) - (C) = (D)	Number of IEC Materials distributed	(A) + (B) - (C) = (D)

*To check for errors in counting, the total amount distributed in the table above should equal the total distributed from the table below.

**Shade in weekends to explain lack of data.

Date	Condoms			IEC Materials		
	Stock at beginning of day (A)	Stock at end of day (C)	Amount Distributed (A) - (C) = (D)	Stock at beginning of day (A)	Stock at end of day (C)	Amount Distributed (A) - (C) = (D)
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
TOTAL# OF CONDOMS DISTRIBUTED =				TOTAL # OF IEC MATERIALS DISTRIBUTED =		

REQUEST FOR REFERRAL

Client Code

1. NAME OF SERVICE TO WHICH REFERRED:

2. REASONS FOR REFERRAL:

3. REFERRED BY PHYSICIAN

Name:

Signature:

Date:

STI MONTHLY REPORT

Reporting Period: from _____ to _____

Table 1: Services Provided by STI Center

Number of	Male					Female					Total
	<16	16-24	25-35	>35	Total Male	<16	16-24	25-35	>35	Total Female	
Clients visiting STI center											
Return clients											
Clients receiving counseling											
Clients being managed											
Clients with Ulcerations (not Herpes)											
Clients with Genital Herpes											
Clients with Urethral Discharge											
Clients with Cervicitis											
Clients with Vaginitis											
Clients with confirmed Trichomoniasis											
Clients with confirmed Bacterial Vaginosis											
Clients with confirmed Candidiasis											
Clients with PID											
Clients with Scrotal Swelling											
Clients with Inguinal Bubo											
Clients with Genital Warts											
Clients with other STI conditions											
Clients intending to notify their partner											
Clients referred to other services											

Table 2: Commodities Distributed

	Number of Clients
Condom demonstration/distribution	
IEC Materials	

Additional Remarks _____

Site manager's signature

Date

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