



NATIONAL CENTER FOR HIV/AIDS, DERMATOLOGY AND STI

Presentation slides for participants on
**NATIONAL GUIDELINES ON SEXUALLY TRANSMITTED INFECTIONS (STI)
AND REPRODUCTIVE TRACT INFECTIONS (RTI) CASE MANAGEMENT**

2010

Module 1

Basic of Sexually Transmitted Infections (STIs) and Reproductive Tract Infections (RTIs)

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Learning objectives

This module will enable you to:

- identify how STIs/RTIs are transmitted and the factors that influence transmission
- explain:
 - ❑ the extent STIs and RTIs, especially the prevalence among target groups in Cambodia
 - ❑ the serious complications that can arise from untreated STI and the prevention of STI/RTI
 - ❑ ways in which STIs are linked with the spread of HIV
 - ❑ why the control of STI is so difficult, and what must be done to improve our capacity for control.

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What are RTIs?

1. Sexually Transmitted Infections (STIs)
2. Endogenous infections
3. Iatrogenic infections

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1. Sexually Transmitted Infections (STIs)

- They come from sexual partners with STI.
- They spread through sexual contact with infected partners.
- Common examples are:
 - Gonorrhoea, chlamydia, syphilis, chancroid, trichomoniasis, genital herpes, genital warts, HIV...

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2- Endogenous infections

- They come from organisms normally found in vagina.
- They do not usually spread from person to person, but overgrowth can lead to symptoms.
- Common examples are:
 - Yeast infection, bacterial vaginosis (BV).

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3- Iatrogenic infections (a)

- They come from inside or outside the body: Endogenous (vagina), STI (cervix or vagina) or contamination from outside.
- They spread by medical procedures or following examination or intervention during pregnancy, childbirth, the postpartum period or in family planning (e.g., IUD insertion) and gynecology settings. Infection may be pushed through the cervix into the upper genital tract and cause serious infection of the uterus, fallopian tubes and other pelvic organs. Contaminated needles or other instruments, e.g. uterine sounds, may transmit infection if infection control is poor.

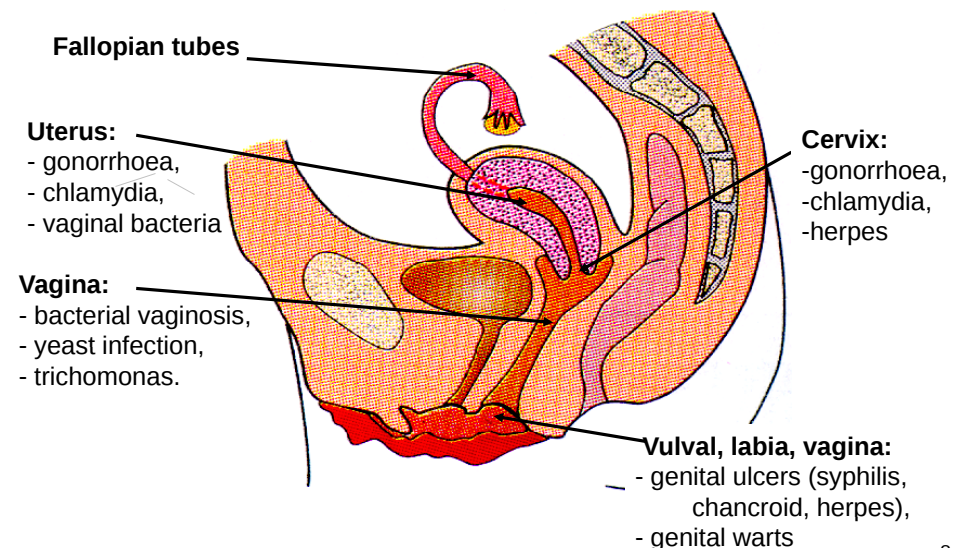
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3- Iatrogenic infections (b)

- Common examples are:
 - Pelvic Inflammatory Disease (PID) following abortion or other transcervical procedures,
 - Also, many infectious complications of pregnancy and postpartum period.

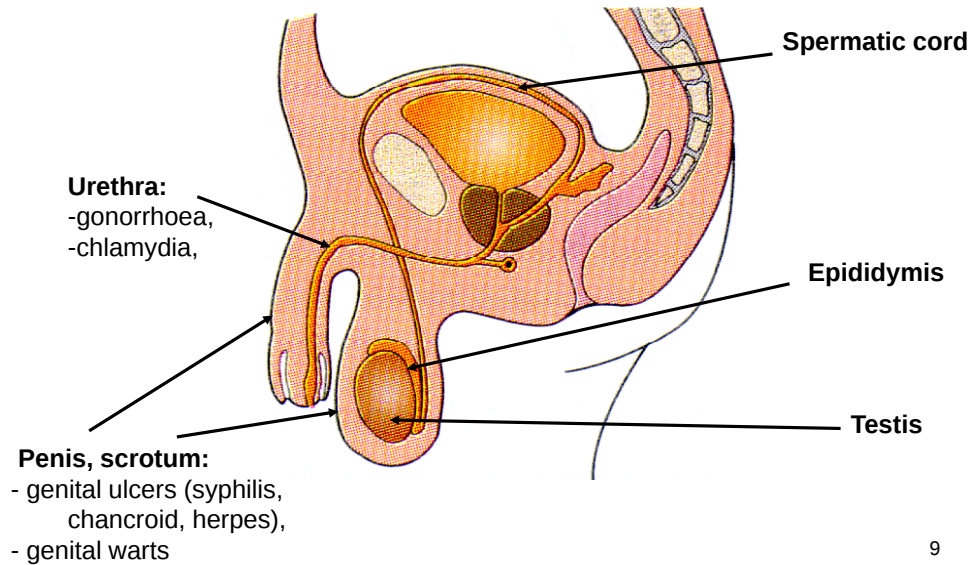
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Female anatomy



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Male anatomy

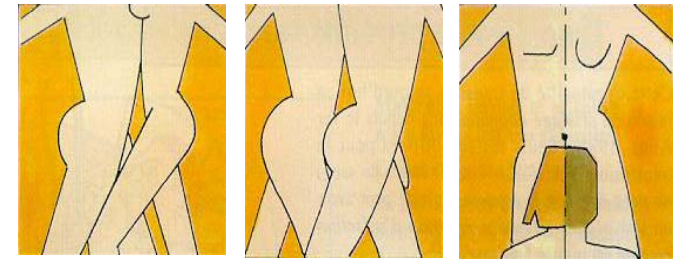


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How are STIs transmitted?

1)- Most common mode of transmission of STI is **through unprotected penetrative sexual intercourse** (vaginal, anal or oral).

NB: It is important to remember that the human immunodeficiency virus (HIV) is transmitted in the same ways as any other STI.



Vaginal sex

Anal sex

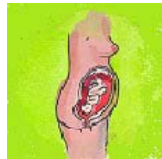
Oral sex

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How are STIs transmitted?

2)- Mother-to-child transmission (MTCT):

– during pregnancy (e.g. HIV and syphilis)



– at delivery (e.g. gonorrhoea, chlamydia and HIV)



– through breast milk (e.g. HIV)



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How are STIs transmitted?

3)- Unsafe (unsterile) use of needles or injections or other **contact with blood or blood-products** (e.g. syphilis, HIV and hepatitis).



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What factors increase the risk of transmission?

- Biological factors:
 - age,
 - gender,
 - immune status.
- Behavioral factors:
 - Personal sexual behaviors,
 - Social factors,
 - Other personal behaviors associated with risk,
 - Behavior of the partner(s).

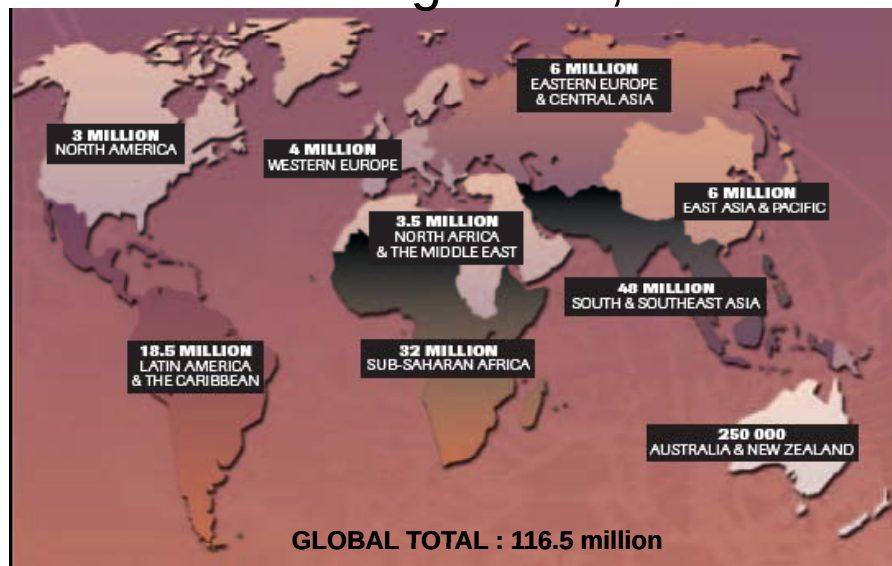
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Which population groups are particularly vulnerable?

- sexually active teenage girls & boys
- sex workers and their clients including men who have sex with men (MSM)
- men or women who have multiple sexual partners; men or women whose jobs separate them from their regular sex partners for long periods of time, such as long-distance drivers, soldiers, and migrant workers.

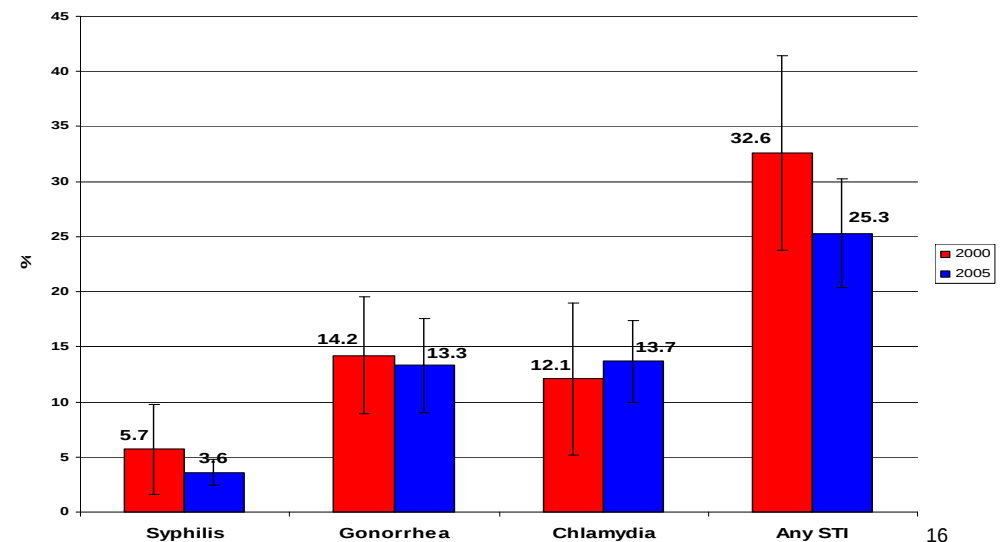
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Estimated prevalence of curable STIs among adults, 1999



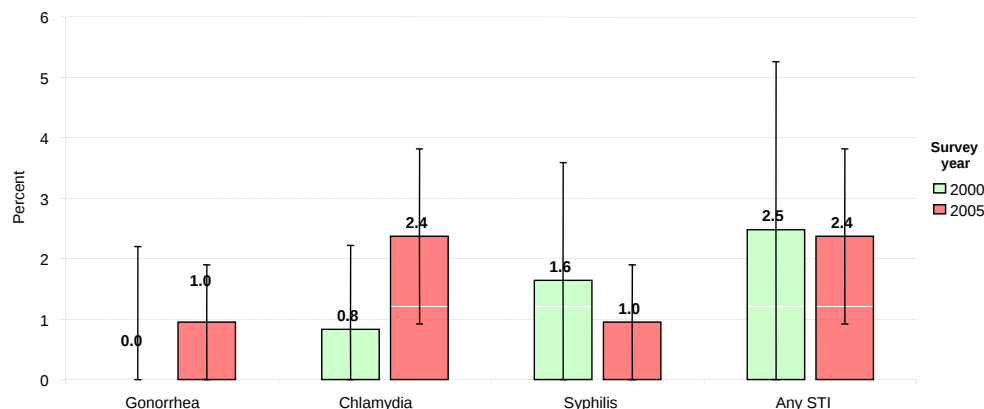
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Comparison of STI prevalence among FSW by survey year



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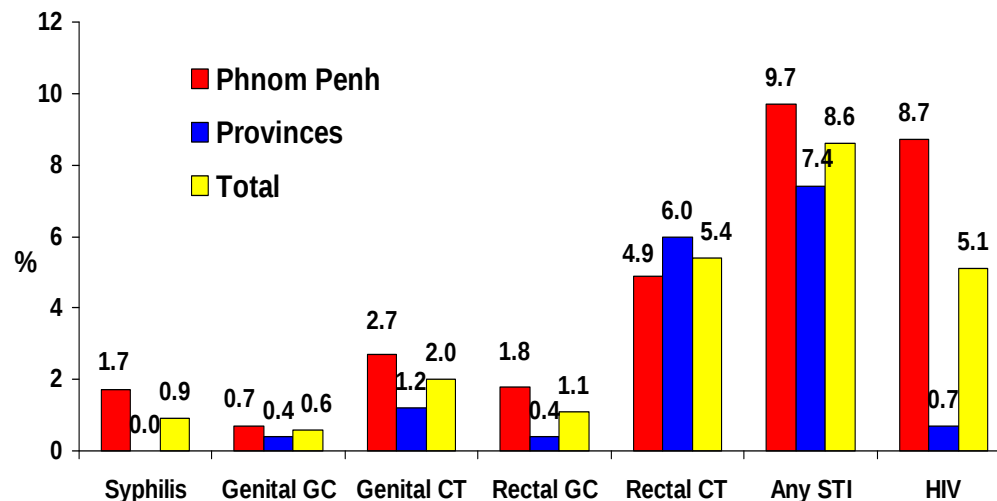
Comparison of STI prevalence among police by survey year



For purposes of comparison, provinces include: Battambang, Kampong Cham, Sihanouk Ville, Banteay Meanchey and Phnom Penh.

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STI prevalence among MSM by survey site



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The complications of STI

A UNAIDS Technical Update in May 1998 states that:

- Both symptomatic and asymptomatic infections can lead to the development of serious complications.
- The most serious complications and sequelae (long-term consequences) of untreated STI tend to be in women and newborn babies. These can include cervical cancer, pelvic inflammatory disease (salpingitis), chronic pelvic pain, fetal wastage, ectopic pregnancy and related maternal mortality.
- Chlamydial infections and gonorrhoea are important causes of infertility, particularly in women, with far-reaching social consequences. Chlamydial infection is an important cause of pneumonia in infants. Neonatal gonococcal infections of the eyes can lead to blindness.
- Congenital syphilis is an important and significant cause of infant morbidity and mortality. In adults, syphilis can cause serious cardiac, neurological and other consequences, which can ultimately be fatal.

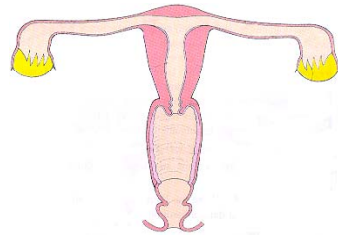
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The complications of STI

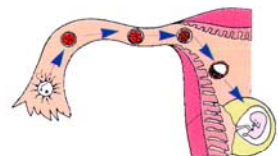
Causes	Complications
Gonococcal and Chlamydial infection	Infertility in men and women, Epididymitis, Ectopic pregnancy due to tubal damage
Gonorrhoea	Blindness in infants
Gonococcal, chlamydial and anaerobic bacterial infections	Pelvic and generalized peritonitis
Acquired syphilis	Permanent brain and heart disease
Congenital syphilis	Extensive organ and tissue destruction in children
Human papilloma virus	Genital cancer

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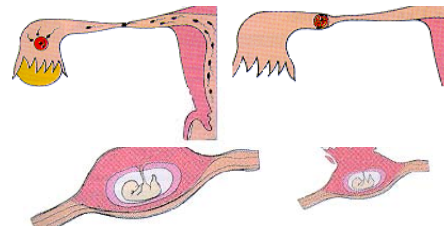
Normal



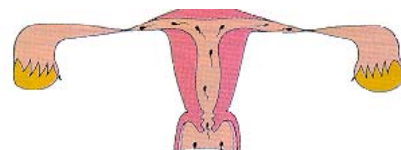
Female genital tract



An example of complications of STI



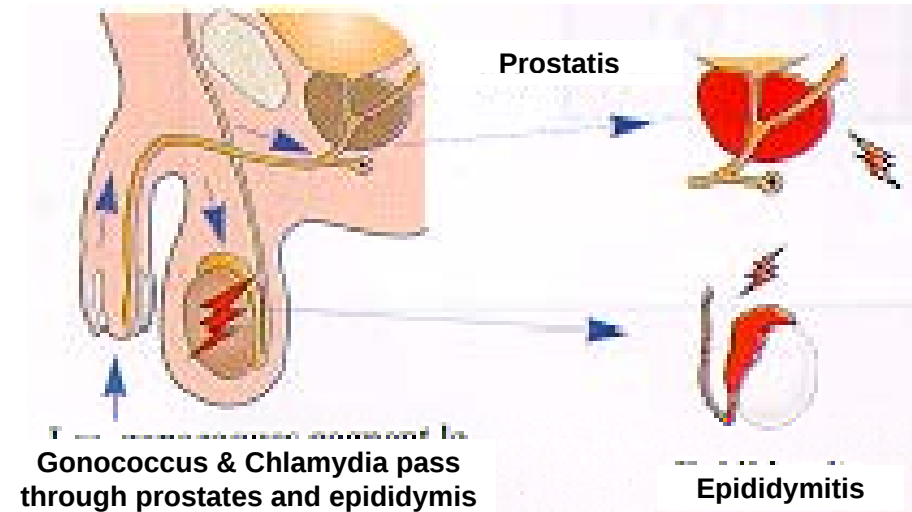
Stricture → Ectopic pregnancy



Obstacle → Infertility

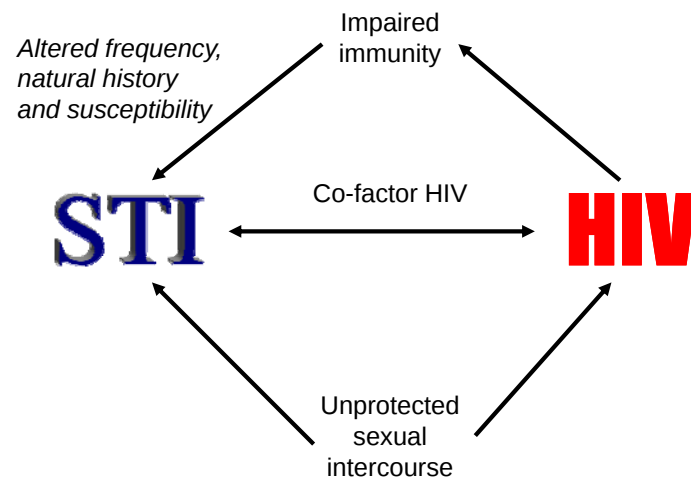
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Complication of STI in male genital tract



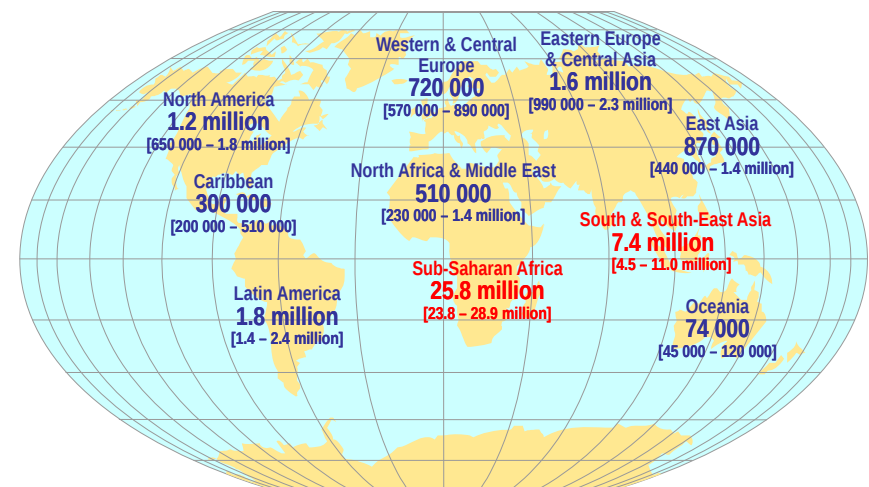
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Why STIs/RTIs are important ?



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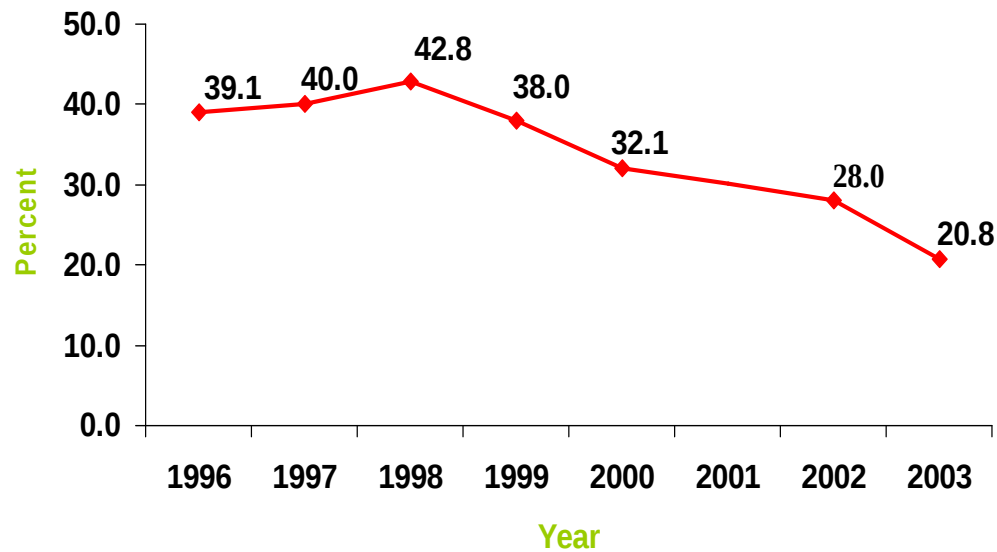
Adults and children estimated to be living with HIV as of end 2005



Total: 40.3 (36.7 – 45.3) million

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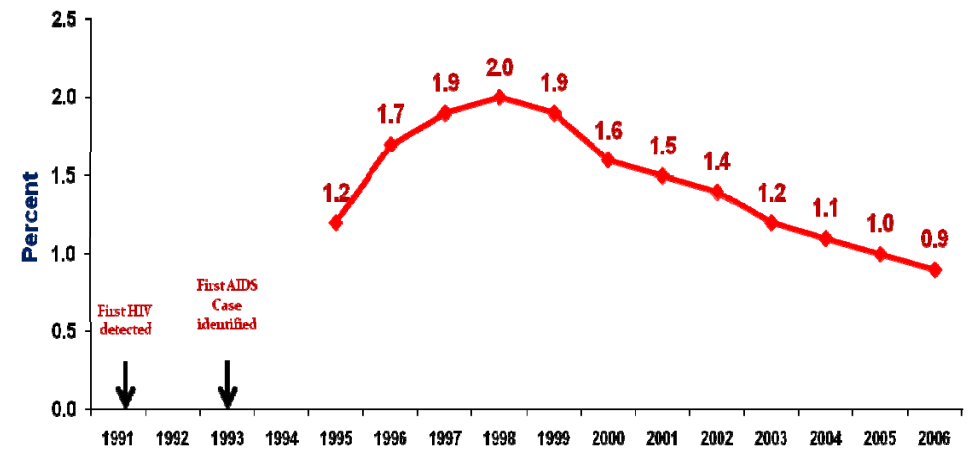
Adjusted HIV prevalence* among DFSW, by year



*Adjusted for results of quality assurance testing

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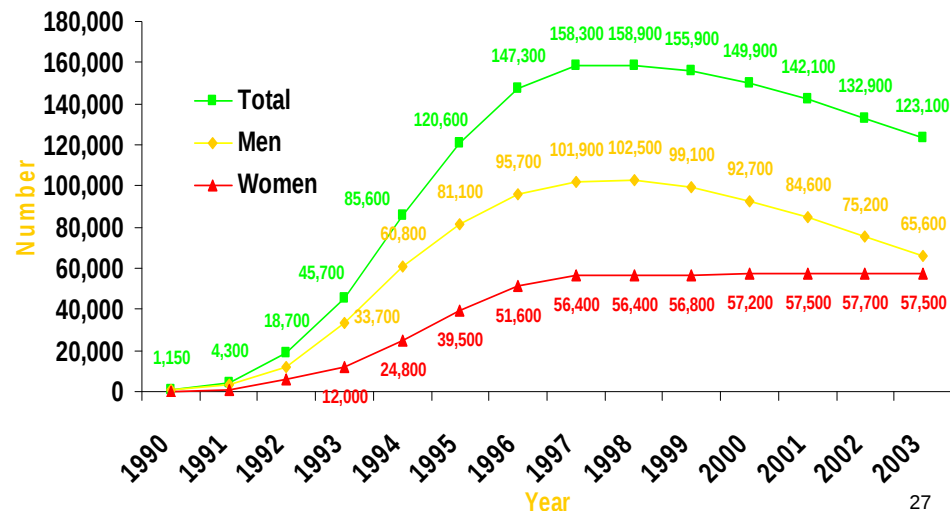
Estimated National HIV Prevalence* among Adults Aged 15-49, Cambodia



* From the modeled numbers of PLHA

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Estimated number of people aged 15-49 living with HIV/AIDS, Cambodia



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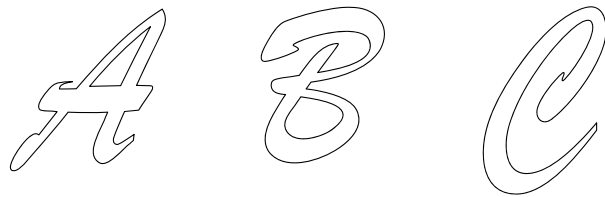
What *can* be done to control STI?

- **Primary prevention** aims to prevent people being infected with STIs or HIV
- **Secondary prevention** is about the provision of treatment and care for infected people in order to avoid further transmission of infection to others.

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How to prevent STI

- **Delaying sexual activity (for adolescents);**
- **Decreasing the number of sex partners;**
- **Using condoms correctly and consistently.**



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How to prevent iatrogenic infections

Prevent upper genital tract infections:

- STI prevention and management ,
- Good antenatal care and safe delivery practices,
- Safe performance of transcervical procedures,
- Good post-abortion care and management of complications.

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How to prevent endogenous infections (a)

Yeast infection and bacterial vaginosis are common endogenous infections that can be easily treated but often recur. Health care providers should be aware that:

- pregnant women and women using oral contraceptives may get frequent yeast infections because of changes in vaginal acidity (pH);
- certain medical conditions—e.g. diabetes—may increase the risk of yeast infections as may long-term use of steroids.

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How to prevent endogenous infections (b)

Health care providers can offer advice about some simple ways to prevent endogenous infection.

- Douching can disrupt the normal flora of the vagina and cause overgrowth of other microorganisms (bacterial vaginosis). Use of detergents, disinfectants, and vaginal cleaning or drying agents should be avoided. Cleaning the external genital area with soap and water is sufficient for hygiene.
- Antibiotics can also disrupt the normal vaginal flora and permit overgrowth of yeast. Women taking antibiotics—especially long courses of broad-spectrum antibiotics—may also need treatment for yeast infection.

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Why is it so difficult to control the spread of STI?

- 70% of women and 30% of men infected with chlamydia may not have symptoms
- Up to 80% of women and 10% of men infected with gonorrhoea may also have no symptoms

This means that as few as 20% of the women infected will come forward for treatment – so the rest do not appear in statistics

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Why is it so difficult to control the spread of STI?

- people with symptom-free STIs do not seek treatment
- health facilities offering treatment for STIs may be too far away for many people
- people seeking other health care such as antenatal services may not be routinely screened for STIs
- many patients perceive a stigma in attending traditional STI referral clinics, where anyone might be perceived to be at risk of infection by STIs
- many people may choose to go to alternative providers, both in the formal and informal sectors, who do not report case numbers. Cost may sometimes be an important factor in patients' decisions.

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Six features of comprehensive care

- make a correct diagnosis
- provide correct antimicrobial therapy for the STI syndrome
- educate on the nature of the infection, safer sexual behaviour, safe sex acts and risk reduction in order to prevent or reduce future risk-taking behaviour
- educate on treatment compliance
- demonstrate the correct use of condoms and provision of condoms
- advise on how the patient's partners may be treated and issue a partner referral card for the patient to pass on to his/her partner(s).

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Approaches to STI/RTI diagnosis

- *clinical diagnosis*: using clinical experience to identify the symptoms typical for a specific STI.
- *syndromic case management* : is a problem-oriented that responds to the patient's symptoms (A syndrome is simply a group of the *symptoms* a patient complains about and the clinical *signs* you observe during examination).
- *etiological diagnosis*: using laboratory tests to identify the causative agents.

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Clinical diagnosis

- The clinician treats STIs/RTIs based on the clinical symptoms and his/her professional experience.
- Different STIs/RTIs cause similar symptoms, so the clinician may pick the wrong one to treat.
- Mixed infections are common and the clinician may diagnose only one of them.
- A patient with multiple infections needs to be treated for each of them. Failure to treat one infection may lead to the development of complications and the continued transmission of that STI.
- It is easy to diagnose some STIs incorrectly and also to miss mixed infections.

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Key features of syndromic case management

- It is problem-oriented (it responds to the patient's symptoms) is highly sensitive and does not miss mixed infections treats the patient at the *first* visit
- It makes STI care more accessible as it can be implemented at primary health care level
- It uses flow-charts that guide the health worker through logical steps provides opportunity and time for education and counselling.

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Etiological approach (lab-based)

- Laboratory testing requires skilled personnel and consistent support and supplies.
- Laboratory diagnosis can confirm diagnosis if patients with STI are referred from primary health care centres.
- It is important for STI asymptomatic screening, especially syphilis case-finding in pregnant women.
- However, it is unavailable and unreliable for diagnosis of some STIs, even when good resources are available (e.g. *Haemophilus ducreyi*, which causes *chancroid*, is a fastidious bacterium which cannot be easily cultured. Tests for *Chlamydia trachomatis* are expensive and the collection of specimens is invasive and unpleasant for both men and women)

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Module 2

Clinical & Laboratory Examination Skill

1

Learning objectives

At the end of this module the participants will be able to:

1. Explain the aim of history taking
2. Describe the communication skills and how to gathering information
3. Describe the professional behavior during a clinical examination
4. Define how to make the physical examination and how to collect the specimens from men & women
5. Perform the using standard Medical history & STI/RTI Laboratory Bulletin
6. Describe the common STI/RTI Syndromes

2

History-taking and Examination

The Aims of History-taking and Examination are to:

- Make an accurate and efficient syndromic STD diagnosis
- Define the patient's risk of transmitting or contracting STDs
- Find out about partners who may have been infected

3

Communication Skills

Communication skills for establishing rapport with patients are first skills you will use when patient comes to see you include:

- Verbal skills- the way you talk to the patient and ask questions and
- Non verbal skills – how you behave with the patient.

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Verbal Skills

- Greet patient
- Avoid common problems in verbal communication
- Ask open and closed questions effectively
- Prepare your response to patient emotions

5

How to Greet the Patient

- ③ Use a welcoming tone of voice, smile.
- ③ Introduce yourself.
- ③ Offer the patient a seat.
- ③ Make eye contact if culturally appropriate.
- ③ Encourage the patient to talk by asking questions.
- ③ Nod when the patient talks or say “mmm” or “tell me more”.
- ③ Be respectful and understanding.

6

How to Avoid Common Problems in Verbal Communication

- Always be polite.
- Use words that the patient can understand easily.
- Make your questions clear.
- Ask one question at a time.
- Avoid ‘leading’ questions.
- Avoid moral judgements.
- Ask the patient’s permission to talk about sensitive topics.

7

Open and Closed Questions

- Open questions – patient can give a longer reply including the information he or she wants to include.

Examples:

“What is troubling you?”

“What kind of medicines are you taking at the moment?”

- Closed questions – patient answers in one word or a short phrase, often ‘yes’ or ‘no’.

Examples:

“Is the swelling painful?”

“Is your period late?”

“What is your age?”

8

Non-Verbal Skills

- Provide the patient with privacy.
- Listen carefully to what the patient says.
- Sit if patient is sitting and watch how close you are to patient.

9

Six Useful Skills For Effective Verbal Communication

- Facilitating
- Directing
- Summarizing and checking
- Empathizing
- Reassuring
- Expressing partnership

10

Gathering Information During History-taking

Start of history-taking

End of history-taking



Open questions

Closed questions

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The Information You Need

- General details about the patient
- Description of present illness
- Family Planning
- Medical history
- Sexual history

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General Details

- Age
- Number of children, number of pregnancies
- Locality or address
- Employment
- Level of education

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Present illness

Explore symptoms described by the client that may indicate the presence of an STI/RTI and their duration, including:

In male patients:

- Urethral discharge
- Genital ulcer
- Genital warts
- Scrotal pain/swelling
- Dysuria
- Skin rash
- Adenopathy
- Anal discharge



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Present illness cont.

In female patients:

- Vaginal discharge
- Lower abdominal pain
- Painful intercourse
- Lesion
- Dysuria
- Itching
- Genital warts
- Adenopathy
- Anal discharge



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Family Planning history

- STI/RTI prevention and concerns should be discussed with all family planning clients at each visit as the following:
- Using contraceptives such as injection, pill, condom, implant, IUD
- Number of pregnancy, number of living children
- Number of abortions, induced or spontaneous
- Last menstruation period

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Medical History

- Any past STD: Type? Date?
- Any treatment and response?
- Results or any prior tests?
- Other illness: Type? Date? Any treatment and response? Results or any prior tests?
- Medications
- Drug Allergies

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Sexual History

Explore risk behaviors to find out about factors that may affect the client's sexual health, including:

For men:

- How many sex regular partners have you had in the last year?
- Did you use condom at the last sex?
- Any contact with casual partner in the past month?
- Did patient have STIs in the past?
- Does patient use any addictive drugs now ?

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Sexual History cont.

For MSM

- Do you have sex with men, women or both?
- Do you commonly have anal or oral sex?
- Do you have receptive or insertive sex?

For women:

- Does the patient know how to use a condom?
- How many regular clients/boyfriends in last 3 months?
- The type of sexual behaviour commonly practiced with clients/boyfriend (eg. vaginal, oral or anal sex?)
- Whether the patient used a condom, last time had sex with regular partner or boyfriend.
- Ask about the type of addictive drug used by the patient (if any)

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Risk Assessment

For cervicitis, risk the assessment is important to assess which women presenting with vaginal discharge

a) Risk assessment for female sex workers (DSW or ISWs)

- 1- Thick yellow discharge
- 2- Lower abdominal pain during intercourse (deep pain as exposed to pain related with friction)
- 3- More than 5 clients per day on average
- 4- Unprotected sex with new clients

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Risk Assessment cont.

b) Risk assessment for general population

- 1- Patient complaints of lower abdominal pain or
- 2- Partner has symptoms of STI or
- 3- Patient has a positive risk assessment:
 - *Patient younger than 25 years old*
 - *Patient unmarried and sexually active*
 - *Patient had sex with more than one person in the last 3 months*
 - *Patient had sex with a new partner in the last 3 months*

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Clinical Examination

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Professional Behaviour During a Clinical Examination

- ③ Ensure privacy at all times.
- ③ Explain what you are going to do, and why it is important.
- ③ Approach the examination in a confident way, never showing uncertainty or embarrassment.
- ③ Never be rough or conduct an examination against someone's will.
- ③ Use all the communication skills covered in this Module.

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Good Examination Practice

Essential Elements	Hint
1. Allay the patient's fears	Explain what will be done and encourage disclosure of any discomfort
2. Privacy	Provide a curtain across the window or around the examination bed and close the door
3. Examination bed	Examine the patient in lateral decubitus or "prayer" position
4. Good lighting	Small lesions are best seen with a patient examination light

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Good Examination Practice cont.

Essential Elements	Hint
5. Infection control	Wash hands with soap and water, before and after examination; wear gloves
6. Health care provider	Health care provider to assist with preparation for the exam and as an assurance to the patient that the exam is standard medical practice is a good idea.
7. Good preparation	Have equipment (e.g. slides, swabs and spatulas), disposable plastic or sterilisable specula and anoscopes nearby
8. Communication	Ask whether the patient is uncomfortable; provide assurance; explain when the discomfort will end, and how to relieve the discomfort. 25

Good Examination Practice cont.

Essential Elements	Hint
9. General examination	Examine the skin, mouth, lymph nodes, chest, cardiovascular system, abdomen.
10. Speculum examination	Patient descriptions of signs can be unreliable; perform speculum where indicated; most important part of the exam is the visual inspection of the cervical & vaginal area.
10. Anogenital examination	Patient descriptions of signs can be unreliable; perform anoscopy where indicated; most important part of the exam is the visual inspection of the anogenital region

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Examination Regions

Region	Exposure Needed	Body Position
• Hands/arms • Head & neck • Mouth	Clothes loosened	Sitting
• Abdomen	Clothes loosened, abdomen exposed	Supine
• Genitals • Anus/rectum	Gown with undergarment off, abdomen to knees exposed	Supine

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Examination Regions cont.

- Sit the patient on edge of bed
- Clothes on
- Inspect hands & arms for rashes, lymph nodes
 - Examine joints for effusion, erythema
 - Palms for rash associated with syphilis
- Inspect & palpate the neck and scalp
 - Nodes to inspect: cervical & occipital
 - Inspect for alopecia
- Inspect skin
 - Umbilicated papules (molluscum or penicillium)

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Examination Regions cont.

- Inspect mouth & teeth with strong light & tongue depressor
 - Look for signs of syphilis, oral candida
 - Lips: herpetic lesions (cold sores)
- Inspect pharynx
 - exudates, erythema
- Inspect abdomen skin
 - Look for signs of chronic liver disease, rashes of syphilis
- Palpate liver, spleen

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Secondary syphilis



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Pharyngeal gonorrhea



Chancre syphilis on tongue



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Physical exam - men

The minimal routine screening examination includes:

1. Don gloves
2. Inspection:
 - Skin of hands, palms and forearms look for rash...
 - Genitals area look for ulcer, warts, scabies, molluscum
 - Inguinal areas look for lymphadenopathy
 - Lower abdominal look for mass, tumor pubic hair for lice and nits.,
 - Penis, including the meatus, with retraction of the foreskin and milking of the urethra.
3. Palpation:
 - Scrotal contents (testes, spermatic cord, epididymis).
 - Inguinal and femoral lymphadenopathy.

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Physical exam – men cont.

6. For men who have sex with men (MSM), inspection of the mouth, throat, perineum, and anus.

Palpation for cervical, supraclavicular, and axillary lymphadenopathy. For MSM complaining of

rectal symptoms, anoscopic exam. For men giving oral sex, exam of the mouth.

7. Record the presence or absence of

-Buboes

-Ulcers

-Urethral discharge, noting the color and amount

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Scrotal Examination

- a) Cup scrotum with one hand and note any changes
- b) Check each testicle one at a time
 - Gently roll testicle between fingers and thumb
 - Normal testicular findings
 - Normal variation-one testicle may be larger than the other & left testicle may lie lower than right
 - Normally oval shaped
 - Firm, smooth, and rubbery
 - Abnormal testicular findings
 - Identify lumps or bumps on testicle

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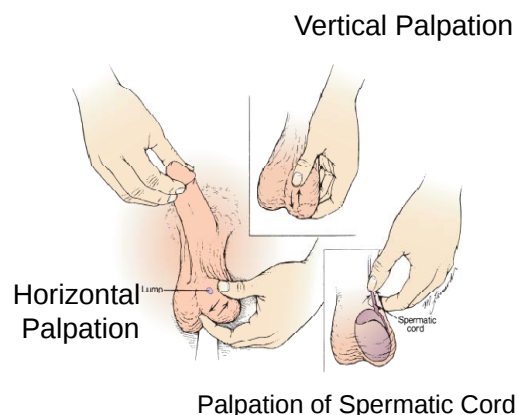
Scrotal Examination cont.

- c) Examine epididymis (next to testicle)

- Soft and mobile
- May be mildly tender

- d) Examine vas deferens (spermatic cord)

- Contiguous with epididymis
- Should be smooth and mobile



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Perineum/Anorectum Examination

- Ask the patient to remove pants and put on gown
- Ask patient to roll to left side, facing away from you ('left lateral position')
- Hips and knees flexed towards stomach
- Ask patient to retract right buttock with right hand
- Inspect the perianal region & natal cleft
 - Look for warts, ulcers, rashes, haemorrhoids, bleeding, discharge

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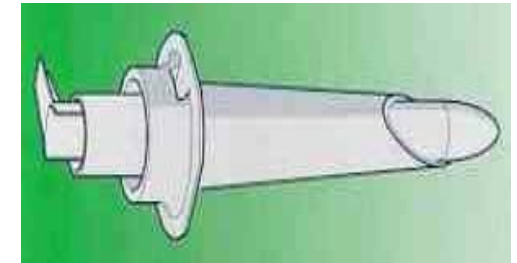
Left lateral Position



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Anal Examination – Anoscopy

- Show anoscope to patient
- Anoscope is only indicated when symptoms of proctitis or rectal bleeding are described
- Generally should not be performed if external herpetic lesions, condylomas, or fissures are present



Disposable anoscope

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Anal Examination – Anoscopy

- An anoscope has the following characteristics
 - Rigid, hollow, tubular instrument
 - 10 cm long, 2 – 4 cm wide
 - Central removable introducer
 - Short, plastic, disposable recommended
 - Metal ones must be disinfected and sterilised between patients (warm with hot water before use)



Disposable anoscope

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Anal Examination- Anoscopy cont.

- Perform digital rectal exam first
- Rest anoscope at anal verge
- Apply gentle pressure to aid sphincter relaxation & insert slowly
 - Ask patient to relax, breathe deeply, and bear down, as per digital rectal exam above

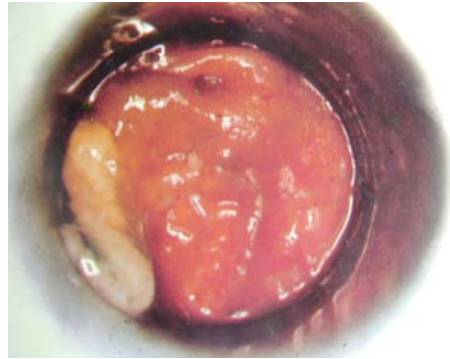


Digital rectal exam

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Anal Examination- Anoscopy cont.

- Follow line of least resistance toward navel
 - Remove trocar
- Inspect rectal mucosa with strong light
- Look for ulcers, discharge, lesions, bleeding, warts, ulcers, rashes, hygiene



Rectal gonorrhea

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Physical exam - women

The minimal routine physical examination for women with a suspected STD/RTI includes the following:

1. Inspection of the skin, of the lower abdomen, inguinal areas, thighs, hands, palms, and forearms.
2. Inspection of the pubic hair for lice and nits.
3. Inspection and palpation of the external genitalia and inspection of the perineum and anus.
4. Palpation for inguinal and femoral adenopathy.
5. Palpation the abdomen for pelvic masses and tenderness.

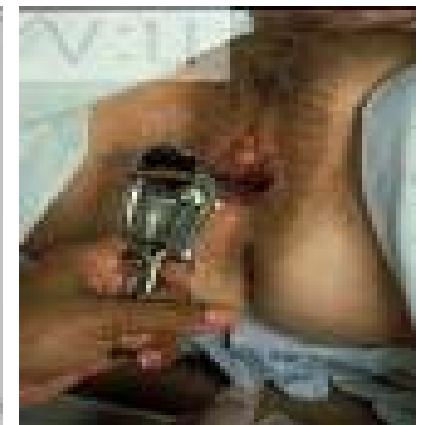
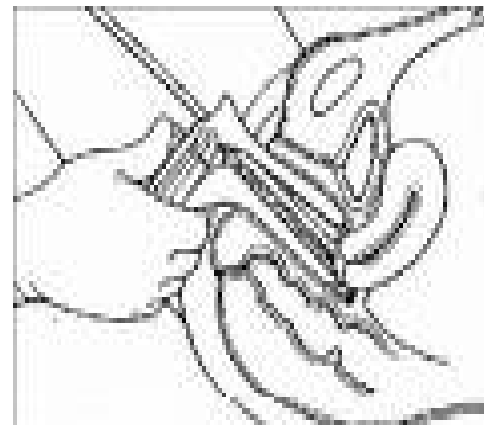
Physical exam – women cont.

5. Speculum examination of the vagina and cervix.
- Insert index finger into introitus and gently press down toward perineum
 - Insert closed speculum at 45° angle, remove fingers and rotate blades to horizontal position
 - Open speculum and move until cervix in view
 - Inspect vaginal mucosa, note lesions, discharge
 - Inspect cervix and os for discharge, bleeding, lesions, friability



Warm and lubricate the speculum

Speculum examination of the vagina and cervix.



44

Physical exam – women cont.

6. Bimanual pelvic examination.

- Palpate the anteverted uterus by passing the fingers of the right hand to the anterior fornix while the fingers of the left hand are placed well above the symphysis pubis.
- Palpate the retroverted uterus from the posterior fornix.
- Examine the uterine appendages from the lateral fornices where any swelling may be palpated between the fingers of the two hands.

7. Record the presence or absence of

- Buboes
- Ulcers
- vaginal discharge, noting the color and amount

45

BIMANUAL EXAMINATION

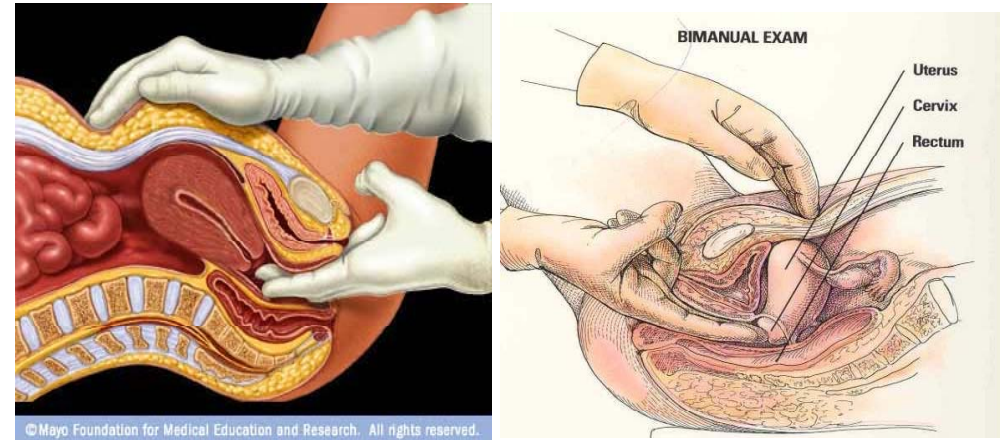


Photo Courtesy Region III PTC

46

Cervicitis symptoms include a red and inflamed cervix with an unusual discharge



ADAM. 47

Physical exam - women



48

Urethritis



Gonococcal pus in the Bartholin's duct



49

Completion

- Remove & dispose of gloves
- Provide tissue for patient to wipe him/herself
- Ask patient to dress & sit by desk again
- Wash hands with soap and water
- Continue sexual health consultation
 - Diagnosis
 - Treatment
 - Prevention counselling
 - Condoms
 - Contact tracing
 - Follow-up

50

specimen collection

51

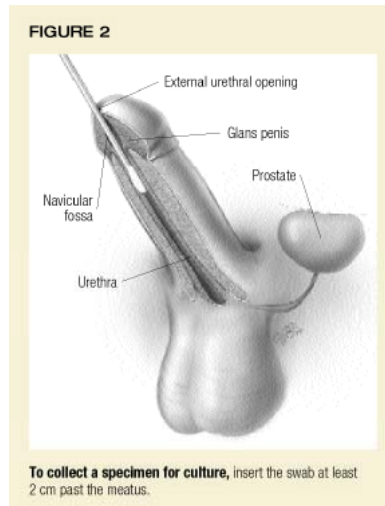
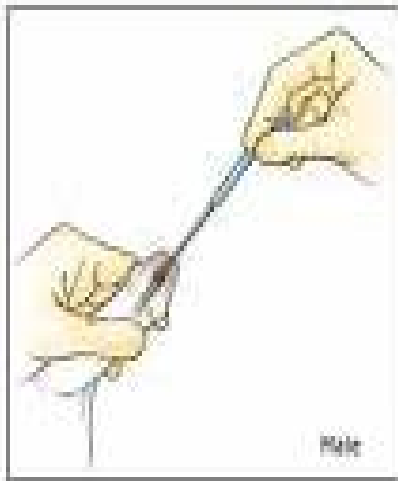
Collection of specimens

A. For men

- 1- Urethral Gram-stain smear is recommended
if the patient has symptoms of urethritis or asymptomatic
2. Urethral culture for *Neisseria gonorrhoeae*
3. Syphilis serology
4. Refer STI clinic client to VCCT (including drug users and sexual contacts of commercial sex workers).

52

Collection of specimens for male



53

Collection of specimens

B-For MSM

- Gram-stained smear of the rectal mucosa
- Cultures for *Neisseria gonorrhoeae* (GC), *Chlamydia trachomatis*.
- Herpes simplex virus. Nucleic acid amplification.
- If perianal or rectal ulcers are seen, also perform serologic test for syphilis (RPR or VDRL, TPPA).
- If enteritis or proctocolitis:
 - Culture stool for *Salmonella*, *Shigella*, and *Campylobacter*, and
 - Send stool for ova and parasites (O & P) exam.

54

Collection of specimens

C. For Women

- 1- Vaginal fluid from the posterior fornix using two to three cotton swabs avoiding cervical secretions.
 - One swab will be rolled on a microscope slide for Gram stain and air-dried.
 - The other swab will be used for wet preparation

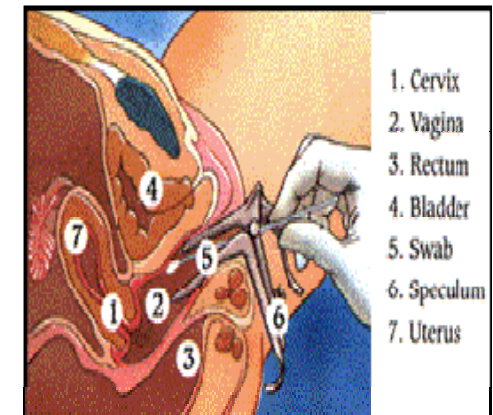


55

Collection of specimens

2- Endocervical swab will be :

- wipe mucous from cervical os with large swab
- Insert small cotton swab 1-2 cm into endocervical canal
- Rolled in the endocervix for 10 seconds after cleaning of cervix; it will then be rolled on a microscope slide for Gram stain/ Methylene blue
- Insert new swab into endocervical canal and rotate for 10 seconds remove carefully without touching vaginal walls and insert swab into BD culture or Gen-probe transport container.



56

Collection of specimens cont.

3. Venous blood: collect 5cc of venous blood and put in a dry sterile test tube with stopper for syphilis test.
4. Refer STI clinic client to VCCT (including drug user, prostitutes, and sexual contacts bisexual men, or women with multiple partners.
- . After completion of the routine screening history and physical examination, it should be possible
- .To tentatively classify patients into one of several clinical syndromes. Some patients will of course be asymptomatic and have no signs on physical exam and should receive no therapy until their laboratory test results are received.

57

How to use the standard medical history form for women and Bulletin analysis?

58

Using of SMH Form for women

- General Information
- History & Reason for consultation
- Risk Behaviour
- Risk assessments for cervicitis
- Clinical Examination
- Laboratory examination
- Diagnosis
- Treatment
- Counseling & Advice

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Annex 1

មន្ទីរសុខាភិបាលខេត្ត (Provincial Health Department).....

ព្រះរាជាណាចក្រកម្ពុជា (Kingdom of Cambodia)

គ្លីនិកសុខភាពគ្រួសារ (Family health clinic)

ជាតិ (Nation) សាសនា (Religion) ព្រះមហាក្សត្រ (King)

ប័ណ្ណវិភាគពេទ្យស្ត្រីរោគ

ឈ្មោះអ្នកជំងឺ (Name)..... អាយុ (Age)..... ភេទ (sex).....									
លេខកូដគ្លីនិក (Clinic code number)..... លេខកូដមន្ទីរពិសោធន៍ (Lab code number).....									
MICROSCOPIC EXAMINATION									
Wet preparation (ស ក្នុងសភាពស្រស់) ☐ Vaginal (ទ្វារមាស)		Gram stain (ពេទ្យបំពាក់ពណ៌ក្រាម) ☐ Vaginal (ទ្វារមាស)		Gram stain/ Methylene blue (ក្រាម/មេទីលេនប៊ូ) ☐ Endocervical (មាត់ឆ្មាខាងក្នុង)		Gram stain (ពេទ្យបំពាក់ពណ៌ក្រាម)		Syphilis test	
pH		Nugent Score (ពិន្ទុផ្លែឆ្មា)		<10WBCs/HPF		☐ Urethral smear (វត្ថុវិភាគស្រាវជ្រាវក្នុង)		RPR test	
Whiff test/Amine test (KOH): ពេទ្យក្លិន		4-6		10-20WBCs/HPF		WBC		TPPA/ TPHA test	
Clue Cells (ប្លូសែល)		>7		>20WBCs/HPF		GNID ប្រោសក្នុង			
Trichomonas (ផ្ទៃក្នុងម្ជុល)		Budding yeasts/ Hyphae (ប្លូត)		GNID ប្រោសក្នុង		☐ Anal smear (វត្ថុវិភាគស្រាវជ្រាវក្នុង)		Rapid test	
Budding yeasts/ Hyphae (ប្លូត)						WBC			

ថ្ងៃទី.....ខែ.....ឆ្នាំ.....

ថ្ងៃទី.....ខែ.....ឆ្នាំ.....

ហត្ថលេខាគ្រូពេទ្យ (signature physician)

ហត្ថលេខាអ្នកបច្ចេកទេសមន្ទីរពិសោធន៍ (signature technician)

60

Commons STI/RTI Syndromes

Syndrome	STI/RTI	Organism	Type	Sexually transmitted	Curable
Genital ulcer	Syphilis	<i>Treponema pallidum</i>	bacterial	yes	yes
	Chancroid	<i>Haemophilus ducreyi</i>	bacterial	yes	yes
	Herpes	Herpes simplex	viral	yes	no
	Granuloma inguinale	<i>Klebsiella granulomatis</i>	bacterial	yes	yes
	Lymphogranuloma venereum	<i>Chlamydia trachomatis</i>	bacterial	yes	yes

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Commons STI/RTI Syndromes cont.

Syndrome	STI/RTI	Organism	Type	Sexually transmitted	Curable
Vaginal discharge	Bacterial vaginosis	multiple	bacterial	No	yes
	Yeast infection	<i>Candida albicans</i>	fungal	No	yes
	Trichomoniasis	<i>Trichomonas vaginalis</i>	protozoal	yes	yes
	Gonorrhoea	<i>Neisseria</i>	bacterial	yes	yes
	Chlamydia	<i>Chlamydia trachomatis</i>	bacterial	yes	yes

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Commons STI/RTI syndromes cont.

Syndrome	STI/RTI	Organism	Type	Sexually transmitted	Curable
PID	Bacterial anaerobias Gonorrhoea Chlamydia	multiple <i>Neisseria</i> <i>Chlamydia trachomatis</i>	bacterial	Yes	yes
Genital warts	Human papilloma virus (HPV)	Human papilloma virus (HPV)	virus	Yes	No
Urethral discharge	Gonorrhoea Chlamydia	<i>Neisseria</i> <i>Chlamydia trachomatis</i>	bacterial	yes	yes

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Module 3.1

Diagnosis and treatment of STI / RTI

Urethral Discharge

1

Learning Objectives

This module will enable you to:

- Identify properly the clinical and laboratory criteria for diagnosis and care and treatment of urethritis based on the national guideline.

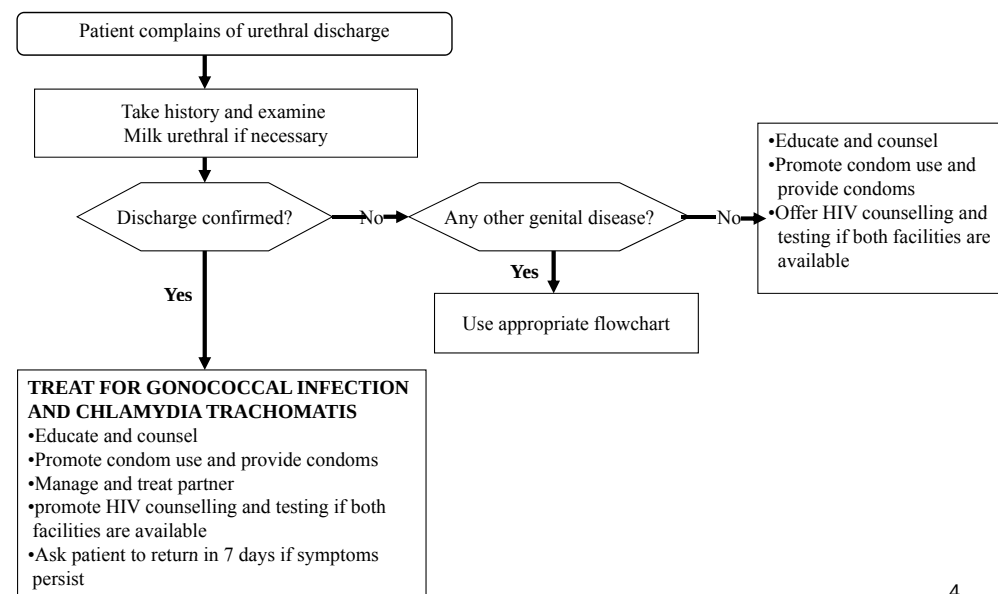
2

How to use the Flow-Charts

- Start at the top of the flow-chart, at the entry point box describing patient complaint.
- Gather the information needed for diagnosis
- Make decisions based on information gathered and gather more info as required
- Make a diagnosis and use treatment that corresponds to the diagnosis
- Offer education and condoms
- Explore options for partner referral

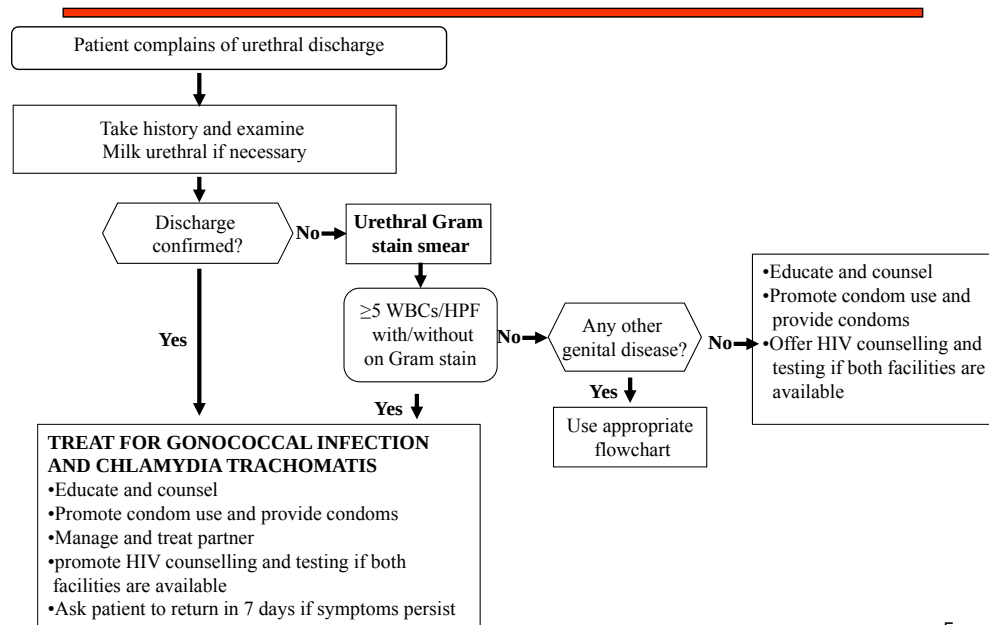
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Urethral Discharge Syndrome



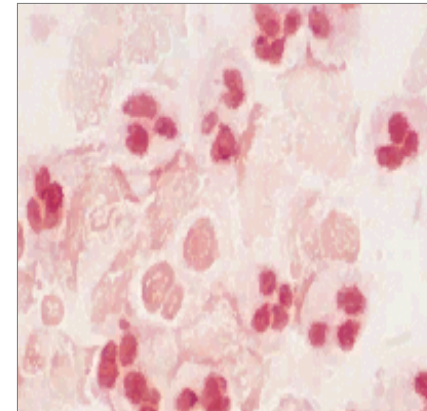
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Urethral Discharge Syndrome Patient with complaint of urethral discharge but discharge not present

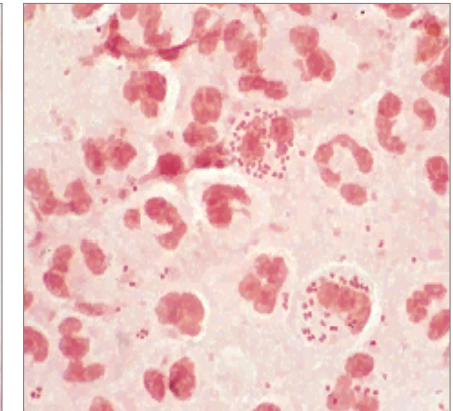


5

Urethritis Gram Stain



PMNs, no GNDC

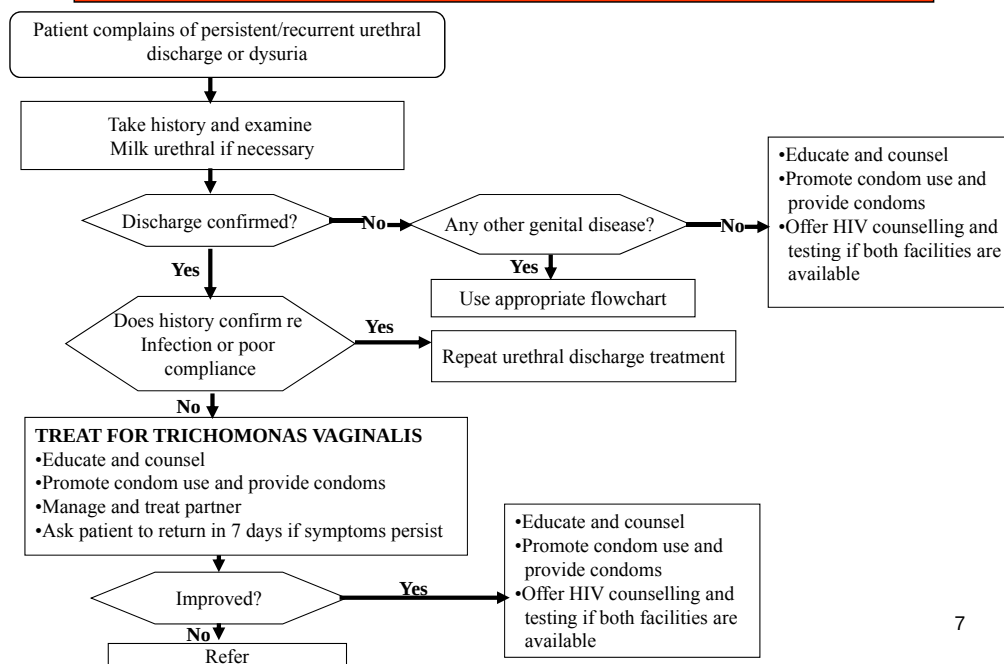


PMNs w/ intracellular GNDC

Mosby STD Atlas, 1997

6

Persistent/Recurrent Urethral Discharge in Men



7

Urethritis

- Divided into gonococcal (GU) and non-gonococcal (NGU)
- Transmission via vaginal, anal, and oral sex
- Definition: urethral inflammation manifested by one or more of the following:
 - Urethral discharge
 - Dysuria
 - Meatal pruritus

8

Nongonococcal Urethritis (NGU)

Common infectious etiologies:

- *C. trachomatis* 20 - 40%
- *Mycoplasma genitalium* } 10 - 20%
- *Ureaplasma urealyticum* }
- *Trichomonas vaginalis* < 5%
- HSV < 5%
- Other/unknown 20 - 30%

9

Urethritis Clinical Features NGU vs GU

	<u>NGU</u>	<u>GU</u>
Incubation	5-14 days	2-6 days
Onset	Gradual	Abrupt
Dysuria	Mild	Severe
Discharge	Mucoid	Purulent



DOIA Website, 2000

10



Non gonococcal Urethritis



Gonococcal Urethritis

11

Urethritis

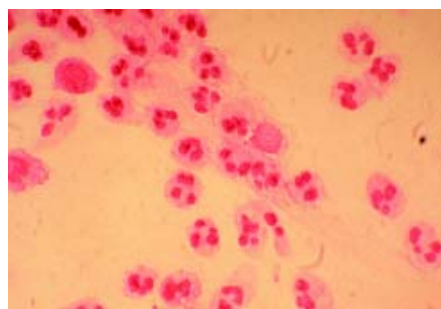
- ❑ Can confirm diagnosis one of 3 ways:
 - 1-Symptoms: history of urethral discharge and/or dysuria
 - 2-Examination: mucopurulent or mucoid purulent discharge
 - 3- Laboratory:
 - o Gram stain of urethral secretions with ≥ 5 WBCs/HPF
 - o Positive leukocyte esterase or ≥ 10 WBCs/HPF on first void urine
- ❑ For etiological diagnosis: GC and CT tests
- ❑ Cannot accurately distinguish etiology based on exam findings

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Urethritis diagnosis



Intracellular Gram-negative diplococci (GNDC) in urethral Gram stain



Non gonococcal Urethral Gram stain with >5 WBCs per high power

13

Gonococcal Urethritis Physical Exam



On exam, urethra is erythematous and tender
Copious purulent discharge is evident after stripping the urethra

Mossby STD Atlas, 1997

14

GC Clinical & diagnosis in Men

- Incubation period 2-6 days
- Men present with abrupt onset of severe dysuria and copious purulent discharge; few may be asymptomatic carriers
- Other presentations: purulent conjunctivitis, proctitis, pharyngitis
- Gonorrhea diagnosis in Men:
 - 95% sensitive in symptomatic males
 - 50-70% sensitive in asymptomatic males
 - Culture 80-95% sensitive
 - Gen-probe: 90-95% sensitive

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Gonococcal Infections in Men

- Urethritis
- Epididymitis/seminal vesiculitis
- Proctitis
- Conjunctivitis
- Abscess of Cowper's/Tyson's glands
- Pharyngitis
- DGI (<5% of patients; 90% arthritis +/- dermatitis)
- Urethral stricture
- Penile edema



Infection may be asymptomatic



DGI Skin Lesion

16

Chlamydia Infection in Men

- Incubation period 1-5 weeks (2 weeks)
- Urethritis
- Epididymitis
- Proctitis
- Conjunctivitis
- Reiter's Syndrome

>50% ASYMPTOMATIC



Reiter's Syndrome
Circinate Balanitis

17

Chlamydia Urethritis Manifestations in Men

- Urethritis
 - may have mucoid to purulent discharge, dysuria and itching/irritation at the meatus
 - May be asymptomatic.



18

Treatment for Gonorrhoea & Chlamydial infection in men

1. For gonococcal urethritis:

CEFIXIME 400 mg single oral dose OR

CEFTRIAZONE 250 mg single IM dose OR

SPECTINOMYCIN 2gm single IM dose

PLUS

2. For Chlamydia urethritis:

- AZITHROMYCIN 1 gm single oral dose OR
- DOXYCYCLINE 100 mg orally twice daily for 7 days OR
- ERYTHROMYCIN 500mg orally four times daily for 7 days

Treatment of partners:

All partners (in the past 2 months) of patients with urethral discharge should receive treatment for gonorrhea and chlamydia

19

Treatment for Gonorrhoea & Chlamydial infection in men

Treatment of partners:

All partners (in the past 2 months) of patients with urethral discharge should receive treatment for gonorrhea and chlamydia

Special Considerations (HIV Infection)

Gonococcal urethritis, chlamydial urethritis, and nongonococcal, nonchlamydial urethritis might facilitate HIV transmission. Patients who have NGU and also are infected with HIV should receive the same treatment regimen as those who are HIV negative.

20

Treatment of Persistent/Recurrent Urethral Discharge in Men

- First document presence of urethritis
 - Rule out noncompliance or reinfection (? Partner)
 - Consider other etiologies: *Trichomonas* , HSV, and non-chlamydial urethritis
 - Treat to cover *Trichomonas* with:
 - ☐ METRONIDAZOLE 2g single oral dose OR
 - ☐ Tinidazole 2 gm single oral dose (if available)
- Plus
- ☐ ERYTHROMYCIN 500mg orally four times daily for 7 days

Module 3.2

Diagnosis and treatment of STI/RTI

Genital Ulcer

1

Learning Objectives

This module will enable you to:

- Use the flowchart for genital ulcer
- List the etiologic agents of genital ulcer
- Describe the clinical manifestations and sequelae of genital ulcer
- State the clinical and laboratory criteria for the diagnosis of Syphilis, chancroid & herpes.
- Summarize the clinical management of patients with genital ulcer to include recommended diagnostic tests, treatment.

2

Genital Ulcers

- Syphilis
- Chancroid
- Herpes simplex
- Lymphogranuloma venereum (LGV)
- Granuloma inguinale (Donovanosis)
- Primary HIV infection
- Many Non STD etiologies

3

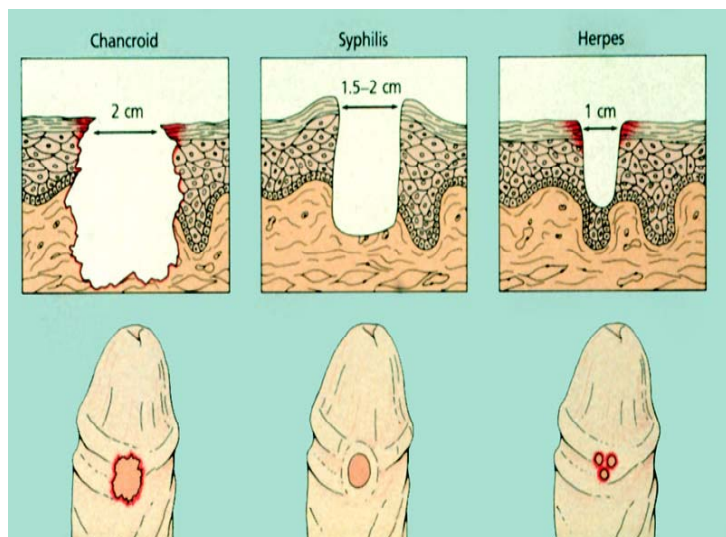
Genital Ulcer Disease

Ulcer Morphology

- Number - single or multiple
- Depth - shallow or deep
- Borders - smooth or ragged
- Indurations - present or absent (firm or soft)
- Exudates - clean-based or purulent
- Associated pain - painful or painless
- Associated lymphadenopathy - regional or generalized

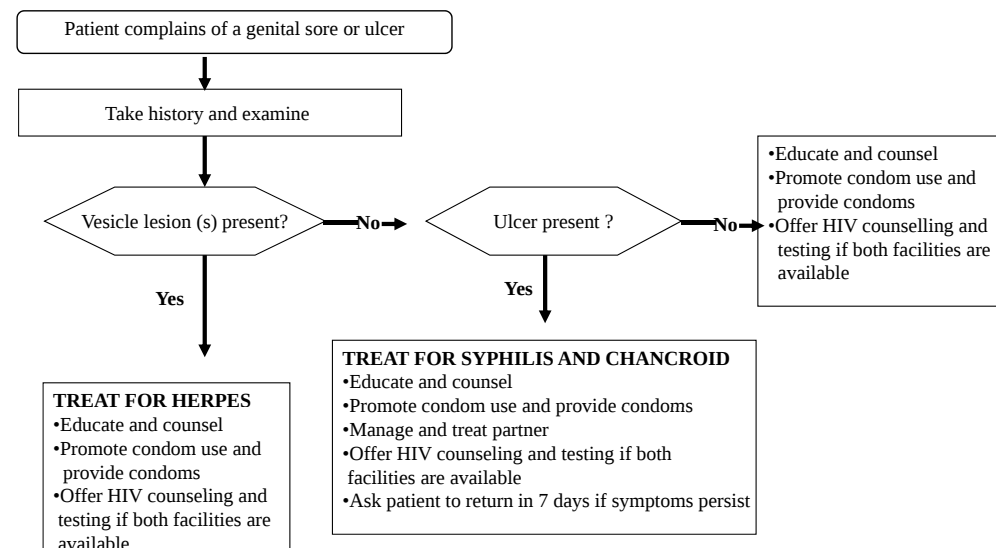
4

Comparison of Genital Ulcer Morphology



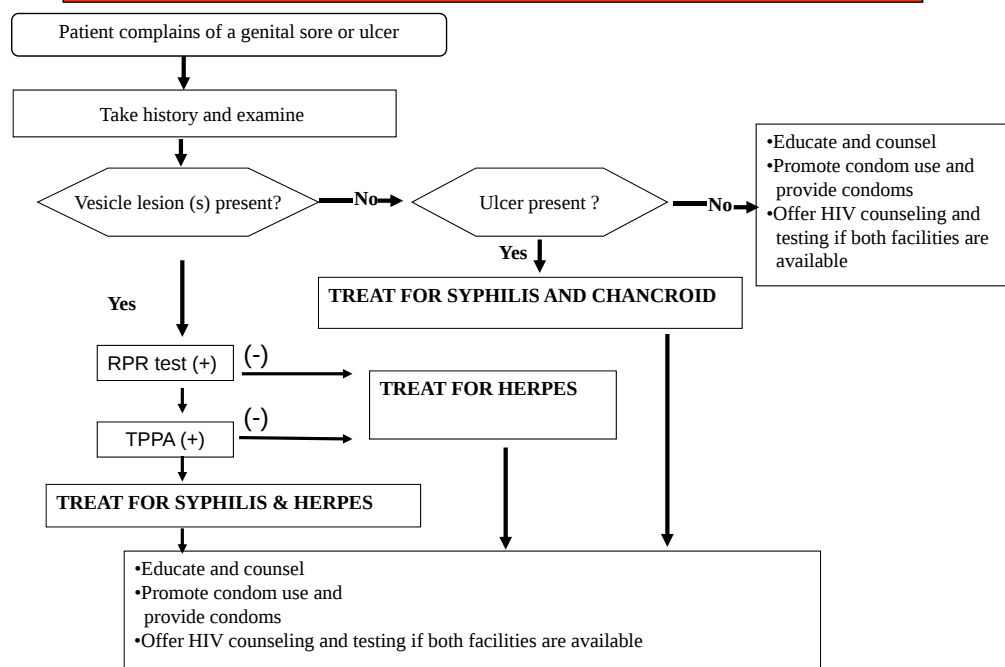
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Genital Ulcer Syndrome



6

Genital Ulcer Syndrome (with Laboratory)



TREATMENT FOR SYPHILIS, CHANCROID

1- For SYPHILIS:

BANZATHINE PENICILLIN G 2.4 million units IM at a single session

For penicillin –allergic patients, use:

- DOXYCYCLINE 100 mg orally twice daily for 14 days OR
- TETRACYCLINE 500mg orally four times daily for 14 days OR
- ERYTHROMYCIN 500mg orally four times daily for 14 days

PLUS

2- For CHANCROID:

- AZITHROMYCIN 1 gm single oral dose OR
- CIPROFLOXACIN 500 mg orally twice daily for 3 days OR
- ERYTHROMYCIN 500mg orally four times daily for 7 days OR
- CEFTRIAXONE 250mg single IM dose

8

Primary and Secondary Syphilis Among HIV Infected Persons

Treatment

Treatment with benzathine penicillin G, 2.4 million units IM in a single dose is recommended.

Some specialists recommend additional treatments (e.g., benzathine penicillin G administered at 1-week intervals for 3 weeks, as recommended for late syphilis) in addition to benzathine penicillin G 2.4 million units IM.

9

Treatment for chancroid Among HIV infected person

HIV-infected patients who have chancroid should be monitored closely because, as a group, these patients are more likely to experience treatment failure and to have ulcers that heal more slowly. HIV-infected patients might require longer courses of therapy than those recommended for HIV negative patients, and treatment failures can occur with any regimen.

10

Treatment for chancroid Among HIV infected person

Because evidence is limited concerning the therapeutic efficacy of the recommended ceftriaxone and azithromycin regimens in HIV-infected patients, these regimens should be used for such patients only if follow-up can be ensured. Some specialists prefer the erythromycin 7-day regimen for treating HIV-infected persons.

11

TREATMENT FOR HERPES

1. FOR HERPES PRIMARY EPISODE

- Wash the lesion thoroughly with soap and water to keep the area clean and dry.
- GENTIAN VIOLET 0.5% wash twice daily for 7 days or
- ACICLOVIR 200mg orally, 5 times daily for 7 days OR
- ACYCLOVIR 400mg orally, 3 times daily for 7 days OR
- FAMCICLOVIR 250mg orally, 3 times daily for 7 days OR
- VALACICLOVIR 1000mg orally, twice daily for 7 days

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TREATMENT FOR HERPES Cont.

2. FOR HERPES RECURRENT EPISODE

- ACICLOVIR 200mg orally, 5 times daily for 5 days OR
- ACYCLOVIR 400mg orally, 3 times daily for 5 days OR
- ACYCLOVIR 800mg orally, twice daily for 5 days OR
- FAMCICLOVIR 125mg orally, twice daily for 5 days OR
- VALACICLOVIR 500mg orally, twice daily for 5 days
- VALACICLOVIR 1000mg orally, once daily for 5 days

13

TREATMENT FOR HERPES Cont.

HIV Infection

Immunocompromised patients might have prolonged or severe episodes of genital, perianal, or oral herpes. Lesions caused by HSV are common among HIV-infected patients and might be severe, painful, and atypical. HSV shedding is increased in HIV-infected persons. Whereas antiretroviral

therapy reduces the severity and frequency of symptomatic genital herpes, frequent subclinical shedding still occurs.

Suppressive or episodic therapy with oral antiviral agents is effective in decreasing the clinical manifestations of HSV among HIV-positive persons. HIV-infected persons

14

Recommended Regimens for Daily Suppressive Therapy in Persons Infected with HIV

❑ **Acyclovir** 400–800 mg orally twice to three times a day

OR

❑ **Famciclovir** 500 mg orally twice a day

OR

❑ **Valacyclovir** 500 mg orally twice a day

15

Recommended Regimens for Episodic Infection in Persons Infected with HIV

❑ **Acyclovir** 400 mg orally three times a day for 5–10 days

OR

❑ **Famciclovir** 500 mg orally twice a day for 5–10 days

OR

• **Valacyclovir** 1.0 grams orally twice a day for 5–10 days

16

GUD PARTNER MANAGEMENT

- All partners (in the past 3 months) of patients who receive syndromic treatment for GUD should also be treated for syphilis and chancroid.(and for LGV/GI based on local epidemiology)

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Syphilis

- Caused by *treponema pallidum*
- Spirochete penetrates through abrasions.
- Major route are sexual and vertical (in utero from infected pregnant via hematogenous spread to her fetus)
- Most infectious during primary and secondary stages
- Noninfectious after 4 years



Treponema pallidum

18



Early lesion-4wks



Healing 4-5 wks



> 5 wks



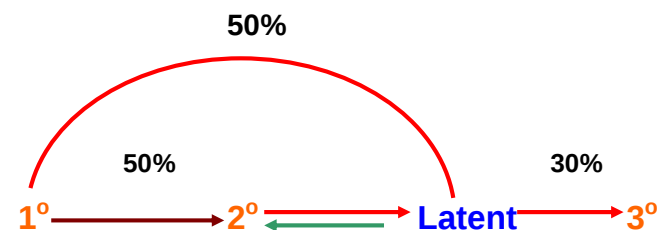
> 6 weeks

Photos courtesy Region III PTC

19

Syphilis: The Disease

- Chronic infection that is characterized by episodes of active disease interrupted by periods of latent infection
- Incubation period: 9-90 days



20

Primary Syphilis

• Chancre

- Appears 10-90 days after infection; average 3 weeks
- Usually darkfield-positive
- VDRL/RPR ~74-87% sensitive at this stage; check FTA- ABS or TP-PA if clinically indicated
- Persists 2-3 weeks. may go unnoticed by patient



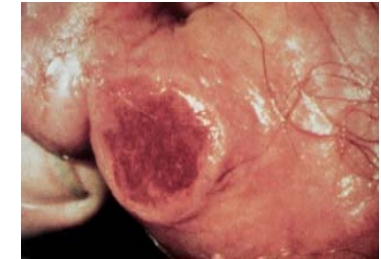
Primary Syphilis
Chancre, Penile Corona

21

Primary Syphilis



Primary Syphilis Clearly Indurate Ulcer



Penile Lesions Resembling Herpes



Multiple Vulvar Chancres



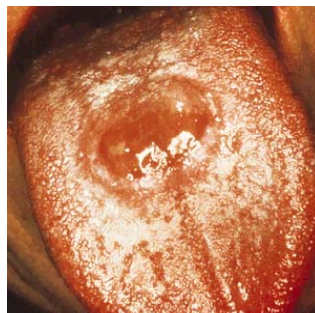
Crusting Ulcer on Penile Glans

22

Primary Syphilis



Chancre on Chin



Chancre on Tongue



Digital Chancre

23

Secondary Syphilis

- Occurs 3-6 weeks after primary chancre, disseminated disease with multiple signs.
- Rash (75-90%) : macular, papular, squamous usually non pruritic (including palms and soles in 60%)
- Generalized adenopathy (70-90%)
- Symptoms: malaise, fevers, myalgias.
- Mucous patches (5-30%) flat patches (oral cavity, pharynx, larynx, and genitals)

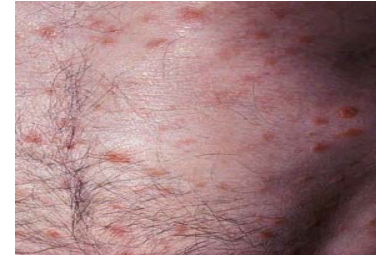
24

Secondary Syphilis

- Condyloma lata (5-25%) moist, heaped, wart-like that occur in warm interiginous areas most commonly:
 - Gluteal folds
 - Perineum
 - Perianal
- Alopecia (10-15%): patchy occipital and bi-temporal, loss of lateral eyebrows
- Serologies should be positive

25

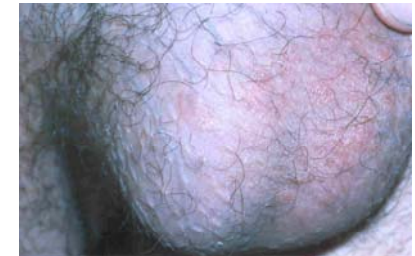
Rash of Secondary Syphilis



Macular & Papulosquamous Rash



Hyperpigmented macules



26

Secondary Syphilis Condyloma Lata



27

Secondary Syphilis Mucous Patches

- Painless, flat, white or red patches
- Occur on mucus membrane of mouth, pharynx, larynx, genitals
- Teeming with spirochetes; very infectious



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Alopecia

Moth-Eaten



Diffuse



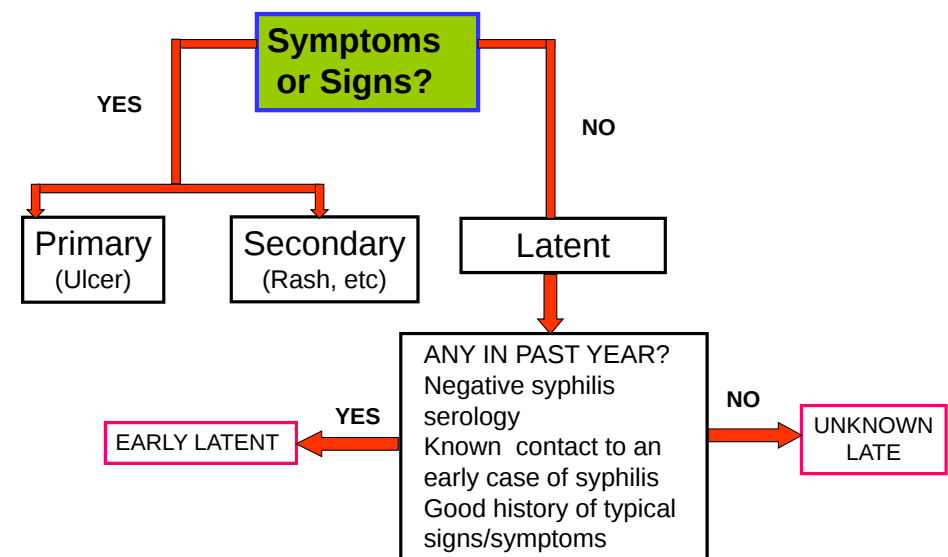
Latent Syphilis

- Divided into “Early Latent”, less than 1 year after infection, and “Late Latent”, more than 1 year after infection
- No clinical manifestations: only evidence is positive serologic test for syphilis
- Relapses of secondary lesions in up to 25% of cases, usually within the first year.

Tertiary Syphilis

- 30% of untreated patients will develop 3^o manifestation
- CNS (months to years)
- Cardiovascular
 - Aortic aneurysm (15-30 years)
- Bone and connective tissue
 - Gummas : Granulomatous lesions, erosive and destructive (1-40 years)

Syphilis Staging Flowchart



Diagnosis of Syphilis

A. History

- ☐ History of syphilis
- ☐ Contact to an early case of syphilis
- ☐ Typical signs or symptoms of syphilis in the past 12 months
- ☐ Serologic test for syphilis

B. Physical examination: lymph nodes, Skin of torso, palms, soles

C. Laboratory

- ☐ Identification of treponema pallidum based on dark-field microscopy
- ☐ Serological tests

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Diagnosis of Syphilis

- Darkfield microscopy
 - ☐ Requires special microscope and training
 - ☐ Rapid diagnosis of primary lesions
 - ☐ Sensitivity decreases with age of lesion (1° and 2° only) and use of topical agents
- Serology
 - ☐ Nontreponemal tests (RPR, VDRL)
 - ☐ Treponemal tests (TP-PA, FTA-ABS)

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Nontreponemal Tests for Syphilis VDRL and RPR

- Detect anticardiolipin Abs, not specific for TP
- Quick, inexpensive and quantitative (can be used to monitor response to Rx)
- Biological false positives (BFP) seen in viral illnesses, vaccinations, autoimmune diseases, chronic diseases
- May be negative in primary, then again in late latent and tertiary disease

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Syphilis Treponemal Tests

- Specific for *T. pallidum*
- Measure antibody (IgM & IgG) directed against *T. pallidum* antigens by hemagglutination(TP-PA) or immunofluorescence(FTA-ABS)
- Test depends on serum dilution and adsorption for specificity
- Useful to confirm positive non-treponemal test

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Which Serologic Test is Best? Sensitivity According to Stage

<u>Test</u>	<u>1°</u>	<u>2°</u>	<u>Latent</u>	<u>Tertiary</u>
<u>VDRL/RPR</u>	78% (74-87)	100%	95%(88-100)	71%(37-94)
FTA-ABS	84%(70-100)	100%	100%	96%
MHA-TP*	76%(69-90)	100%	97%(97-100)	94%

***MHA-TP and TP-PA probably perform equivalently**

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Serologic Pitfalls in the Diagnosis of Syphilis

- Negative nontreponemal test may occur early in primary or late in tertiary - check FTA-ABS or TP-PA
- Prozone phenomenon: false negative due to lack of agglutination with high antibody levels - dilute serum and recheck
- Serofast: persistent, low-level positive titer after adequate treatment

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Syphilis Follow-up and Serologic Response

- 1° and 2°: re-examine at 6 and 12 months; fourfold decrease in serology within 6 months
- Latent: re-examine at 6, 12 and 24 months; fourfold decrease in serology in 12-24 months
- HIV: closer follow-up recommended
 - 1° and 2°: re-examine at 3, 6, 9, 12, and 24 months; fourfold decrease in serology in 6-12 months
 - latent: re-examine at 6, 12, 18 and 24 months; fourfold decrease in 12-24 months

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Syphilis in Pregnancy

- Transmission rate by stage of maternal:
 - Primary: 70-100%
 - Secondary: 90%
 - Latent: 10-30%
- Outcome in untreated early syphilis:
 - 25% intrauterine death
 - 25% perinatal death
 - 50% congenital syphilis (50% asymptomatic)
- Appropriate treatment during pregnancy does not prevent disease, but treats disease in fetus

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Congenital Syphilis Complications

- Abortion or stillbirth
- Neonatal disease
 - bone: osteochondritis, periostitis, teeth
 - eye: retinal and and/or corneal
 - visceral: liver, spleen
 - skin: rash
 - CNS: juvenile paresis or tabes, deafness
- Latent disease: interstitial keratitis, deafness, arthropathy

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Syphilis Contact Management

- All partners within the following time periods require evaluation:
 - 1°: 90 days + duration of symptoms
 - 2°: 6 months + duration of symptoms
 - early latent: 1 year
- Partners of patients with syphilis of unknown duration and titers $\geq 1:32$ should also be evaluated

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Syphilis Contact Management

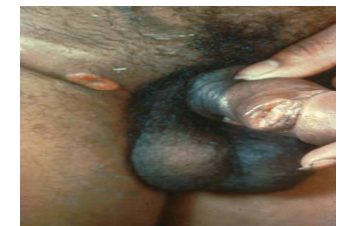
- Partners exposed within 90 days preceding diagnosis of early syphilis should be treated presumptively (epidemiologic treatment)
- Partners exposed more than 90 days prior to the diagnosis of early syphilis should be evaluated for infection and treated presumptively if follow-up is uncertain
- Long-term partners of patients with late syphilis should also be evaluated

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Chancroid



Multiple Penile Ulcers



Penile Ulcer with Regional Node



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Chancroid Clinical Features

- Caused by *Haemophilus ducreyi*
- Incubation period 3-10 days
- Starts as a papule that forms a soft, painful ulcer with a necrotic base
- Accompanied by painful adenopathy that may suppurate to form buboes

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Chancroid Characteristics of Bubo

- Occurs in 40-50% of cases
- Bubo formation results from pyogenic inflammatory response with neutrophils but few bacilli.
- Suppurative and tender
- Often a sterile abscess

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Chancroid Diagnosis

- Gram-stain: Low sensitivity
 - Short, Gram-negative rods aligned as “railroad ties”
 - Requires experienced microscopist
- Culture: Sensitivity 40-80%
 - Requires selective media
 - Not commercially available
- Clinical diagnosis
 - Presence of bubo in association with painful genital ulcers strongly suggests chancroid

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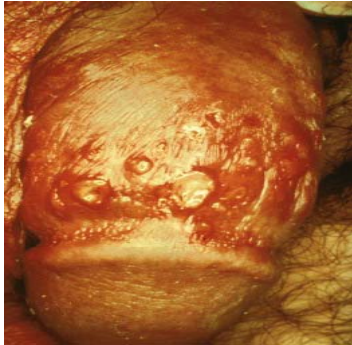
Chancroid Clinical Follow-up

- Re-examine in 3-5 days, then weekly until ulcers and buboes have healed
 - Ulcers usually improve within 3 -7 days of treatment
 - Buboes may appear to worsen in 1-2 days following therapy; may need to aspirate
- Retest for syphilis and HIV in 3 months
- HIV-infected patients may require longer courses of therapy
- Partner management
 - Treat all sexual contacts within past 10 days plus length of symptoms in days

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Primary Herpes

Primary Herpes, Penis



Primary Herpes
Confluent Vulvar Ulcers



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Genital Herpes Simplex

- Genital herpes is a chronic, life-long viral infection.
- Two types of HSV has been identified, HSV1 and HSV2.
- May cause primary, recurrent, subclinical or asymptomatic infection
- Most sexual transmission occurs during asymptomatic shedding
- Condom use likely decreases risk of transmission to partner

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Genital Herpes-Primary Infection



DOIA Website, 2000

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Primary Herpes

- Incubation period ~ 4 days (2-14 day range)
- Systemic symptoms seen in up to 80% (fever, headache, malaise, myalgia)
- Local symptoms: pain, itching, dysuria, discharge, inguinal adenopathy
- Multiple painful lesions develop bilaterally; begin as erythematous papules that vesiculate, then ulcerate and crust

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Primary Herpes (cont.)

- New lesions may appear for up to 10 days, with mean duration of lesions 18 days
- Mean time of culture positivity is 12 days
- Complications are not uncommon: aseptic meningitis (30%), autonomic dysfunction, dissemination



Early Lesions



Crusted Lesions

Recurrent infection without treatment

- Prodromal symptoms in ~50% begin 12-24 hours before lesions and sometimes without lesions ("false prodrome").
- Duration is shorter than in primary infection: average duration of viral shedding 4 days.
- Symptoms usually there are no systemic symptoms.
- Average of 2-6 recurrences/year
- HSV-2 primary infection is much more prone to recur than HSV-1 primary

Diagnosis of Herpes

- Sensitivity of viral culture only 50% overall, better in primary and fresh lesions, worse in recurrent or older lesions
- Antigen detection (IFA, ELISA): 70-85% sensitive in active lesions
- Tzanck prep insensitive (50%)
- Herpes serologies

HSV in Pregnancy

- Transmission rates by stage of maternal infx:
 - Primary (acquired during 3rd trimester): 50%
 - Recurrent (at time of delivery): 4%
 - Asymptomatic shedding (at delivery): probably < 1%
- Most transmission due to asymptomatic shedding
- Management of women with hx of HSV:
 - Active lesions/ prodrome noted prior to delivery: C-section

Module 3.3

Diagnosis and treatment of STI / RTI

Vaginal Discharge

1

Learning Objectives

At the end of this module, the participants will be able to:

1. Use appropriate the flowchart of vaginal discharge
2. Differentiate between normal & abnormal vaginal discharge
3. List the signs and symptoms of vaginal discharge
4. Describe about what's wrong with vaginal douching
5. Identified the efficiency treatment of vaginal discharge
6. Summarize the clinical management of patients with vaginal discharge including diagnosis, and treatment.

2

Normal Discharge

- ❑ Floccular in consistency, whitish, and non-malodorous.
- ❑ The volume- minimal staining of undergarments to profuse discharge.
- ❑ pH is acidic, ranging from 3.8 to 4.2
- ❑ Normal vaginal microorganisms
 - Lactobacillus species
 - Bacteroides urealyticus, Phaemolytic and non haemolytic streptococci, Candida albicans, Diphtheroids, Enterococci, Escherichia coli, Fusobacterium nucleatum, Mobiluncus spp, Mycoplasma hominis, Micrococcus pyogenes, Peptostreptococcus spp, Prevotella bivia disiens, Staphylococcus epidermidis, and Ureaplasma urealyticum.

3

Abnormal Vaginal Discharge

- Vaginal hypersecretion not associated with pre-mid- and post menstruation
- Offensive or malodorous discharge
- Yellowish/ curdy/frothy discharge
- Abnormal vaginal discharge: N. gonorrhoeae, C. Trachomatis, trichomonas vaginalis, candida albicans, and anaerobic bacteria.

4

Differences Between Vaginitis and Cervicitis

Vaginitis

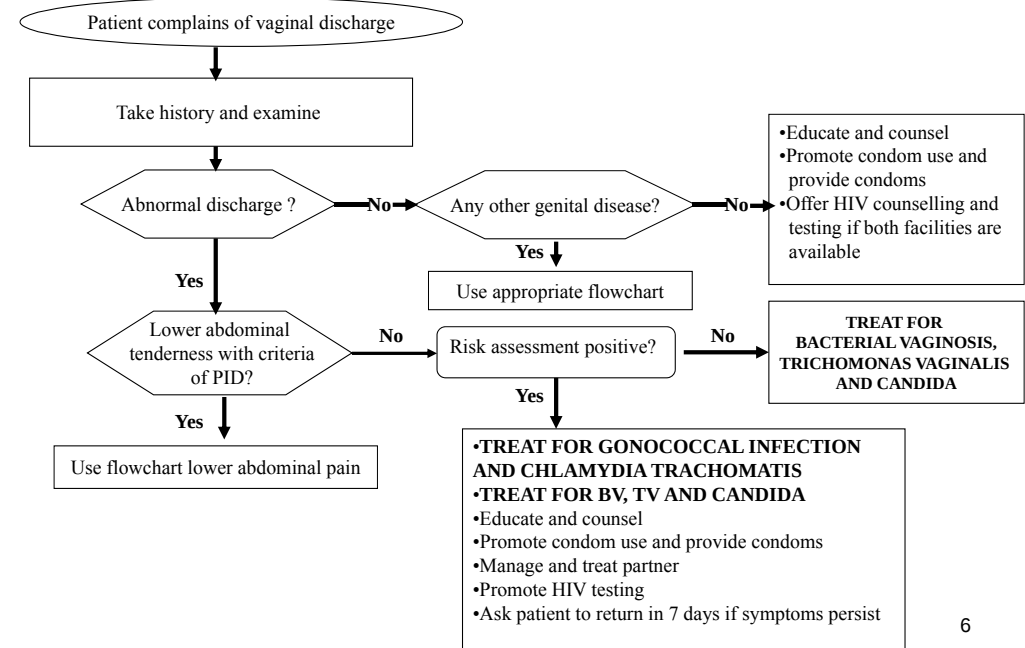
- Commonly caused by trichomoniasis, candida and bacterial vaginosis (BV)
- Most common cause of vaginal discharge
- Easy to diagnose
- Treatment of partner not necessary for candida and BV

Cervicitis

- Commonly caused by gonorrhea and chlamydia
- Less common cause of vaginal discharge
- Difficult to diagnose
- Need to treat partner

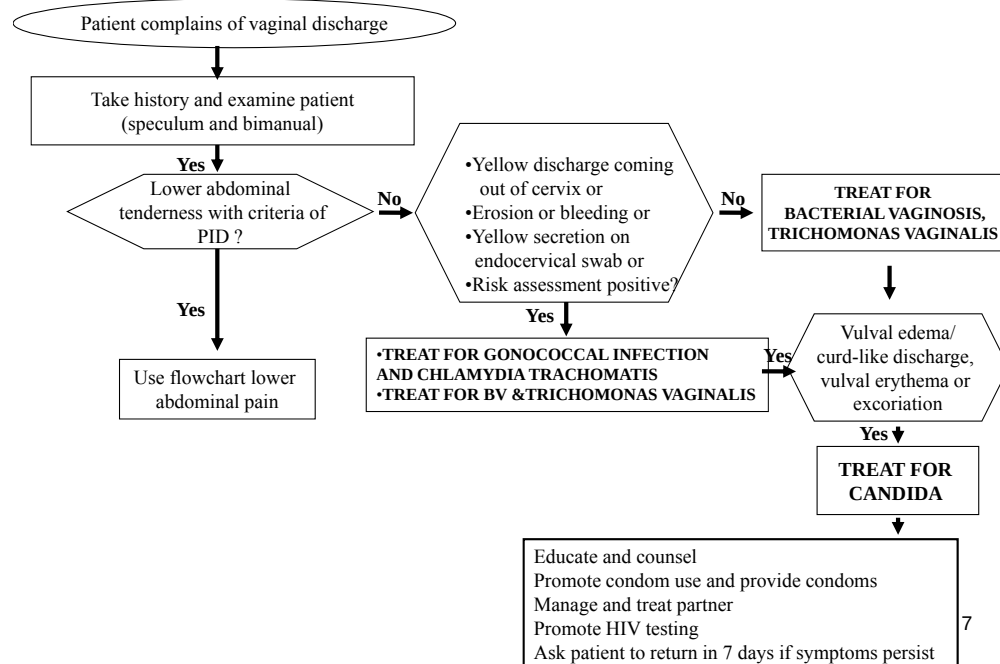
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Vaginal Discharge



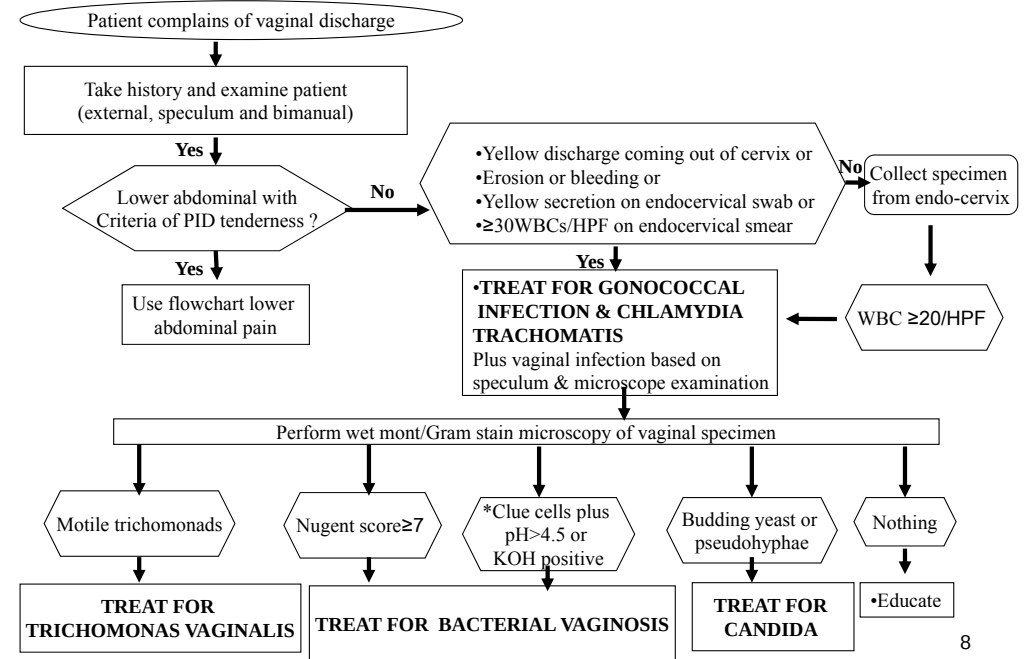
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Vaginal Discharge Bimanual & Speculum



7

Vaginal Discharge Bimanual & Speculum & Microscope



* See Amsel criteria

8

Risk Assessment of Cervicitis

- The patient has been complaining of a muco-purulent discharge.
- Partner has symptoms of STI.

The risk assessment is positive if the answer is 'yes' to one or two questions.

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TREATMENT FOR CERVICITIS

1. For gonococcal cervicitis:

- ☐ CEFIXIME 400 mg single oral dose OR
- ☐ CEFTRIAXONE 250 mg single IM dose OR
- ☐ SPECTINOMYCIN 2gm single IM dose

PLUS

2. For chlamydia cervicitis:

- ☐ AZITHROMYCIN 1 gm single oral dose OR
- ☐ DOXYCYCLINE 100 mg orally twice daily for 7 days OR
- ☐ ERYTHROMYCIN 500mg orally four times daily for 7 days

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TREATMENT FOR VAGINITIS

1. FOR TRICHOMONASIS

- ☐ METRONIDAZOLE * 2g as a single oral dose to be taken at clinic under supervision OR
- ☐ TINIDAZOLE * 2 g as a single oral dose (if available)

Alternative regimen:

- ☐ METRONIDAZOLE* 500 mg given orally twice daily for 7 days OR
- ☐ TINIDAZOLE * 500 mg given orally twice daily for 7 days

Pregnancy: METRONIDAZOLE * 2g as a single oral dose

(WHO- ok in 2nd and 3rd trimester; CDC- ok in all of pregnancy)

**no alcohol*

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TREATMENT FOR VAGINITIS cont.

2. FOR BACTERIAL VAGINOSIS

- METRONIDAZOLE* 500 mg given orally twice daily for 7days

Alternative regimens:

- METRONIDAZOLE * 2g as a single oral dose OR
- CLINDAMYCIN vaginal cream 2%, 5g intravaginally, at bedtime for 7 days OR
- METRONIDAZOLE gel 0.75%, 5g intravaginally, twice daily for 5 days OR
- CLINDAMYCIN 300 mg orally, twice daily for 7 days

**avoid alcohol*

Note: oil based cream, may weaken condoms or diaphragm

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TREATMENT FOR VAGINITIS cont.

FOR BACTERIAL VAGINOSIS (Pregnancy: CDC:)

- METRONIDAZOLE* 250 mg orally three time daily for 7days

Alternative regimens:

- METRONIDAZOLE * 2g as a single oral dose OR
- CLINDAMYCIN 300mg orally, twice daily for 7 days OR
- METRONIDAZOLE gel 0.75%, 5g intravaginally, twice daily for 5 days

**no alcohol*

(WHO- metronidazole ok in 2nd and 3rd trimester. CDC- ok in all of pregnancy)

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TREATMENT FOR VAGINITIS cont.

3. FOR CANDIDIASIS

- CLOTRIMAZOLE* 500 mg intravaginally, as a single dosr OR
- MICONAZOLE* or clotrimazole* 200 mg intravaginally daily for 3 days OR
- FLUCONAZOLE 150 mg orally, as a single dose

Alternative regimen:

- NYSTATIN 100,000 IU intravaginally daily x 14 days

** ok in pregnancy*

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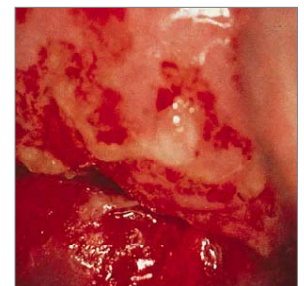
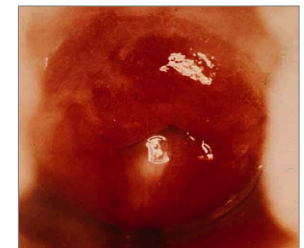
Vaginal Discharge Syndrome Partner management

- All sexual partners (within the last 2 months) of patients treated for GC/CT/Trich should receive treatment with the same regimens
- Sexual partners of patients treated only for vaginitis do not need to receive treatment unless the discharge recurs. (If discharge recurs treat the male partners with Metronidazole 2 gm P.O. orally once).

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Mucopurulent Cervicitis (MPC) Clinical Features

- Caused by GC, *Chlamydia*, herpes or trichomoniasis
- Often the etiology is not identified
- Cannot predict etiology by physical exam
- Many asymptomatic, but may have discharge or abnormal bleeding
- On physical exam, may see erosions or friability of cervix with mucopurulent discharge (MPC)
- Complications: may lead to PID



Friable

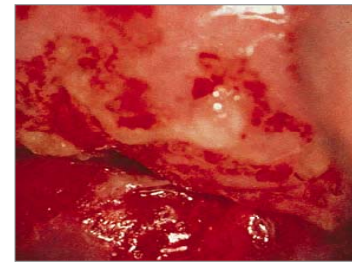
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Evaluation of Cervicitis

- Yellow endocervical exudate on swab from cervix is “Positive swab test”
- Cervical bleeding with cotton swab (friability)
- Gram stain of cervical exudate
 - Number of WBCs on gram stain is generally not useful (low positive predictive value), but cut off of ≥ 20 WBC/high power oil immersion field is used as possibly indicative of cervicitis
 - ~ 50-70% sensitive for GC (if gram negative intracellular diplococci are not found may still opt to treat for cervicitis based on risk assessment).
- Etiologic tests for CT and GC (if available) and saline wet mount for *Trichomonas*

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Evaluation of Cervicitis



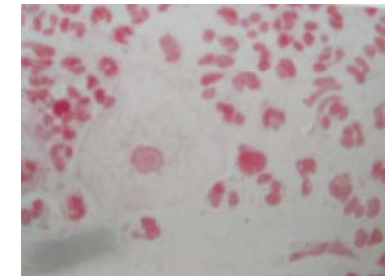
Friable



Yellow endocervical exudate



Positive swab test



WBCs ≥ 30 on Gram stained



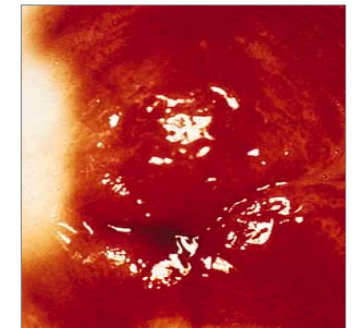
Cervicitis Treatment

- Presumptive treatment recommended
 - Patient at high risk for CT/GC (risk assessment positive or known high prevalence in clinic setting)
 - Tests for CT and or GC are done but health care provider thinks patient likely not to follow-up
 - Tests for CT/GC are not available- treat by following vaginal discharge syndrome
- Partner treatment
 - Follow vaginal discharge syndrome if diagnostic tests not available
 - All sex partners of patients diagnosed with CT/GC/Trich should receive same treatment

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Chlamydia Infections

- Cervicitis
- Urethritis
- Conjunctivitis
- Proctitis
- Peri-hepatitis (Fitz-Hugh-Curtis syndrome)



Beefy Red Cervical Mucosa



70-80% ASYMPTOMATIC



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Chlamydia Partner Management

- Transmissibility:
 - male to female: 45-70%
 - female to male: 28-68%
- All sexual partners (within 2 months prior to diagnosis) should be evaluated, tested and treated
- If no sex partners within 2 month prior to diagnosis, treat the most recent partner

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Gonococcal Infections in Women

- Cervicitis
 - Urethritis
 - Proctitis
 - Pharyngitis
 - Accessory gland infection (Skene, Bartholin)
 - PID/Peri-hepatitis (Fitz-Hugh-Curtis)
 - Conjunctivitis
 - DGI
 - 50% women asymptomatic, others have dysuria, vaginal discharge or bleeding
- Many infections asymptomatic



Tender swollen Bartholin's gland with purulent discharge

22
 Mosby

Gonorrhea Diagnosis

- Gram stain of cervical discharge
 - 95% sensitive in men
 - 50-70% sensitive in women (would treat based on risk assessment if gram stain negative for GC))
- Culture: 80 - 95% sensitive
- DNA probe (Gen-Probe): 90-95% sensitive

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GC Partner Management

- Transmissibility:
 - male to female: 50 - 90%
 - female to male: 20 - 80%
- Sexual partners (within 2 month prior to diagnosis) should be evaluated, tested and treated
- If no sex partners within 2 months prior to diagnosis, treat the most recent partner

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Vaginitis: Clinical Presentation

- Abnormal vaginal discharge
- Vulvar itch
- Odor
- Discomfort
- Burning with urination
- Painful intercourse



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Vaginitis Etiologies

- Bacterial Vaginosis (BV)
- Trichomoniasis
- Vulvovaginal Candidiasis (VVC)

Differential diagnosis:

- ◆ Gonorrhea
- ◆ Chlamydia
- ◆ Atrophic vaginitis
- ◆ Allergy
- ◆ Foreign body
- ◆ Urinary tract infection

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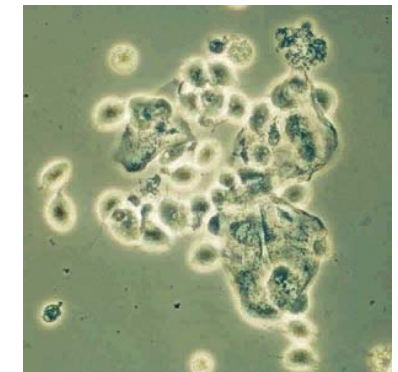
Evaluation of Vaginitis

- Characteristics of vaginal discharge
- Appearance of mucosa and cervix
- Vaginal pH
- Whiff test (amine test)
- Saline and KOH wet mounts
- Swab test, CT and GC tests

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Trichomoniasis

- Caused by *Trichomoniasis vaginalis* (parasite)
- Can infect cervix, vagina, urethra or bladder
- In men, can cause urethritis; spontaneous resolution may occur
- Treatment of male partner(s) of female patients diagnosed with trichomoniasis is recommended (testing for infection in men is difficult)



28

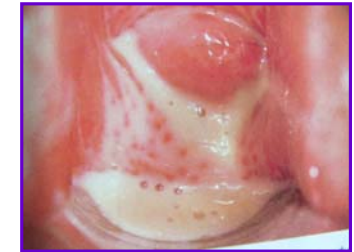
Trichomoniasis: Signs and Symptoms

- Malodorous yellow-green discharge with irritation, may have vulvar itching
- May see punctate cervical hemorrhages (strawberry cervix)
- Often may be asymptomatic ($\geq 50\%$)
- Long-term asymptomatic carriage documented in both men and women

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Trichomoniasis: Diagnosis

- Thin frothy grey/yellow vaginal discharge
- May see punctate cervical hemorrhages (strawberry cervix) 5 -10%
- Motile trichomonads on saline wet mount (sensitivity may be as low as 60%)
- pH > 4.5
- Whiff test may be positive
- Culture –In Pouch TV Test (if available)

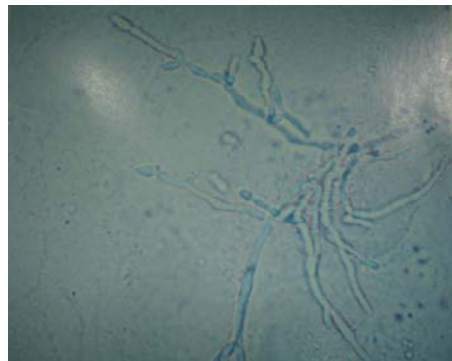


Strawberry cervix

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Vulvovaginal Candidiasis

- Caused by various *Candida* spp. (*albicans* 75-90%, *glabrata* 5-10%, *tropicalis* 5-10%)
- *Candida* may colonize 15-40% of women, so only considered a pathogen if symptomatic
- Very common infection
 - ~70-75% of women during their lifetime
 - ~ 40-50% have at least one recurrence



Pseudohyphae

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Vulvovaginal Candidiasis

Risks Factor

- Hormonal changes
- Pregnancy
- Diabetes
- Antibiotic use
- HIV infection
- Steroids



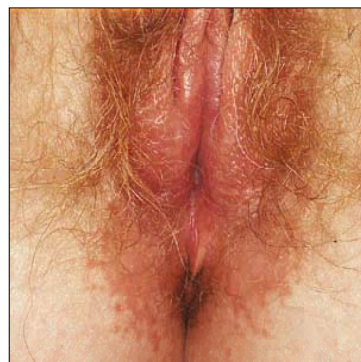
Candidiasis

32

Vulvovaginal Candidiasis

Signs and Symptoms

- Vaginal discharge, vaginal soreness, burning or itching
- Vulvar pruritis or dysuria may be the only complaint
- Discharge is white, can be thin and watery to thick and curd-like, with erythematous vaginal epithelium and vulva



Erythema and inflammation of external genitalia

Vulvovaginal Candidiasis Diagnosis

- Discharge (often cheesy, white) on inflamed mucosa, plus
- Evidence of fungal infection:
 - yeasts or pseudohyphae on wet mount microscopy or
 - Yeast or pseudohyphae on Gram stain vaginal smear
- pH usually normal

Differential Diagnosis of Vaginitis

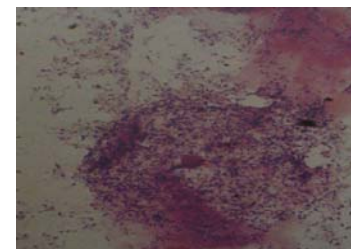
	BV	VVC	Trich
Symptoms	Odor discharge	Itch discharge	Itch discharge
Discharge	thin milky homogenous foul odor	thick white cheesy	frothy grey foul odor
pH	>4.5	Normal	>4.5
Whiff test	Positive	Negative	Positive/negative
Wet mount	Clue cells	Yeast/hyphae	Motile protozoa
Gram stain	Nugent score ≥ 7	Yeast/hyphae	

Normal Vaginal Flora can be changed by

- Douching
- Antibiotic and antifungal therapy
- Hormonal changes: pregnancy, birth control pills
- Spermicides, lubricant
- Foreign bodies: tampons, IUD, diaphragm
- semen
- Menstruation



Lots of lactobacilli and few other bacterial morphotypes



What is vaginal douching

- Douching is rinsing or cleaning out the vagina with water or other solutions (such as salted water, lemon juice, vinegar, tooth paste, etc.)

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Why women Use Vaginal douches?

- Douching is a practice that is thought to have been around since ancient times.
- Reasons women have given for using douches include to:
 - To rinse away blood after menstrual period
 - To clean the vagina after sex to avoid STIs or to prevent pregnancy (ineffectively!)
 - To reduce odors.

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Is douching safe?

- Health care providers DO NOT RECOMMEND douching to clean the vagina. The vagina cleans itself naturally. Douching changes the delicate chemical balance in the vagina (and the vaginal flora), which can make a woman more prone to bacterial infections. It also can spread existing vaginal or cervical infections up into the pelvic organs (uterus fallopian tubes, and ovaries).

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Problems of douching

- These problems include:
 - vaginal irritation
 - Infections (called *bacterial vaginosis* or BV), and
 - sexually transmitted infections (STIs)
 - Women who often douche are also more at risk for getting *pelvic inflammatory disease* (PID).

PID can result in chronic pain, infertility or ectopic pregnancy. Both BV and PID can lead to serious problems during pregnancy, such as infection in the baby, problems with labor, and early delivery.

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Conclusions

- The vagina cleans itself in a natural way.
- Women who want to feel fresh can gently clean their vulva with water or water with soap, but there is no need to wash inside the vagina.
- Douching is harmful, because of the risk for lower or upper genital tract infection.
- Douching shortly before the consultation at the STI clinic also makes diagnosis of existing infection more difficult or impossible.
- Health care providers, including outreach workers should make these issues clear to brothel owners and sex workers.

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Bacterial Vaginosis (BV)

- Normal lactobacilli are replaced by anaerobes (*Mobiluncus*) and *Gardnerella*
- Risk factors: multiple or new sex partner(s), routine douching
- Not an STD but may be sexually associated
- Associated with endometritis after procedures (endometrial biopsy, hysteroscopy, IUD insertion, abortion)
- Increased susceptibility to HIV

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Bacterial Vaginosis: Symptoms

- Foul, “fishy” odor
- Increased amount discharge
- Vulvar itching and/or irritation
- Symptoms worse after intercourse and during menses
- 50% may be asymptomatic



Bacterial Vaginosis

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BV: Recurrent Infection

Recurrent BV is common

- 25% within 4-6 weeks after treatment
- Up to 85% will have recurrence within one year
- Can occur after vaginal or oral therapy, and after metronidazole or clindamycin therapy
- Treatment of male partners does not reduce recurrence

Possible management strategies

- Vaginal metronidazole intermittently (Metro Gel once or twice per week for 3-6 months)
- Condoms to reduce semen exposure

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DIAGNOSIS OF CERVICITIS CAUSED BY BV

Amsel criterial

must have at least three of the following findings:

1. Vaginal pH >4.5
2. Homogeneous, non-viscous, milky-white discharge adherent to the vaginal walls.
3. Positive amine or "whiff test".
4. Presence of "clue cells" on wet mount examination.

45

Characteristic of Amsel criteria:



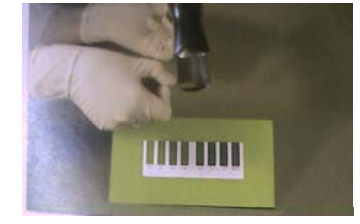
Amine odor



Clue cells)



Thin and homogenous discharge

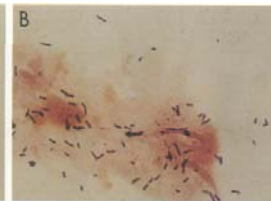


vaginal pH > 4.5

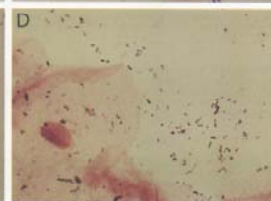
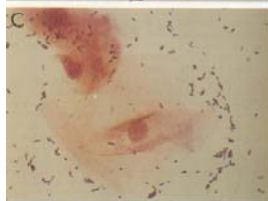
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Characteristic of Nugent criteria:

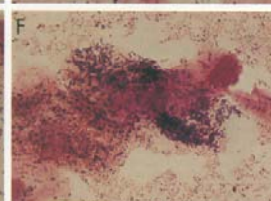
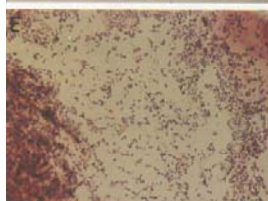
Gram's stain
Vaginal flora



Normal



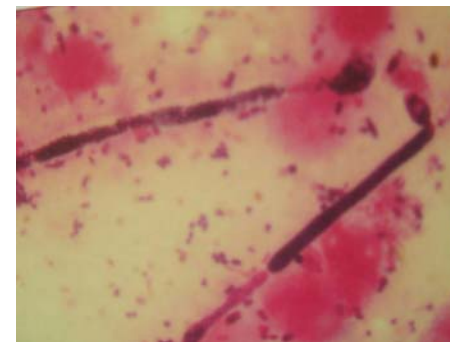
Intermediate



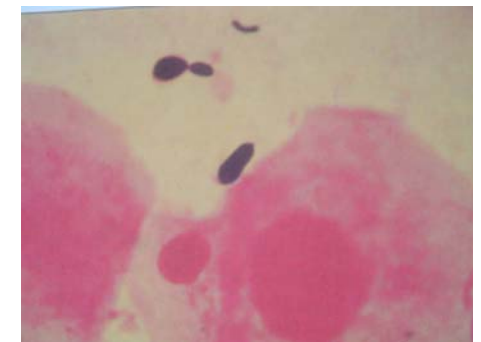
Bacterial vaginosis

47

Gram's stain of vaginal flora



Mycelia



Budding yeast

48

Module 3.4

Diagnosis and treatment of STI/RTI

Vaginal Discharge in female sex workers

1

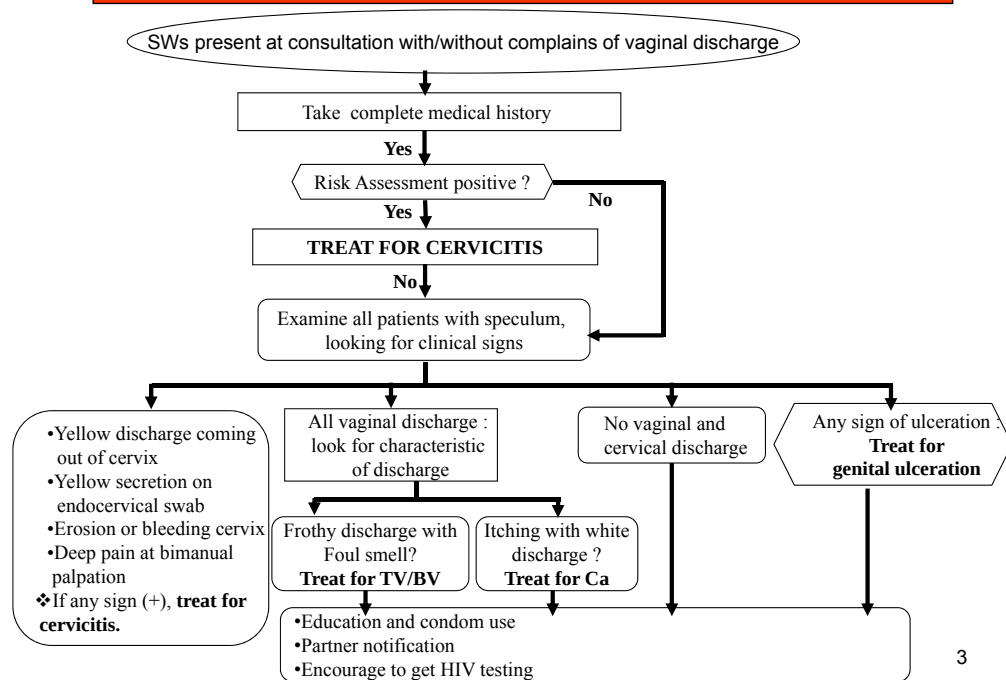
LEARNING OBJECTIVES

At the end of this module the participants will be able to:

1. Perform the using of flowchart clinical examination with & without Lab
2. Identify how to use the risk assessment for cervicitis on high risk group
3. Define how to make the diagnosis & treatment of vaginitis
4. Define how to make the diagnosis & treatment of cervicitis

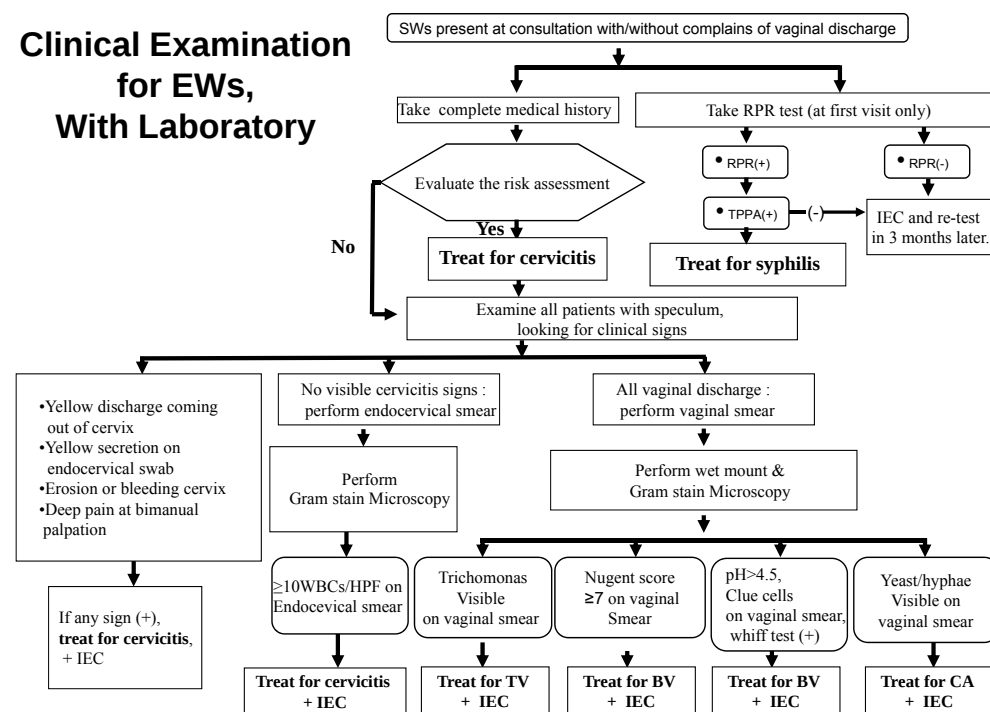
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Clinical Examination for EWs, Without Laboratory



3

Clinical Examination for EWs, With Laboratory



4

Risk Assessment for cervicitis

- 1) Patient has been complaining of thick yellow discharge since her last visit.
- 2) Patient experience deep pain when having sexual intercourse.
- 3) Patient have more than five clients per day (on average)
- 4) Patient have unprotected sex with new clients

Any two positive answers warrant treatment for cervicitis

5

Risk Assessment for cervicitis

- 1) Patient has been complaining of thick yellow discharge since her last visit.
- 2) Patient experience deep pain when having sexual intercourse.
- 3) Patient have more than five clients per day (on average)
- 4) Patient have unprotected sex with new clients

Any two positive answers warrant treatment for cervicitis

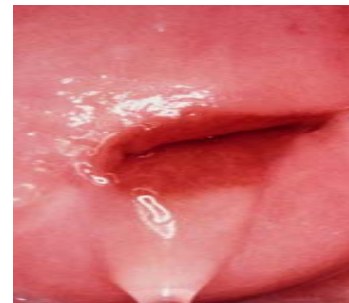
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Laboratory test for cervicitis

- Endocervical smear
- Gram stain the endocervical smear
- Count white blood cells (WBC)

If WBC ≥ 10 /HPF microscopic warrant treatment for cervicitis

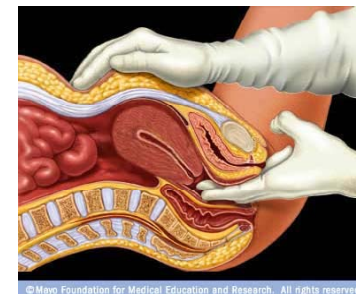
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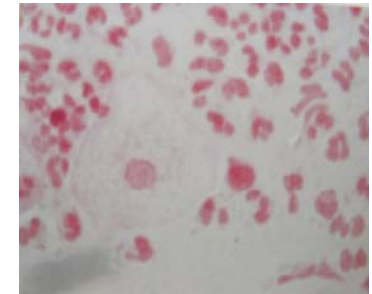
Yellow discharge coming out of cervix



Yellow secretion on endocervical swab



Deep pain at bimanual palpation



≥ 10 WBCs/HPF on Endocervical smear

8

BACTERIAL VAGINOSIS

3 OUT OF 4 CRITERIA

1. Thin, homogenous vaginal discharge
2. pH > 4.5
3. Whiff test (+)
4. Clue cells

9

CRITERIA OF BACTERIAL VAGINOSIS



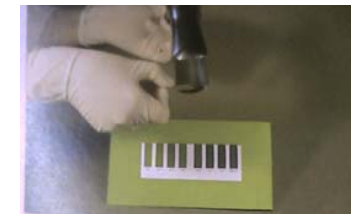
Amine odor



Clue cells



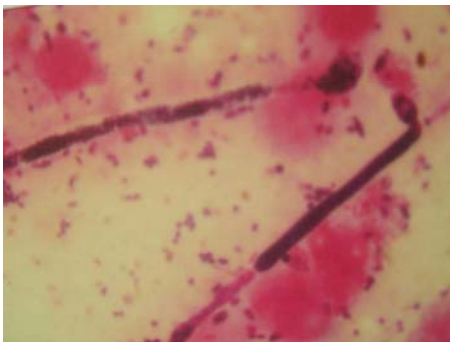
Thin homogenous



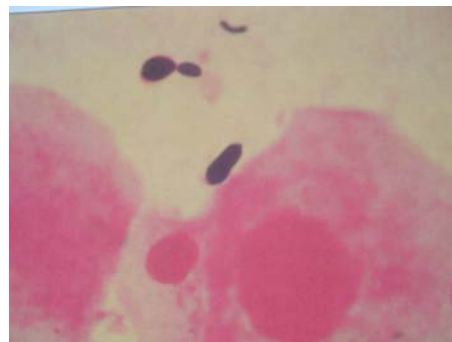
Vaginal pH > 4.5

10

Gram stained smear of vaginal discharge showing gram-positive yeasts and mycelia

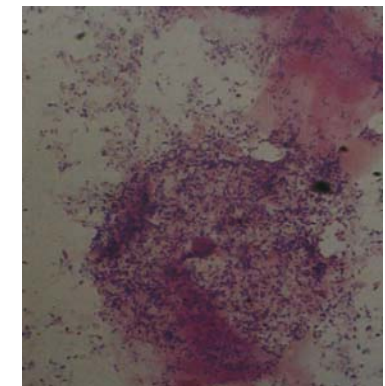
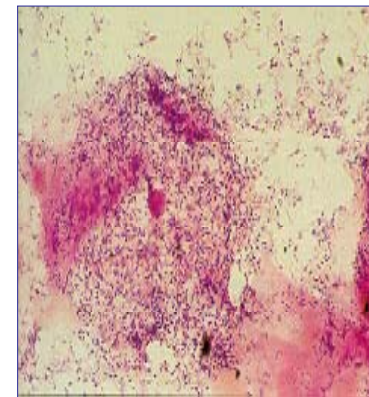


Gram stained smear of vaginal discharge showing budding yeasts



11

Gram stained smear of vaginal discharge showing Nugent score > 7



12

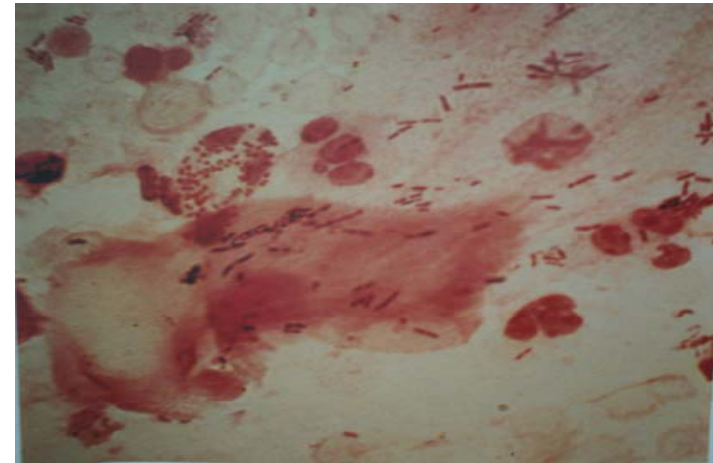
Case 1

- **Patient Profile:** 18 yrs. old sex workers
- **History:** came for routine monthly health check-up
- **Examination:** external genitalia with minimal vaginal discharge, speculum examination with mucopurulent endocervical discharge, cervical redness and edema, bimanual examination- no adnexal tenderness, no masses



13

Case 1 : Laboratory



14

Case 1

- What is your probable diagnosis?
 - a. Gonorrhoeae
 - b. Chlamydial Infection
 - c. A and B
 - d. Normal
 - e. Vaginal discharge
- What is your management?
 - a. Cefixime 400 mg. single dose
 - b. Doxycycline 100 mg. 2 x a day for 7 days
 - c. Azithromycin 1g single dose
 - d. A and C
 - e. None

15

Case 2

- **Patient Profile:** age 20 yrs. old sex workers
- **History:** Vulvar itching and increased vaginal discharge for 2 days, treated 10 days earlier with an unknown antibiotic for bacterial urinary tract infection
- **Examination:** Vulvar erythema, white discharge in patches on cervix and vaginal mucosa, otherwise normal



16

Case 2: Laboratory



17

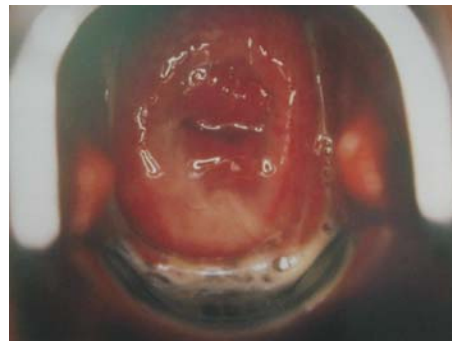
Case 2

- What is your diagnosis?
 - a. Trichomoniasis
 - b. Bacterial vaginosis
 - c. Gonorrhea
 - d. Candidiasis
 - e. Normal physiologic discharge
- What is your treatment?
 - a. Metronidazole 500 mg. 2 x a day for 7 days
 - b. Cefixime 400 mg. single dose
 - c. Clotrimazole 500 mg. single dose per vagina
 - d. None of the above
 - e. A and C

18

Case 3

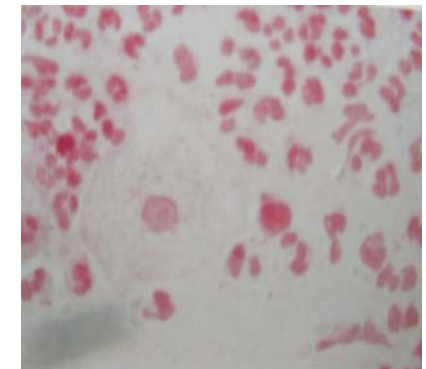
- **Patient Profile:** age 20, Beer girl
- **History:** Increased vaginal discharge and slight vulvar itching for 2 weeks, one partner for 6 months.
- **Examination:** External genitals, normal, vaginal mucosa slightly erythematous, moderate yellow discharge, cervix with edematous ectopy, slight tenderness of uterine fundus, no adnexal tenderness or masses



19

Laboratory

- Vaginal pH 5.5, whiff test positive, wet mount showed leucocytes, motile trichomonads, clue cells, endocervical gram stain showed 20 PMNs per 1000 field, without gram negative diplococci, N. gonorrhoeae culture: positive, HIV testing negative, RPR, non reactive.



20

Case 3

- What is your diagnosis?
- What is your management?
- How will you treat her partner?

21

Case 4

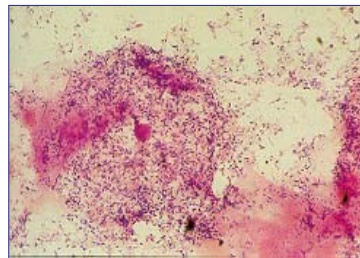
- **Patient Profile:** age 22, sex worker
- **History:** Increased vaginal discharge with a “strong” odor for 1 week, has a new boyfriend one month previously
- **Examination:** Homogeneous white vaginal secretions at introitus and coating vaginal walls, cervix showed small area of ectopy, with cloudy mucus in os, bimanual examination normal



22

Case 4

- Laboratory: Gram stain of vaginal secretions showed Nugent score more than 7, no budding yeast/mycelia, Gram stain of cervical secretions showed 2-4 PMNs per 1000x field, without gram negative intracellular diplococci, RPR non reactive, declines HIV testing



Gram stain of vaginal discharge

23

Case 4

- What is your diagnosis?
 - a. Trichomoniasis
 - b. Bacterial vaginosis
 - c. Gonorrhea
 - d. Chlamydia trachomatis
 - e. Normal physiologic discharge
- What is your treatment?
 - a. Metronidazole 500 mg. 2 x a day for 7 days
 - b. Cefixime 400 mg. single dose
 - c. Doxycycline 100 mg. 2 x a day for 7 days
 - d. None of the above
 - e. Metronidazole 1g

24

Module 3.5

Diagnosis and treatment of STI/RTI

Lower Abdominal Pain

1

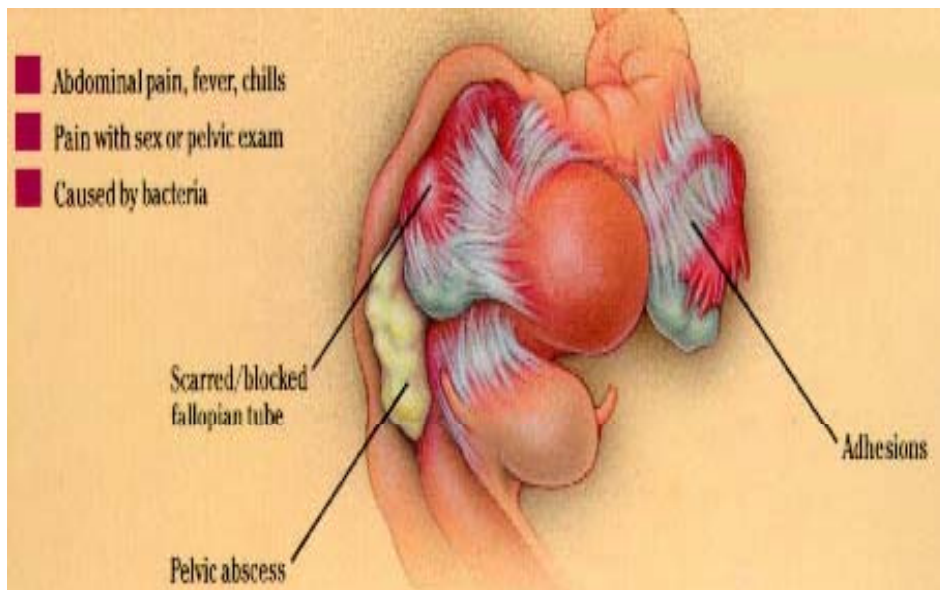
Learning Objectives

At the end of this module the participants will be able to:

1. Use appropriate the flowchart of lower abdominal pain
2. Define how to make examination women with lower abdominal pain
3. List the clinical criteria of PID
4. Define how to refer, treat and follow up the women with PID
5. Identified the efficiency treatment of PID
6. Summarize the clinical management of patients with PID including diagnosis, and treatment.

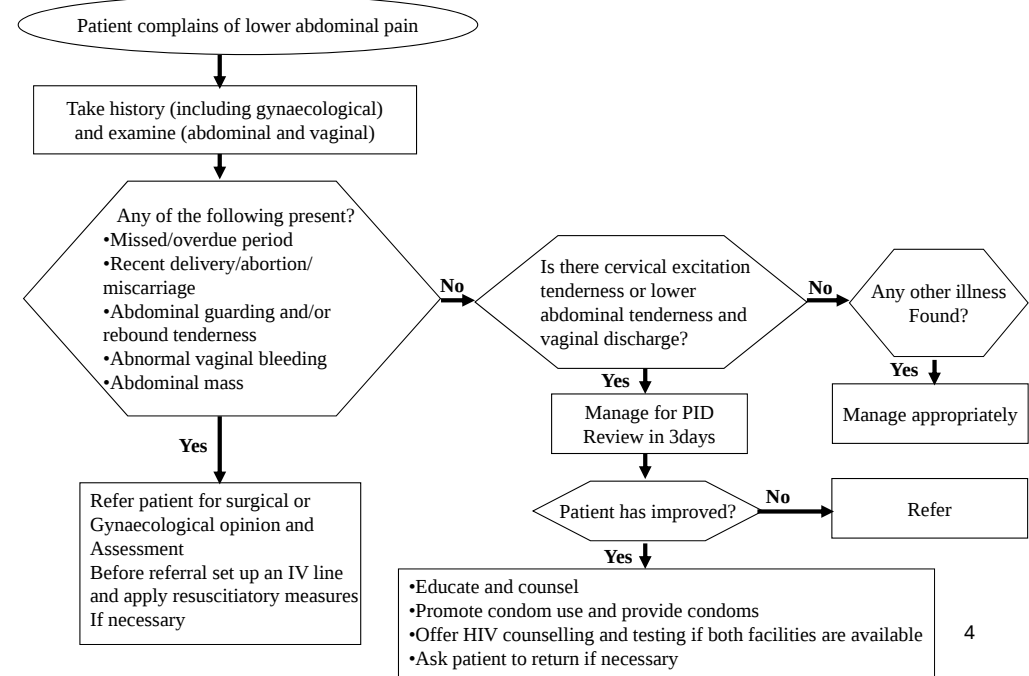
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Causes of Lower Abdominal Pain



3

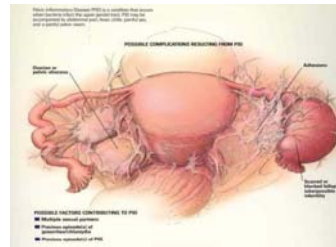
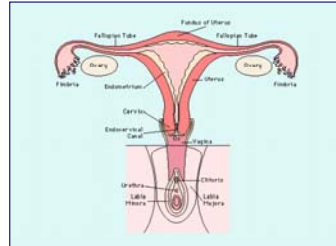
LOWER ABDOMINAL PAIN



4

Checklist for Examining Women with Lower Abdominal Pain

- History and Physical must include
 - Ask about vaginal bleeding
 - Ask about abnormal vaginal discharge
 - Ask about last menstrual period (LMP)
 - Ask about miscarriage, abortion or delivery in the past 6 weeks
 - Check Temperature
 - Palpate Abdomen-check for tenderness, rebound, guarding, mass
 - Vaginal exam



5

Clinical Criteria & Indication for treatment

Clinical Criteria

- Temp > 38.3° C
- Abnormal cervical or vaginal mucopurulent discharge
- WBCs on saline vaginal secretions
- Positive test for CT or GC

Indications for treatment

- Cervical motion tenderness OR
- Lower abdominal pain and vaginal discharge

6

When to refer for Hospitalization for women with LAP syndrome

- If diagnosis is uncertain
- Surgical emergencies (ectopic pregnancy, appendicitis) cannot be ruled out
- Pelvic abscess is suspected
- Severe illness (unable to tolerate oral medications)
- Pregnancy
- Patient unable to follow outpatient therapy
- All patients who fail to respond to outpatient therapy

7

Indications for Specialist Referral for Women with Lower Abdominal Pain

- Missed /overdue period OR
- Recent delivery / abortion/miscarriage OR
- Rebound tenderness OR
- Abdominal Guarding OR
- Abnormal vaginal bleeding

8

TREATMENT FOR PID

1. OUTPATIENT THERAPY

FOR GONORRHEA

- ☐ CEFIXIME, 400mg orally, as a single dose OR
- ☐ CEFTRIAXONE, 250mg by intramuscular injection, as a single dose OR
- ☐ Spectinomycin, 2g by intramuscular injection, as a single dose

PLUS

FOR CHLAMYDIA TRACHOMATIS

- ☐ DOXYCYCLINE, 100mg orally twice daily for 14 days

PLUS

FOR ANAEROBIC BACTERIAL INFECTION

- ☐ METRONIDAZOLE, 500mg orally twice daily for 14 days

Patient taking metronidazole should be cautioned to avoid alcohol.

9

TREATMENT FOR PID

2. INPATIENT THERAPY

FOR GONORRHEA

- ☐ CEFTRIAXONE, 250mg by intramuscular injection, once daily OR
- PLUS

FOR CHLAMYDIA TRACHOMATIS

- ☐ DOXYCYCLINE, 100mg orally or by intravenous injection, twice daily
- PLUS

FOR ANAEROBIC BACTERIAL INFECTION

- ☐ METRONIDAZOLE, 500mg orally or by intravenous injection, twice daily

Note:

- ☐ For all drug should be continued until at least two days after the patient has improved and should then followed by either doxycycline, 100mg orally, twice daily for 14 days.
- ☐ Patient taking metronidazole should be cautioned to avoid alcohol.

10

Lower Abdominal Pain Syndrome: Follow-up and Partner Management

- Outpatient: re-examine patient in 3 days to ensure improvement in symptoms; if not better intravenous therapy needed. Refer for hospitalization.
- All partners (in the past 2 months) of patients treated for PID should receive treatment for gonorrhea and chlamydia.

11

Module 3.6

Diagnosis and treatment of STI/RTI

Ano-rectal Infections

1

Learning Objectives

At the end of this module, the participants will be able to:

1. Use the flowcharts of ano-rectal
2. List the etiologic agents of intestinal or anal infections
3. Describe the clinical manifestations of proctitis, enteritis and perianal lesion
4. State the clinical and laboratory criteria for the diagnosis of proctitis, enteritis and perianal lesion.
5. Summarize the clinical management of patients with ano-rectal infections including diagnosis, and treatment.

2

Mode of Transmission in MSM

- Penile penetration
- Fingers
- Rimming (analingus, *oral-anal contact*)
- **Fomites**
 - Sex toys
 - Objects used in sexual manner
 - Iatrogenic (from unclean clinic conditions)

3

Sexually Transmissible Causes of Intestinal or Anal Infections

The sexually transmitted organisms most commonly responsible for anorectal and enteric infections in MSM are:

1- Bacterial pathogens

- ☐ Neisseria gonorrhoeae
- ☐ Chlamydia trachomatis (including LGV serovars)
- ☐ Treponema pallidum (syphilis)
- ☐ Haemophilus ducreyi
- ☐ Calymmatobacterium granulomatis (granuloma inguinale)

4

Sexually Transmissible Causes of Intestinal or Anal Infections

2- Enteric bacterial pathogens

- ☐ Campylobacter sp.
- ☐ Salmonella spp.
- ☐ Shigella spp.
- ☐ Yersinia spp.

3- Viruses

- ☐ Herpes simplex virus (HSV)
- ☐ Human papillomavirus (HPV)
- ☐ Hepatitis A, B
- ☐ HIV

5

Sexually Transmissible Causes of Intestinal or Anal Infections

4- Protozoa

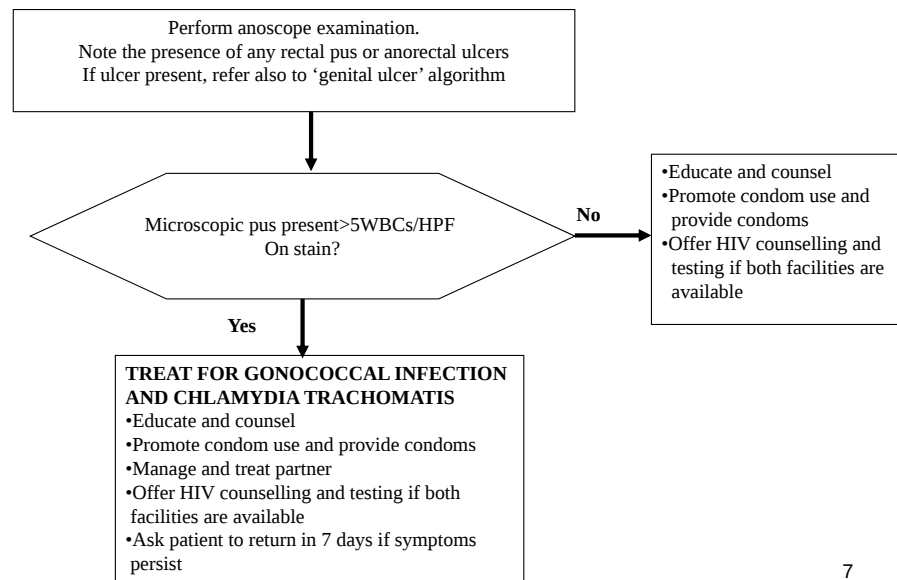
- ☐ Giardia lamblia
- ☐ Entamoeba histolytica
- ☐ Amoebae
- ☐ Isospora belli sp.
- ☐ Cryptosporidia sp.
- ☐ Dientamoeba fragilis (?)

5-Parasitic infections

- ☐ Scabies
- ☐ Lice

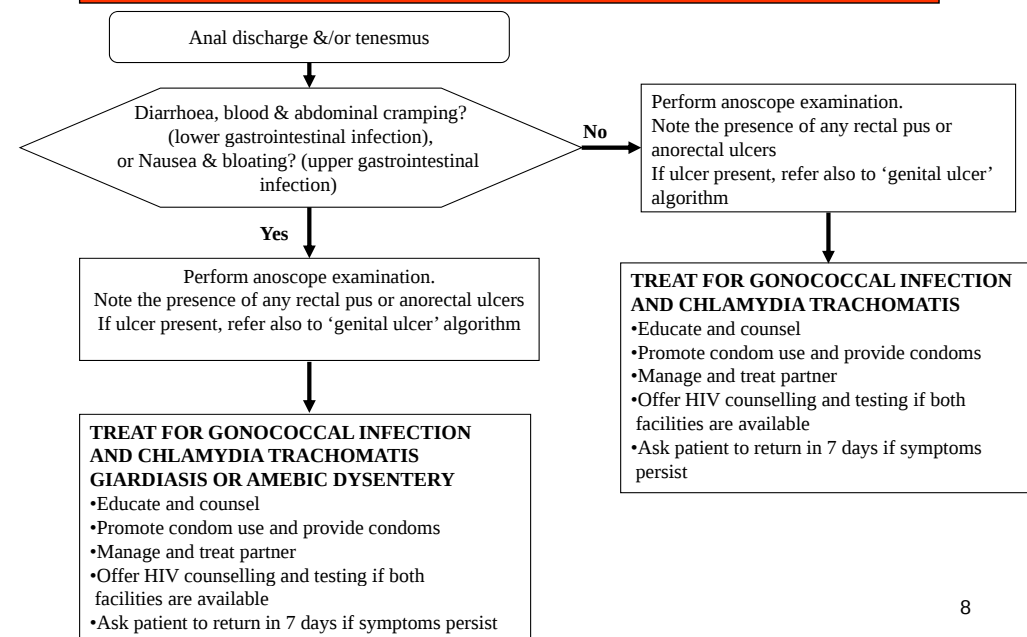
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Management of Anorectal Asymptomatic



7

Management of Anorectal symptomatic



8

Proctitis: Symptoms

Symptoms

- Constipation
- Painless or bleeding stools
- Tenesmus
- Anal & rectal discomfort or pain
- External & internal ulceration (esp. HSV)
- Mucus or purulent discharge (sometimes mistaken for diarrhea)



Proctitis due to *C. trachomatis*

9

Enteritis: Symptoms

- Diarrhea,
- abdominal pain,
- bloating, cramps, and nausea.
- Additional symptoms: flatulence, amucous rectal discharge, and in severe cases, melena.
- Systemic symptoms such as fever, dehydration, malabsorption syndrome, weight loss, and myalgia may also be present.

10

Perianal lesions : Causes and Symptoms

- Caused by syphilis, HSV, granuloma inguinale, chancroid, and genital warts (HPV)
- Symptomatic infection of the anal canal is commonly very painful and often results in constipation and tenesmus.



Perianal chancres (syphilis)



Rectal HSV infection 11

Pharyngeal Symptoms: Special Considerations

- In the absence of cultures or nucleic acid amplification testing, oral disease can only be suspected with either of the following
 - A history of recent oral sexual contact with a known infected partner
 - If the patient presents with genital symptoms
- Patients in these risk situations will often be treated empirically for urethritis or for contact exposure anyway
- More difficult to clear than urethral



Pharyngeal gonorrhoea

12

Diagnosis

1-History and examination

-In taking the patient's history, inquire about symptoms, types of sexual practices, condom use, and possible exposure to pathogens known to cause proctitis, proctocolitis, and enteritis.

-Physical exam should include inspection of the anus and anoscopy to identify general mucosal abnormalities.

2- Laboratory

- Gram-stained smear of the rectal mucosa obtained during anoscopy (WBCs>5/HPF considered indicative of proctitis);

13

Diagnosis cont.

- Cultures for *Neisseria gonorrhoeae* (GC), *Chlamydia trachomatis*.
- Herpes simplex virus. Nucleic acid amplification.
- If perianal or rectal ulcers are seen, also perform serologic test for syphilis (RPR or VDRL,).
- If enteritis or proctocolitis are likely, based on fever, bloody diarrhea, or milder diarrheal symptoms persisting one week without diagnosis:
 - Culture stool for *Salmonella*, *Shigella*, and *Campylobacter*, and
 - Send stool for ova and parasites (O & P) exam.

14

Treatment

1- Proctitis

- **For gonococcal :**
- CEFIXIME 400 mg single oral dose OR
- CEFTRIAZONE 250 mg single IM dose OR
- SPECTINOMYCIN 2gm single IM dose
- **PLUS**
- **2. For Chlamydia:**
- AZITHROMYCIN 1 gm single oral dose OR
- DOXYCYCLINE 100 mg orally twice daily for 7 days OR
- ERYTHROMYCIN 500mg orally four times daily for 7 days

15

Treatment cont.

2- Treatment for other diagnoses:

Giardiasis

- ☐ Metronidazole 400 mg bid for 5 days

Amebiasis

- ☐ Metronidazole 500 mg tid for 10 days,

Shigellosis

- ☐ Ciprofloxacin 500 mg bid for 7 days

Campylobacter enteritis

- ☐ Ciprofloxacin 500 mg bid for 7 days

16

Treatment for other diseases

Genital ulcer: see the algorithm of genital ulcer syndrome

Pharyngeal gonococcal :

- Cefixime 400mg oral as a single dose **OR**
- Ceftriaxone 125 mg intramuscularly as a single dose

PLUS

Pharyngeal chlamydia :

- Azithromycin 1 gram orally as a single dose **OR**
- Doxycycline 100 mg twice daily for 7 days

Module 3.7

Diagnosis and treatment of STI/RTI

Inguinal Bubo & Scrotal Swelling

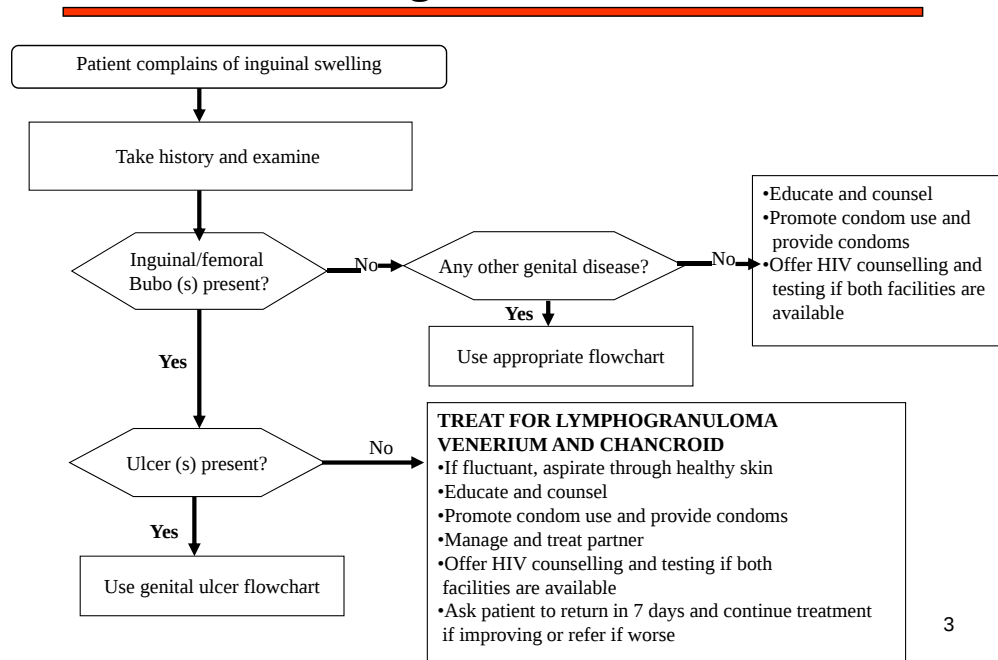
1

Learning Objectives

1. Use appropriate the flowchart of inguinal bubo
2. List the signs and etiologic agents of inguinal bubo
3. Identified the efficiency treatment of inguinal bubo
4. Use appropriate the flowchart of scrotal swelling
5. List the signs and etiologic agents of scrotal swelling
6. Identified the efficiency treatment of scrotal swelling
7. Summarize the clinical management of patients with inguinal bubo and scrotal swelling including diagnosis, and treatment

2

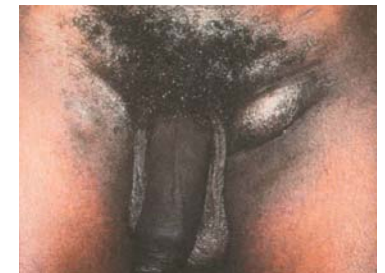
Inguinal Bubo



3

Inguinal Bubo

- Inguinal and femoral buboes are localized enlargements of the lymph nodes in the groin area, which painful and may be fluctuant.
- Frequently associated with LGV (C. trachomatis serovars L1, L2, L3) and chancroid.
- Non-sexually transmitted (e.g infection of the lower limb or tuberculous lymphadenopathy).



Inguinal Bubo

4

TREATMENT FOR INGUINAL BUBO

For Chancroid:

AZITHROMYCINE 1G orally as a single dose **OR**

CIPROFLOXACIN, 500 mg orally, twice daily for 3 days

OR

For Lymphogranuloma venereum:

•DOXYCYCLINE 100 mg orally twice daily for 14 days **OR**

•ERYTHROMYCIN 500mg orally four times daily for 14 days

Note: Some cases may require longer treatment than 14 days recommended above. Fluctuant lymph nodes should be aspirated through healthy skin. Incision and drainage or excision of nodes may delay healing and should not be attempted. Treatment failure, referral for diagnostic biopsy is advisable.

5

TREATMENT FOR INGUINAL BUBO

Special Considerations (*HIV Infection*)

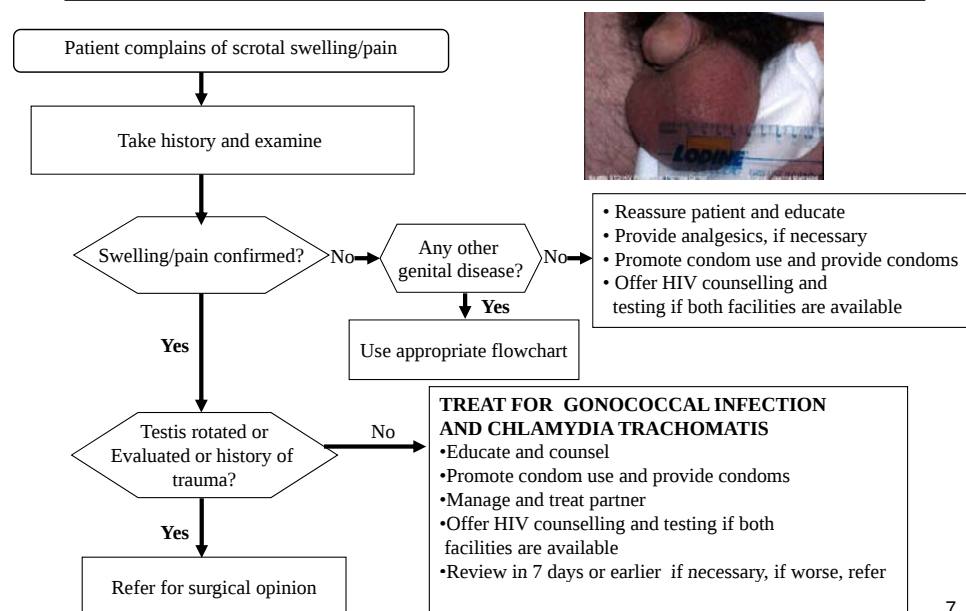
Persons with both LGV and HIV infection should receive

the same regimens as those who are HIV negative. Prolonged

therapy might be required, and delay in resolution of symptoms might occur.

6

Scrotal Swelling



7

TREATMENT FOR GONORRHOEA & CHLAMYDIDAL INFECTION IN MEN

1- For gonococcal:

CEFIXIME 400 mg single oral dose **OR**

CEFTRIAXONE 250 mg single IM dose **OR**

SPECTINOMYCIN 2gm single IM dose

PLUS

2- For Chlamydia:

•AZITHROMYCIN 1 gm single oral dose **OR**

•DOXYCYCLINE 100 mg orally twice daily for 7 days **OR**

•ERYTHROMYCIN 500mg orally four times daily for 7 days

8

Module 3.8

Diagnosis and treatment of STI/RTI

Neonatal Conjunctivitis

1

LEARNING OBJECTIVES

At the end of this module the participants will be able to:

1. Describe the cause and complication of neonatal conjunctivitis
2. Perform the using of flowchart neonatal conjunctivitis
3. Define how to make the diagnosis, treatment & prevention of neonatal conjunctivitis

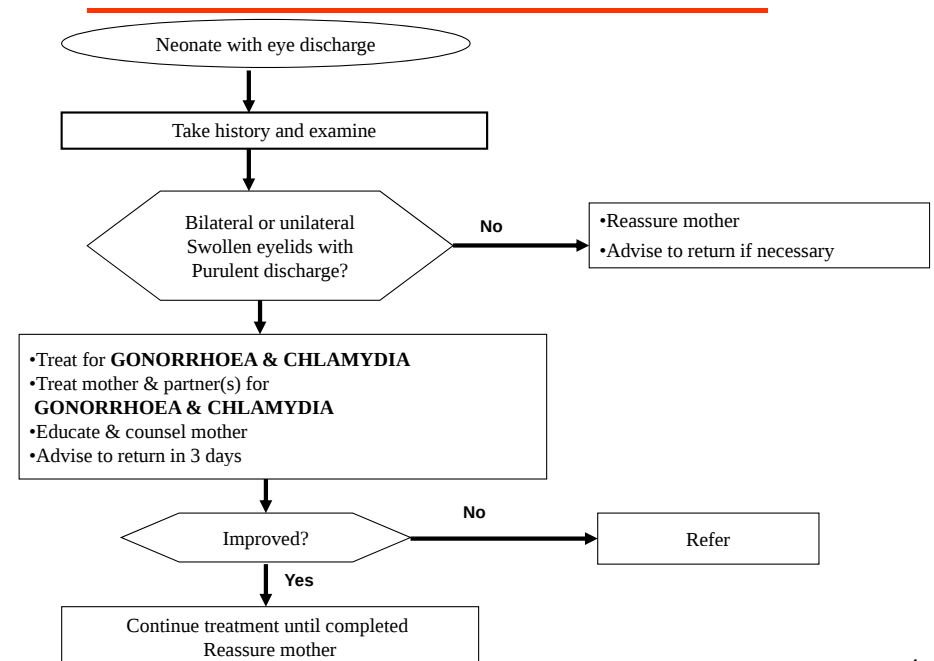
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NEONATAL CONJUNCTIVITIS

- Neonatal conjunctivitis can lead to blindness when treatment is delayed
- Cause ophthalmia neonatorum are N. gonorrhoea & C. trachomatis
- New born babies are generally presented because of redness and swelling of eyelids or sticky eyes, or because of discharge from the eye (s).
- Treatment should be provided both.

3

NEONATAL CONJUNCTIVITIS



4

PREVENTION OF OPHTHALMIA NEONATORUM

The infant's eyes should be carefully cleaned immediately after birth.

- The application of 1% silver nitrate solution or
- Tetracycline 1% ointment to the eyes of all infants at the time of delivery.



5

TREATMENT OF NEONATAL CONJUNCTIVITIS

All new born infants with conjunctivitis should be treated for both *N. gonorrhoeae* and *C. trachomatis* because of the possibility of mixed infection.

Gonococcal conjunctivitis

- **CEFTRIAXONE** 25--50 mg/kg IV or IM in a single dose, not to exceed 125 mg.

Plus

Chlamydial trachomatis conjunctivitis

- **ERYTHROMYCIN BASE OR ETHYLSUCCINATE** 50 mg/kg/day orally divided into four doses daily for 14 days.

6

MANAGEMENT OF MOTHERS AND THEIR SEX PARTNERS

The mothers of infants who have chlamydial & gonococcal infection and the sex partners of these women should be evaluated and treated according to the recommendations for treating chlamydial & gonococcal infections in adults.

7

Module 3.9

Diagnosis and treatment of STI/RTI

Genital warts

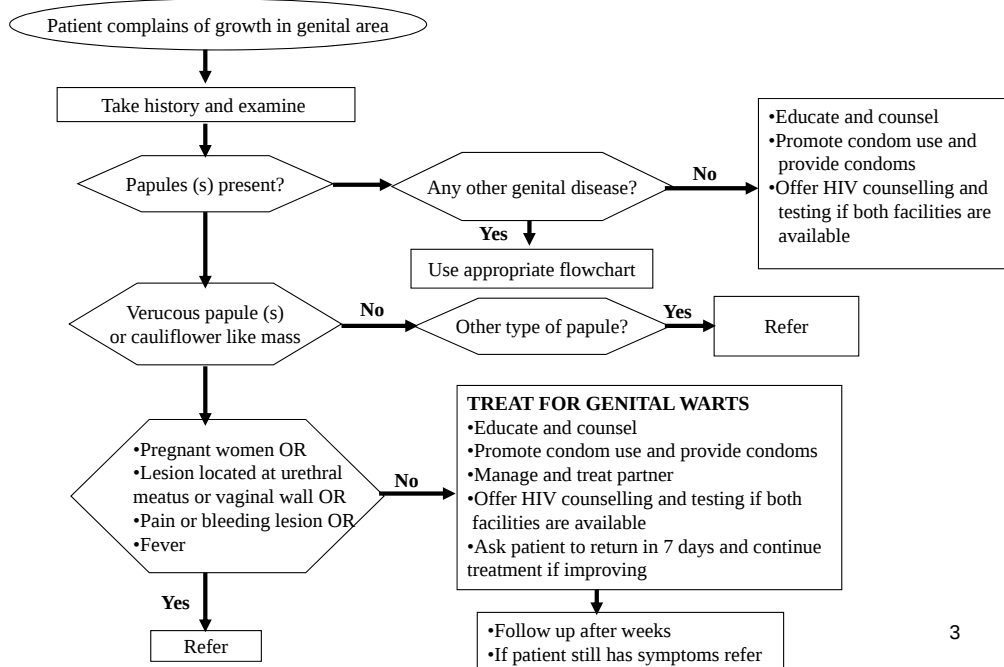
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Learning Objectives

- Explain the mode of transmission of genital warts
- Describe the signs and symptoms of genital warts.
- Identify the efficiency treatment of genital warts.

2

Genital Warts



3

Genital warts

- The infection is transmitted through mucosa and abraded skin by sexual contact, and from mother to child during passage through an infected birth canal.
- The most common types on the genitalia are HPV-6, HPV-11, and HPV-16.
- Specific types of HPV may give rise to invasive carcinoma of cervix. It is recommended practice to examine the cervix in all female STI patients, and to perform regular cervical smears in this population.

4

Genital warts (con't)

- Genital warts are usually flat, papular, or pedunculated growths on genital mucosa.
- Genital warts can occur on the uterine cervix, vagina, urethra, anus
- Genital warts are painless and do not lead to serious complication, except where they cause obstruction, especially in pregnant women.



Genital warts cont.

- Sexual partner (s) should be examined for evidence of warts.
- Patients with anogenital warts should be made aware that are contagious to sexual partners (condoms is recommended to help reduce transmission).
- The removal of the lesion does not mean that the infection cured.
- Not treatment is completely satisfactory

6

TREATMENT FOR GENITAL WARTS

A- *CHEMICAL*

- ❑ Podophyllotoxin 0.5% solution or gel, twice daily for 3 days, followed by 4 days of no treatment, the cycle repeated up to 4 times (total volume of podophyllotoxin should not exceed 0.5 ml per day) OR
- ❑ Imiquimod 5% cream applied with a finger at bedtime, left on overnight, 3 times a week for as long as 16 weeks. The treatment area should be washed with soap and water 6-10 hours after application. Hand must be washed with soap and water immediately after application

7

TREATMENT FOR GENITAL WARTS cont.

- ❑ Podophyllin 10.25%, applied carefully to the warts, avoiding normal tissue. External genital and perianal warts should be washed thoroughly 1-4 hours after the application of podophyllin.0.5 ml per day) OR
- ❑ Imiquimod 5% cream applied with a finger at bedtime, left on overnight, 3 times a week for as long as 16 weeks. The treatment area should be washed with soap and water 6-10 hours after application. Hand must be washed with soap and water immediately after application OR

8

TREATMENT FOR GENITAL WARTS cont.

☐ TCA 80-90%, applied carefully to the warts, avoiding normal tissue, followed by powdering of the treated area with talc or sodium bicarbonate (baking soda) to remove unreacted acid . Repeat application at weekly intervals.

B- *PHYSICAL*

☐ Cryotherapy with liquid nitrogen, solid carbon dioxide, or a cryoprobe. Repeat applications every 1-2 weeks. OR

☐ Electrosurgery OR

☐ Surgical removal

9

TREATMENT FOR GENITAL WARTS cont.

1- VAGINAL WARTS

☐ Cryotherapy with liquid nitrogen

OR

☐ Podophyllin 10-25%. Allow to dry before removing speculum

OR

☐ TCA 80-90%

OR

☐ Electrosurgery

10

TREATMENT FOR GENITAL WARTS cont.

2- CERVICAL WARTS

Treatment of cervical warts should not be started until the results from a cervical smaer test are known.

☐ Cryotherapy with liquid nitrogen

OR

☐ Podophyllin 10-25%. Allow to dry before removing speculum

OR

☐ TCA 80-90%

OR

☐ Electrosurgery

11

Module 3.10

Diagnosis and treatment of STI/RTI

Rare STIs/RTIs with Cutaneous infestation

1

LEARNING OBJECTIVES

At the end of this module the participants will be able to:

1. List the etiologic agents of Molluscum Contagiosum, Pediculosis pubis, Scabies
2. Describe the clinical manifestation of Molluscum Contagiosum, Pediculosis pubis, Scabies
3. Define how to make the diagnosis and treatment of Molluscum Contagiosum, Pediculosis pubis, Scabies.

2

Molluscum Contagiosum

DEFINITION

Molluscum Contagiosum is a viral infection caused by a pox virus.

Genital molluscum infections in adults are usually sexually-transmitted.



CLINICAL FEATURES

- Individual lesions of molluscum contagiosum are discrete, smooth, pearly or flesh-coloured, dome-shaped papules and are often confined to the genital area.
- Each papule may have a mildly erythematous base and a central punctum beneath which lies a white curd-like core.

4

LABORATORY TESTS

Giemsa-stained smears of the expressed core from the punctum or a skin biopsy will demonstrate molluscum bodies.

TREATMENT

The condition is usually self-limiting and the lesions may heal spontaneously. Treatment is therefore not mandatory.

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- Deroof the lesion with a sharp curette, a comedone extractor or a needle.
- Destroy the remaining lesion with liquid nitrogen, trichloroacetic acid application or electrocautery.
- More than one treatment session is often required.

MANAGEMENT OF SEXUAL CONTACTS

Regular sex partners should be encouraged to come for examination and treatment, where indicated.

6

PEDICULOSIS PUBIS

DEFINITION

This is an infestation of the anogenital region by the crab louse, *phthirus pubis*. In adults it is usually sexually transmitted.



CLINICAL FEATURES

The infestation is indicated by the presence of brown adult lice on the pubic skin as their ova (nits) on pubic hair shafts. Small haemorrhagic spots are also seen on the pubic/genital skin and underwear.

LABORATORY TESTS

The presence of lice or nits recovered from pubic hair confirms the diagnosis.

8

TREATMENT

- 1-Malathion 0.5% lotion application. Wash off after 12 hours. or
- 2-Permethrin (1%) crème rinse. Wash off after 10 minutes. or
- 3-Lindane 1% shampoo. Wash off after 4 minutes (not recommended for pregnant or lactating women) If the eyelashes are affected, apply an occlusive ophthalmic ointment or vaseline to the eyelid margin twice daily for 10 days or remove lice with tweezers or forceps.

9

Treatment in pregnancy

Pregnant or lactating women should be treated with permethrin.

FOLLOW-UP

Patients should be re-evaluated after 1 week, which is the time taken for any nits to hatch into lice. Re-treat only if the lice are found or eggs are observed.

MANAGEMENT OF SEXUAL CONTACTS

Regular sex partners within the last month should be encouraged to come for examination and treatment.

10

SCABIES

DEFINITION

Scabies is an infestation by the mite, *sarcoptes scabiei var. hominis*.



CLINICAL FEATURES

The clinical features of scabies are pruritic papules on the genitals, finger webs, wrists, axillae and buttocks. There is a nocturnal exacerbation of the itch. Family members may have similar symptoms.

LABORATORY TESTS

The mite can be demonstrated by microscopic examination of scrapings from burrows on the skin.

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TREAMENT

Recommended Regimens

- 1-Emulsion benzyl benzoate (EBB) 25% application for adults and 10% for children under 10 years old. Apply nightly from neck down on all areas of body for 3 nights.
or
- 2-Malathion 0.5% lotion applied thinly to all areas of the body from the neck down and washed off after 24 hours. Apply nightly for 2 nights.

NB: The above are not for use in children under 2 years of age.

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Alternative Regimens

- 1-Gamma benzene hexachloride 1% (Lindane) overnight x 1 application. Avoid bathing 2 hours before application because wet skin enhances absorption. NOT for use in pregnant or lactating women or children below 2 years old.

Children under 2 years old:

- 1-permethrin 5% cream overnight, to be -repeated one week later. Or
- 2-Sulphur 6% in aqueous cream overnight for 3 to 5 days.

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3-Crotamiton 10% lotion (Eurax). This is a weak scabicide and 7 days of treatment are required.

Pregnancy:

- 1-Emulsion Benzyl Benzoate (EBB) 25% or
- 2-Permethrin 5% or
- 3-Crotamiton 10% lotion (Eurax)

Crusted (Norwegian) scabies:

Usually in the malnourished, immunode-ficient and patients with neurological disturbance. Combined topical and oral treatment with Ivermectin (0.2 mg/kg) -2 -3 doses every 1-2 weeks.

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FOLLOW-UP

Clothing and bed sheets should be washed with hot water or dry cleaned. Patients must be warned that there might be an initial exacerbation of the pruritus. Antihistamines are required to relieve the itch.

Repeat treatment with different agent is often necessary –treatment failure may be due to resistance to medication, faulty application techniques, poor penetration through thick scales, mites in difficult to reach areas, and reinfection.

Post -scabetic itch can last several weeks and is treated with topical steroids and antihistamines.

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MANAGEMENT OF SEXUAL CONTACTS

Sex partners and close family contacts should be treated even if asymptomatic.

Scabicide	Frequency of application	Toxicity
Permethrin 5% cream	One application left on over 8–12 hours	Low
Malathion liquid emulsion	One application left on over 4 hours	Low
Benzyl benzoate	Two applications over 48 hours	Low
Lindane	Two applications 72 hours apart	Medium
Sulfur ointment	Each night for 3 nights	Low

Module 3.11

Diagnosis and treatment of STI/RTI

Non-STI Genital Lesions

1

LEARNING OBJECTIVES

At the end of this module the participants will be able to:

- Describe the inflammatory dermatoses that might be occurred in genital area.
- Describe the benign dermatologic lesions that could be confused with STI.
- Describe the malignant lesions of the genital area.
- Describe the dermatologic infections at genital area.

2

I - INFLAMMATORY DERMATOSES OF THE GENITALS

3

1- Psoriasis

- Most common inflammatory reaction affecting the genitalia and it may appear two forms.
- Develop bright red well-defined inguinal plaques known as inverse psoriasis.
- No central clearing often seen in tinea is present.
- The plaque appears homogeneously erythematous.
- Similar lesions may be affect the axilla or the popliteal fossa.

4

1- Psoriasis

- Unlike psoriasis elsewhere, inverse psoriasis may be itchy. Often, no past history of psoriasis is present
- May affect the penis, particularly the gland penis.
- Thin pale erythematous plaques with slight scale are seen in discreet or continuous forms.
- No itching or burning is present.
- It may be aggravated by trauma. Often, no psoriasis is seen on the rest of the body. Like inverse psoriasis, psoriasis on the penis tends to be well defined.

5

1- Psoriasis

- No vesicles or erosions are seen.
- Both types of psoriasis respond well to low-potency cortisone creams.
- Mild and high potency steroids must not be used to avoid atrophy.
- It can be helpful to compound hydrocortisone 2.5% cream and ketoconazole cream.
- Calcipotriol cream, a vitamin D derivative, used elsewhere for psoriasis can be a non-steroidal alternative for psoriasis on the glans penis.

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Psoriasis of the glans penis in a circumcised male



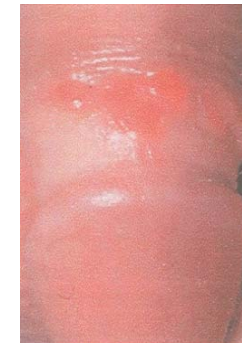
Psoriasis of the glans penis in an uncircumcised man



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2- Reiter's disease

- Reiter's disease is associated with arthritis, urethritis, and conjunctivitis. Patients may also develop a balanitis circinata consisting of moist serpiginous plaques with ragged white borders on the glans penis.



8

3- Eczema

- Frequently affects the genital region, particularly the scrotum.
- Intense itching often related to heat and sweat.
- Present with lichenified erythematous plaques on the lateral scrotum.
- Darker skinned patients often exhibit hyperpigmented rather than erythematous eruptions leading the clinician to underestimate the degree of inflammation.
- In acute cases, low potency topical steroids for a maximum of 2 weeks can be helpful. In chronic cases, most topical medications are soothing for only a few hours.

9

3- Eczema

- Patients often wash the area vigorously with soap feeling that cleanliness will aid the problem.
- Zinc oxide paste is very soothing and helps absorb sweat.
- For particularly inflammatory eruptions, hydrocortisone 2.5% cream can be added to the zinc oxide.

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3- Eczema

- The eruption may develop into lichen simplex chronicus (LSC) characterized by extensive lichenification and hypertrophy of the affected skin.
- The lichenification results from prolonged scratching and rubbing. Breaking the itch-scratch-itch cycle is paramount. Antihistamines at night may temporarily provide relief.
- Vulvodynia defined by the complaint of burning in the vulva region is beyond the scope of this article.



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4- Contact dermatitis

- Can be divided in irritant and allergic forms. All patients are theoretically susceptible to irritant contact dermatitis.
- It may develop from chronic use of soaps, disinfectants or aseptic solutions.
- The latter are often used in hopes of preventing STD's. Irritants can be transferred from the hands to the genitals such as 5-fluorouracil cream used for actinic keratoses on the face.

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5- Allergic contact dermatitis

- The penis may develop immense swelling accompanied by erythema and scaling.
- The marked edema occurs because of the thin elastic skin on the genitalia.
- The list of offenders is numerous and includes many medications used elsewhere on the body that can be transferred to the genital area.
- Poison ivy or rhus dermatitis is commonly transferred by the hands to the genitals.
- Lesions on other locations are common.

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5- Allergic contact dermatitis

- Benzocaine, triple antibiotic ointment, and topical benadryl are frequent offenders.
- Obtaining a history of topical products is very important as many products may be used in patients who are concerned about hygiene or STD's.
- Men with latex allergy can develop erythema and scale along the entire penis due to latex condoms.
- Treatment is mild topical steroids. Switching to a non-latex condom is another option.

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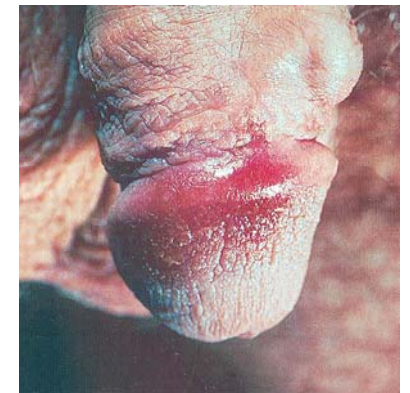
6- Fixed drug eruptions

- Can occur secondary to antibiotics from the tetracycline class or laxatives containing phenolphthalein.
- More than 500 medications have been implicated.
- The eruption presents acutely with single or multiple well defined circular plaques on the distal shaft and glans penis.
- The eruption may be bullous.
- The surface can appear necrotic. It has been compared to branding with a hot iron.
Some patients have been falsely labeled with herpes simplex due to the intermittent nature of the eruption.

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6- Fixed drug eruptions

- Females do not seem to get genital fixed drug eruptions as commonly as men. Recurrent eruptions are associated with hyperpigmentation



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7- Lichen planus

Lichen planus is an inflammatory disorder characterized by violaceous flat-topped papule that may appear on any part of the body. Typically, the glans penis is involved as part of a systemic process. Multiple small 2-5 mm flat topped papules are seen. No vesicles, erosions, or crust are seen.

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7- Lichen planus

- It is an inflammatory disorder characterized by violaceous flat-topped papule that may appear on any part of the body.
- Typically, the glans penis is involved as part of a systemic process.
- Multiple small 2-5 mm flat topped papules are seen. No vesicles, erosions, or crust are seen.



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8- Lichen nitidus

It is a similar inflammatory disorder of unknown etiology. Patients may present with a monomorphic flesh colored 1-2 mm papules along the shaft of penis.



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9- Lichen sclerosis

Lichen sclerosis is a progressive sclerosing dermatosis of unknown origin. Atrophic white plaques occur in men on the glans or prepuce. The eruption tends to fissure. Adhesion may develop. In females, extensive white atrophic plaques may cover most of the vulva and perianal area forming a "figure of 8" appearance. Adhesions may also develop obliterating the labia minora and sometimes narrowing the vaginal orifice. Skin biopsy is necessary to make the diagnosis.

20

9- Lichen sclerosis

- It is a progressive sclerosing dermatosis of unknown origin. Atrophic white plaques occur in men on the glans or prepuce.
- The eruption tends to fissure.
- In females, extensive white atrophic plaques may cover most of the vulva and perianal area forming a "figure of 8" appearance.
- Adhesions may also develop obliterating the labia minora and sometimes narrowing the vaginal orifice.
- Skin biopsy is necessary to make the diagnosis.

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Lichen sclerosis



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10- Vitiligo

- can appear similar to lichen sclerosis, also presenting with hypopigmented or depigmented areas on the genitals.
- Unlike lichen sclerosis, no atrophy is present.
- In men, the glans penis and shaft are commonly affected. There are no symptoms.
- Diagnosis can be aided by the presence of depigmented areas elsewhere on the body, especially on the face and dorsum of the hands.
- Treatment, if desired, with low potency steroids is helpful in some cases.

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10- Vitiligo



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11- Hidraadenitis suppurativa

- Presents with inflammatory red somewhat fluctuant nodules along the inguinal folds and gluteal cleft.
- Lesions may be several centimeters in size.
- Pain is common.
- Lesion should be sought in the axilla. Larger lesions may need incision and drainage.

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12- Zoon's balanitis

- Presents with a chronic erythematous lesion on the distal penis in uncircumcised men.
- The lesion is poorly defined and has a moist surface.



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13- Purple striae

- Purple striae from steroid atrophy often occur in the inguinal folds and thighs after using high potency steroids for one month.

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BENIGN LESIONS

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1- Sebaceous hyperplasia

- It is common on the genitals in men and women. Patients who perform self-examination may be shocked to learn there are dozens of suspicious lesions present along the vulva or along the proximal penile shaft. Lesions tend to be 1-2 mm yellow to flesh colored monomorphic papules sometimes containing individual hairs. Having pictures of normal human anatomy can be reassuring to patients as they are concerned about genital warts.

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1- Sebaceous hyperplasia



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3- Vestibular papillae

- Vestibular papillae are also normal variants found in up to one-half of premenopausal women.
- These small monomorphic filiform tubular projections appear in the vestibule and may be confused with genital warts.
- Reassurance to the patient is all that is needed.



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4- Pearly penile papule (PPP)

- Present on the coronal sulcus of the glans penis with monomorphic 1-2mm flesh-colored smooth papules.
- They may present during late adolescence and may be clinically confused with genital warts.
- The lesions are asymptomatic and reassurance is all that is needed.



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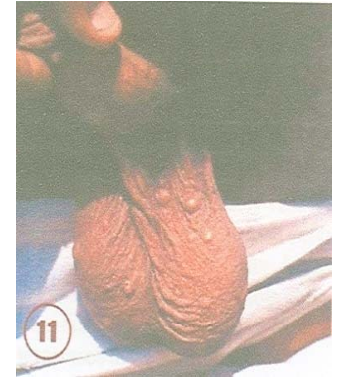
5- Epidermal cysts

- Epidermal cysts are common in the follicle rich genital area.
- They consist of a dilated oil gland or hair shaft that may reach 1-2 cm in size.
- Usually asymptomatic but patients are concerned over the appearance and may request removal.
- Lesion respond well to simple excision.

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5- Scrotal cysts (1)

- Scrotal cysts commonly calcify forming rock-hard deposits.
- Multiple lesions are known as scrotal calcinosis.
- No treatment is needed but individual lesions may be excised.
- Median raphe cysts occur on the ventral midline of the penis and probably represent a fusion anomaly.



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6- Angiokeratomas

- **Angiokeratomas** are common asymptomatic vascular lesions occurring on the scrotum.
- Lesions appear as red to black 1-4 mm nodules.
- Patients may present after an episode of bleeding after trauma.



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MALIGNANT LESIONS OF THE GENITALS

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1- Squamous cell carcinoma (SCC)

Squamous cell carcinoma (SCC) is the most common genital skin cancer. Men present in their 50's and 60's with red irregular defined plaques typically along the coronal sulcus. They may give a history of the lesion being present for 1-2 years. A history describing partial clearing with topical creams is common as most patients have attempted some form of treatment.

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1- Squamous cell carcinoma (SCC)



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2- Erythroplasia of Queyrat

- Erythroplasia of Queyrat and are usually treated by excision with little morbidity.
- Invasive see of the penis occurs primarily in uncircumcised males.
- Women may develop vulvar see which presents with ill defined erythematous somewhat scaly plaque.
- Invasive see on the genitals in men and women tends to be aggressive and metastases are common.



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INFECTIONS

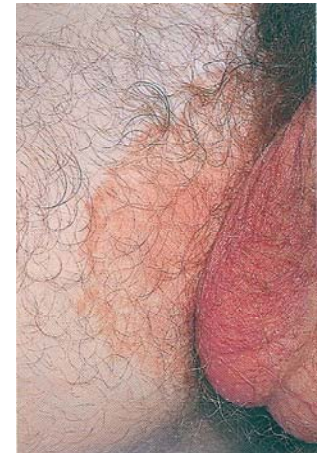
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1- Tinea cruris

- A male will present complaining of a rash that is somewhat for several weeks or months in the groin.
- Most patient have typically tried several over the counter creams, powder, or sprays, so a good history is important.
- Inciting factors include obesity and excessive heat and humidity.
- Men are affected more than women.
- Patients present with diffuse bilateral erythema and scaling along the inguinal folds. A raised border typical of tinea infection is usually present.

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- The eruption may extend along the perineum up the gluteal cleft.
- Involvement of the scrotum is distinctly uncommon and another diagnosis should be considered with extensive scrotal involvement.
- Most tinea cruris are caused by dermatophyte fungi like *Trichophyton rubrum*.



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2- Candidiasis

- Candidiasis also occurs in the inguinal folds.
- The eruption is erythematous and scaly but usually without a raised border.
- In women, the inframammary fold should be examined. Incontinence and heat are inciting factors.
- Both tinea cruris and candidiasis readily respond to topical antifungal treatment such as econazole, ketoconazole, cicloprox, or terfenidine.
- Nystatin will not effectively treat tinea.
- The use of mixture containing topical steroids is strictly discouraged due to lack of efficacy in eradicating infection as well as steroid atrophy in the thin genital skin characterized by a waxy appearance, softness, and telangiectasia.

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2- Candidiasis

- Removing environmental factors such as heat, sweat, and obesity are important to prevent re-infection. Men may be encouraged to wear boxers. Patients should also consider an antifungal powder.
- Removing environmental factors such as heat, sweat, and obesity are important to prevent re-infection.
- Men may be encouraged to wear boxers.
- Patients should also consider an antifungal powder.
- Candidal balanitis occurs in uncircumcised men, particularly associated with excessive

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2- Candidiasis



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3- Tinea versicolor

Caused by *Pityrosporum ovale* may present with tan patches in the pubic area alone or in association with similar lesions on the chest and back. The eruption is usually asymptomatic. Diagnosis can be confirmed clinically with a KOH prep which will show the typical "spaghetti and meatballs" appearance. The eruption will respond to selenium sulfide lotion or any of the axole creams. Oral azole may be considered if the eruption is extensive.



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3- Erythrasma

- It is an uncommon bacterial infection caused by *Corynebacterium minutum* that presents with diffuse thin red patches along the inguinal folds.



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4- Folliculitis

Folliculitis usually caused by *Staphylococcus aureus* (*S. aureus*) is common in the follicle rich genital region. Typically, patients have several 1-2 mm pustules, each centered around a hair follicle. Careful exam may show a hair follicle extending out of the pustule. Note, the lesions are not grouped nor are they usually unilateral like genital herpes.



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4- Folliculitis

- Folliculitis can occur anywhere on the genitals though less common on the distal penis due to absence of follicles.
- Heat and sweat are aggravating factors.
- Patients may give a history of a new exercise routine or wearing synthetic jogging pants that retain perspiration.
- Patients will respond to topical or oral antibiotics directed toward *S.aureus*.
- A mainstay of treatment is antibacterial soaps.

Module 4

Educating and Counseling the Patient

1

Objectives

By the end of the session, the participants will be able to

1. Explain the difference between education and counseling
2. Explain why education and counseling are so vital in STI/RTI case management
3. Recall a range of communication skills discuss sexual practices and sexual behavior for education and counseling
4. Educating and counseling for sex workers and men who have sex with men (MSM)
5. Identify the main education topics for patients with STI/RTI
6. List the benefits of using condoms and recall the basic steps for putting on condoms and demonstrate this to a patient.

2

1. Health education and counseling

Health education

is the provision of accurate and truthful information so that a person can become knowledgeable about the subject and make an informed choice.

Counseling

is a two-way interaction between a client and a provider. It is an interpersonal, dynamic communication process that involves a kind of contractual agreement between a client and a counselor who is trained to an acceptable standard and who is bound by a code of ethics and practice.

3

1. Health education and counseling Con't

Why are education and counseling so important?

- Patients are more likely to comply with treatment if they understand why it is important.
- A person with STI has a high likelihood of being reinfected.
- Preventing reinfection requires sustained behaviour change. Patients often need education and counseling to enable them to change behaviour and adopt safer sexual practices.

4

2. Health education – educate on what?

1. Explaining the STI and its treatment
2. Educating on prevention of future infection:
 - Changing sexual behavior
 - Condoms
 - Sexual practice
 - Other barrier methods
 - Personal hygiene and cultural practices
3. Contacting to treat sexual partners
4. Counseling to refer HIV for testing

5

2. Health education: educate on what? Con't

2.1. Explaining the STI and its treatment

- It is important that the patient understands that the infection is transmitted mainly through sexual intercourse with an infected person.
- explain which STI the patient has and what treatment will be necessary – the name of the medication and how much to take, how often and for how long.
 - find out what the patient understands about the STI and its treatment and what questions and concerns he or she may have
 - advise about any common side-effects of the treatment
 - encourage the patient to comply with treatment.

6

2. Health education – educate on what? Con't

2.2. Educate on prevention of future infection

The patient needs to appreciate the risk of becoming reinfected.

Changing sexual behaviour

- High risk behaviour is behaviour that exposes the patient to sex fluids and blood. Therefore, changing from high risk to low risk sexual behaviour is one way to prevent future infection.
- Reducing the number of sex partners or the rate of change of sex partners is important.
- Sexual abstinence virtually guarantees against contracting or transmitting an STI. This is particularly important during treatment for STIs.

7

2. Health education – educate on what? Con't

Condoms

- Another practice for preventing the spread of STIs is the use of condoms.
- Male latex condoms can reduce the risk of contracting or transmitted STIs if consistently and correctly used.
- The health care provider must demonstrate the correct use of condoms, using a penile model, where available.
- Let the client practice on the model so that they understand how to put the condom on, can demonstrate this skill and feel confident about handling a condom.

8

2. Health education – educate on what? Con't

Sexual practice

- It is also important to inform clients that some sexual practices have a higher risk of infection. For example, anal sex, whether it is male to female or male to male, carries a higher risk than penile-vaginal sex.

Other barrier methods

- Inform your clients of any other existing prevention methods such as the use of spermicides that may also be bactericidal; microbicides or vaccines (e.g. for hepatitis B).

9

2. Health education – educate on what? Con't

Personal hygiene and cultural practices

- Vaginal douching, for example, may remove protective bacteria in the vagina increasing the risk of getting some STIs, e.g. HIV. Washing with soap and water may help prevent colonization with parasites, such as pubic lice or scabies.

10

2. Health education – educate on what? Con't

2.3. The need to treat sexual partners

- always inform patients how important it is to have all their known sex partners treated.
- Reassure the patient that you will maintain confidentiality and discuss how they can persuade the partner(s) to attend for treatment. Stress that treatment will benefit both partners because there will be no risk of reinfection and the partner, who may not be aware of the infection, will have the STI treated and avoid future serious complications.

11

2. Health education – educate on what? Con't

2.4. Counseling to refer HIV testing

- This section will enable you to explain the importance and relevance of HIV testing. We can counsel patients or clients to enable them to make an informed decision about being referred for HIV testing.
- The significant of doing HIV testing is to understand about their HIV status. Then clients will be easier to prevent their health even they gotten negative or positive test result.

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3. Counseling for STI/RTI and HIV

1. Assessing the patient's risk level
 - Factors to assess the patient's risk of further STI
 - Helping the patient identify his/her risk factors
2. The need to change sexual behaviour
3. Barriers to changing behaviour
 - Gender barriers
 - Cultural practices
 - Religion
 - Poverty, social disruption and civil unrest
4. Changes the client will make in sexual behaviour

13

4. Educate and counsel-how?

- communication skills are important (introduced in Module 3)
 - use verbal and non-verbal
 - use of open questions
 - facilitation
 - summarizing and checking
 - reassurance, direction empathy and
 - expression of partnership.
- Helping patients and clients achieve a desire to change
 - explanation and instruction
 - modeling
 - reinforcing strengths you see in the patient
 - helping the patient explore choices
 - rehearsing what the patient will do or say
 - confirming the patient's decisions

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4. Educate and counsel-how? Con't

4.1. Explanation and instruction

These are skills that many service providers use most of the time.

Instruction Telling patients what to do or how to do something, such as use a condom or take medication:

“Remember to complete the whole course of tablets, right to the last one...”

Explanation Telling patients how or why something should be done:

“You have pain low in your tummy because of an infection passed to you during sexual intercourse...”

15

4. Educate and counsel-how? Con't

4.2. Modelling

- This skill enables you to present examples of how the recommended behaviour or treatment has been successful in other cases.
- In other words you are offering positive models for change.
- This is important; models of doom such as *“If you don't do this you may get AIDS and die!”* might contain some truth – but rarely persuade us to change.

16

4. Educate and counsel-how? Con't

4.3. Reinforcing strengths

- This means pointing out a strength or positive attribute that you see in the patient – something that will help him or her recover or prevent the recurrence of STI.
- Reinforcing strengths could also be useful in helping her/him to manage her feelings so that the service provider can direct her back to treatment

17

4. Educate and counsel-how? Con't

4.4. Exploring choices

- This is about reviewing the patient's alternatives or steps towards curing the current STI or preventing another one. The patient can then decide which is best and feasible.
- Offering a choice also empowers the patient, who feels more in control of the decision that he/she will make. The patient may have a sense of 'ownership' of the decision.

18

4. Educate and counsel-how? Con't

4.5. Rehearsing decisions

- When you feel sure that the patient has reached a decision on the appropriate safe behaviour(s), it is important to ask him or her to work through the steps to put the decision into practice.

19

4. Educate and counsel-how? Con't

4.6. Confirming decisions

- This is a useful way to conclude the interview. You have helped the patient to prepare for what he/she will do after leaving the clinic.
- Asking the patient to confirm a decision helps him or her to feel motivated on leaving the clinic. Having reinforced the decision to you, he/she is much more likely to practice safer sex than before.

20

5. Using condoms to stay cured

- list the benefits of using a condom
- demonstrate how to use a condom
- explain how to keep and dispose of condoms

21

5. Using condoms to stay cured Con't

Demonstrating the use of condoms

- show the expiry or manufacture date and explain that the condom should not be out-of-date, smelly, sticky or hard to unroll
- explain how to open the package carefully, using the tear-point
- show the correct side of the condom to insert over the penis, explaining that it will not roll down if placed the other way
- show how to hold the tip of the condom to press out air, before rolling it all the way down the erect penis

22

5. Using condoms to stay cured Con't

Demonstrating the use of condoms

- emphasize that the condom must be rolled right down to its base
- explain that the condom should be removed *just as the penis begins to lose its erection* and that the patient should hold it carefully at the base and slide it off slowly
- explain that the patient should tie the top of the condom and dispose of it safely

23

Module 5

Partner referral and care

1

LEARNING OBJECTIVES

At the end of this module the participants will be able to:

1. explain why partner management is such an important part of STI case management
2. discuss which sexual partner should be notified and treated
3. describe the possible approaches to contacting partners
4. review the partner notification's card
5. treat the patient's partners.

2

Principal of partner notification

- Most STIs are asymptomatic
- Partner of STIs patient may have no symptoms. Thus, many successfully treated STIs patient may return later with a reinfection if sexual partner are not treated.
- Notify partners may include not only current partner(s) but all partners within the last 3 months (GUD, PID, and cervical infections)

Note: if patient is diagnose of syphilis, notify partners within the last 1 year

3

Which sexual partner should be notified and treated

Not all RTIs are sexually transmitted. Therefore, all clinic staff must be as sure as possible about the presence of an STIs before notifying and treatment partner.

- All patient with genital ulcer
- All patient with yeast infection but no improvement after successfully treatment or partner is symptomatic
- Male patient with urethral discharge
- Female patient with lower abdominal pain
- Female patient with cervical infections

4

How to notify partner

- Train staff and VHSG in contact tracing
- Assess possibility to bring partner for clinic visit
- Three steps strategy:
 - If patient is unable to arrange for clinic visit, give treatment for both with good explanation on how to convince and to give medicine to partners
 - If patient is able to arrange for clinic visit, give a partner referral slip to STI patient (see sample of partner referral form). Wait for 2 weeks to see if partner is coming
 - If partner is not present in the clinic, ask VHSG to trace the contact for treatment

5

How to ensure easy access to treatment

- Train male provider to serve male patient
- Avoid long waiting time
- Waving normal clinic fee if partner has no symptoms
- Ensure confidentiality
- Perform risk assessment
- Perform physical and lab examination regardless patient has sign of infections
- Provide treatment for the same STI as the index patient, whether or not they have symptoms
- Make appointment schedule if needed

6

How to conduct follow up visit

- Advice to come back if no improvement is seen after:
 - 3 days for PID
 - 7 days for GUD
- Assess treatment failure/reinfection
 - Has patient completed treatment?
 - Has partner(s) received treatment?
 - Did patient use condom or abstain from sex after starting treatment?
- Retreat or extent duration of treatment if failure or reinfection suspected

7

Partner referral slip

Patient code number : _____	Patient code number : _____
Patient's number : _____	Clinic's name : _____
	OD : _____
	Province/city : _____
Disease code: _____	Disease code: _____
Date of issue: _____	Date of issue: _____
	Signature: _____
** With this coupon, your service will be free of charge.	

8

Partner management

Syndrome of Index patient	Treatment of partner
Urethral discharge	<i>Treat for gonorrhoea and chlamydia</i>
Genital ulcer	<i>Treat for syphilis and chancroid</i>
Vaginal discharge: • Cervicitis/ Cervicitis+Vaginitis	<i>Treat for gonorrhoea and chlamydia</i>
• Vaginitis	<i>Treat the partner unless the discharge is recurrent.</i>

9

Partner management

Syndrome of Index patient	Treatment of partner
Pelvic inflammatory disease (PID)	<i>Treat for gonorrhoea and chlamydia</i>
Scrotal swelling	<i>Treat for gonorrhoea and chlamydia</i>
Inguinal bubo	<i>Treat for lymphogranuloma venereum</i>
Neonatal conjunctivitis	<i>Treat both parents for gonorrhoea and chlamydia</i>

10

Module 6.1

STI/RTI MANAGEMENT FOR PREGNANT WOMEN AND NEWBORNS

1

Learning objectives

At the end of this module the participants will be able to:

1. Describe the STI/RTI assessment in pregnancy, childbirth and the postpartum period
2. List the STI/RTI assessment at the initial antenatal visit
3. List the STI/RTI assessment at the follow-up antenatal visit
4. Describe the STI/RTI assessment at the labour and delivery
5. Perform the Prevention and management of STIs/RTIs
6. List the STI/RTI assessment at postpartum in the newborn

2

STI/RTI ASSESSMENT IN PREGNANCY, CHILDBIRTH AND THE POSTPARTUM PERIOD

- STI/RTI prevention and management are as important during pregnancy as at any other time.
- A woman's sexual activity may increase or decrease and exposure to infection may change.
- A number of STIs—including syphilis, gonorrhoea, chlamydia, trichomoniasis, genital herpes and HIV—can cause complications during pregnancy and contribute to **poor pregnancy outcomes**
- Among endogenous infections, bacterial vaginosis is associated with preterm labour.

3

STI/RTI ASSESSMENT IN PREGNANCY, CHILDBIRTH AND THE POSTPARTUM PERIOD

- **Upper genital tract infection** may be a complication of spontaneous or induced abortion, or preterm rupture of membranes.
- Women of reproductive age should be educated about the importance of early antenatal care and STI/RTI screening.

4

STI/RTI ASSESSMENT IN PREGNANCY, CHILDBIRTH AND THE POSTPARTUM PERIOD

- Women should be encouraged to attend **antenatal clinic early** in pregnancy to allow timely detection and prevention of any problems, including STI/RTI.
- ☐ Women should be screened for **syphilis** at the first antenatal visit. Screening for syphilis should be done on-site, and results and treatment made available to the woman before she leaves the clinic.

5

STI/RTI ASSESSMENT IN PREGNANCY, CHILDBIRTH AND THE POSTPARTUM PERIOD

- Screening for **other STIs/RTIs**, including cervical infections, bacterial vaginosis, should be offered if available.
- Women should be asked at each antenatal visit about **STI symptoms** in themselves and their partner. Screening and/or treatment of **partners** should be offered, for at least symptomatic STIs, syphilis.

6

STI/RTI ASSESSMENT IN PREGNANCY, CHILDBIRTH AND THE POSTPARTUM PERIOD

- **STI prevention** should be promoted during pregnancy as a way of protecting both mother and child, and of safeguarding future fertility.
- Access to counselling and testing for HIV, interventions to prevent mother-to child-transmission, and care of the mother should be available on-site or by referral.
- Prophylaxis for **ophthalmia neonatorum** should be given routinely to all newborn babies.

7

STI/RTI assessment at the initial antenatal visit

- Ask the woman about symptoms of STI/RTI and whether her partner has urethral discharge or other symptoms. If the woman or her partner has symptoms, they should be managed.
- Serological syphilis testing using RPR test should be carried out as early as possible in pregnancy
- Testing should be done on-site where possible, and the woman should receive her results and treatment before leaving the clinic.

8

STI/RTI assessment at the initial antenatal visit

- Pregnant women with a history of spontaneous abortion or preterm delivery should be screened for bacterial vaginosis and trichomoniasis.
- Prevention of STIs (including HIV) should be discussed with the woman and her partner in the context of ensuring a healthy pregnancy and protecting future fertility.

9

STI/RTI assessment at the follow-up antenatal visit

- Syphilis testing should be repeated in late pregnancy
- All women should be tested at least once during each pregnancy, and all women with reactive serology should receive treatment
- women who are HIV positive, management during the antenatal period will depend on the specific protocol followed. Health care providers should review the birth plan and discuss options for infant feeding and postpartum contraception.

10

STI/RTI assessment at the labour and delivery

- Look for signs of infection. Most STIs/RTIs are not emergencies and treatment can be delayed until after delivery. Vesicles or ulcers suggestive of a first episode of **genital herpes** (primary HSV-2 infection) near delivery may be an indication for caesarean section. Where caesarean section is not possible or would be unsafe, transport to a referral hospital should be considered if delivery is not imminent.
- **Genital warts**, even when extensive, are not an indication for caesarean delivery.

11

STI/RTI assessment at labour and delivery

- **Preterm rupture of membranes** and rupture of membranes before the onset of labour require careful management to reduce risk of infection (see Chapter.....).
- **Manage HIV-infected women** (including administration of antiretroviral treatment) according to local protocols.
- Prophylaxis for **ophthalmia neonatorum** should be given routinely to all newborn babies.

12

Prevention and management of STIs/RTIs in the newborn



13

Prevention and management of ophthalmia in the newborn

Prevention of ophthalmia neonatorum

Instil one drop of the following in each eye within one hour of birth

Tetracycline ophthalmic ointment (1%) in a single application

- **OR**
- provide **iodine** drops 2.5% in a single application
- **OR**
- **silver nitrate** (1%) freshly prepared aqueous solution in a single application

14

STI/RTI assessment at postpartum

- Assess for STI/RTI symptoms: rule out postpartum infection
- Discuss prevention of MTCT if HIV positive; consider substitute feeding plan
- Discuss STI/RTI protection and contraception

15

Module 6.2

MANAGEMENT OF ASYMPTOMATIC STIs/RTIs

1

Learning objectives

At the end of this module the participants will be able to:

1. Describe the Asymptomatic STI/RTI
2. Define how to make the STI/RTI Screening tests for Women
3. Define how to make the STI/RTI Screening tests-Men
4. Define how to make the STI/RTI Screening tests-MSM

2

Asymptomatic STI/RTI in women & men

- Many men and women with an STI/RTI do not have symptoms or have minimal symptoms and do not realize that anything is wrong.
- In women, silent asymptomatic infection can be more serious than symptomatic ones.
- Men may ignore symptoms if they are not severe
- Routine screening should be provided for all patients at risk of an STI/RTI

3

STI/RTI Screening tests for Women

- Women with STI syndromes other than genital ulcer should be screened for syphilis. Screening is unnecessary for patients with ulcer who should be treated syndromically for both syphilis and chancroid without testing.
- Sex workers should be screened at the first visit and then every 6 months

4

STI/RTI Screening tests for Women

1-Syphilis screening

- Pregnancy should be done at the first antenatal visit, as early as possible. It can be repeated in the third trimester.
- Women who do not attend antenatal clinic should be tested at delivery
- Women who have had a spontaneous abortion (miscarriage) or still birth

5

STI/RTI Screening tests for Women

2-Vaginal infections

- Pregnant women with a history of spontaneous abortion or preterm delivery should be screened for bacterial vaginosis and trichomoniasis through wet preparation/Gram stain vaginal smear

3-Cervical infection

Women are asymptomatic, it may be possible detect signs of infection by:

6

STI/RTI Screening tests for Women

☐ Speculum examination

- Mucopurulent discharge
- Friability (easy bleeding) when the cervix is touched with a swab
- Positive swab test (yellow discoloration of swab insert endocervical)

☐ Endocervical Gram-stain smear (available in Cambodia)

7

STI/RTI Screening tests for Women

☐ Culture for N. gonorrhoeae

- Endocervix/urethra
- Rectum (if report of anal sex)
- Pharynx (if report of fellatio)

☐ Test for C. trachomatis

- Culture of endocervical swab
- NAAT for endocervical swab or first void urine

8

STI/RTI Screening tests for Women

4- Cervical cancer screening

Cervical cancer is a recognized complication of STI, related to infection with a few specific strains of humanpapiloma virus. Screening and treatment of early stages (cervical dysplasia) are effective in reducing morbidity and mortality from cervical cancer.

Pap smear (papanicolaou smear) is currently recommended, all women over 35 years old should be screened every five to ten years.

5- HIV screening test (voluntary HIV testing and counseling)

9

STI/RTI Screening tests-Men

1-Urethral Gram-stain smear is recommended :

- If the patient has symptoms of urethritis or
- If urethral discharge can be expressed or is spontaneously present or
- If patient is a contact of women with cervicitis, PID.

2- Syphilis screening

3-Urethral and pharyngeal culture for N.gonorrhoeae and urethral culture antigen detection test for C. trachomatis, depending on sexual practices.

10

Additional STI/RTI Screening tests-MSM

4-Rectal Gram-stain (if practices receptive anal intercourse)

- If rectal discharge is present or
- If rectal asymptomatic

5-Rectal culture for N.gonorrhoeae and C. trachomatis (if has practiced receptive rectal intercourse last year)

6-HIV screening test (voluntary HIV testing and counseling)

11

Module 6.3

STIs and Sexual violence

1

Objectives

At the end of this module, the participants will be able to:

- 1- Describe the statistics of sexual violence in the world
- 2- List the medical and other care for survivors of sexual assault
- 3- Describe the Medical management emergency contraception
- 4- Discuss on Post-exposure prophylaxis of STI

2

Sexual violence-some statistics

- Studies from different parts of the world have found that 7–36% of girls and 3–29% of boys suffer from sexual abuse in childhood, with a majority of studies reporting 1.5–3 times more sexual violence against girls than boys.
- The percentage of adolescents who have been coerced into sex can range from approximately 7% to 46% of females and 3% to 20% of males, depending on the country.

3

Sexual violence-some statistics

- Population-based studies report that between 6% and 46% of women have experienced attempted or completed forced sex by an intimate partner or ex-partner at some time in their life.
- Rape and domestic violence account for an estimated 5–16% of healthy years of life lost in women of reproductive age.
- STI has been found in up to 43% of people who have been raped, with most studies reporting rates between 5% and 15% depending on the disease and type of test used.

4

Medical and other care for survivors of sexual assault

The following services should be available, on-site or through referral, for patients who have experienced sexual violence:

- Essential medical care for any injuries and health problems;
- Collection of forensic evidence;
- Evaluation for STI and preventive care;
- Evaluation of pregnancy risk and prevention, if necessary;
- Psychosocial support (both at time of crisis and long-term);
- Follow-up services for all of the above.

5

Medical management Emergency contraception

- Emergency contraceptive pills (levonorgestrel) can be used up to 5 days after unprotected intercourse.
- A second option for emergency contraception is insertion of a copper-bearing IUD within 5 days of the rape. This will prevent more than 99% of pregnancies. The IUD may be removed during the woman's next menstrual period or left in place for continued contraception. If an IUD is inserted, make sure to **give full STI treatment**.

6

Medical management Postexposure prophylaxis of STI

STI prophylaxis can be started on the same day as emergency contraception,

STI presumptive treatment options for adults:

1- Syphilis

- ☐ **Benzathine penicillin** 2.4 million units
by single intramuscular injection OR
- ☐ **Doxycycline** 100 mg orally twice a day for 14 days (in case of penicillin allergy only)

7

Medical management Postexposure prophylaxis of STI

2- Gonorrhoea/Chancroid

- ☐ **Cefixime** 400 mg orally as a single dose, or
- ☐ **Ceftriaxone** 250 mg by intramuscular injection or
- ☐ **Spectinomycin** 2 g by intramuscular injection as a single dose

8

Medical management post exposure prophylaxis of STI

3- Chlamydia/ lymphogranuloma venereum

- ☐ **Azithromycin** 1 g orally as single dose or
- ☐ **Doxycycline** 100 mg orally twice a day for 7 days, or **tetracycline** 500mg orally 4 times a day for 7 days or
- ☐ **Erythromycin** 500mg orally 4 times a day for 7 days

4-Trichomoniasis

- ☐ **Metronidazole** 2 g orally as a single dose or
- ☐ **Tinidazole** 2 g orally as a single dose

9

STI presumptive treatment options for children

1-Syphilis

- ☐ **Benzathine penicillin** 50 000 units/kg of body weight by single intramuscular injection, or
- ☐ **Erythromycin** 12.5 mg/kg of body weight orally 4 times a day for 14 days

2- Gonorrhoea/Chancroid

- ☐ **Ceftriaxone** 125 mg by intramuscular injection, as single dose, or
- ☐ **Spectinomycin** 40 mg/kg of body weight (maximum 2 g) by intramuscular injection
(>45 kg, use adult protocol)

10

STI presumptive treatment options for children

3- Chlamydia/ lymphogranuloma venereum

- ☐ **Erythromycin** 12.5 mg/kg of body weight orally 4 times a day for 7 days (12 years or older, use adult protocol)

4- Trichomoniasis

- ☐ **Metronidazole** 5 mg/kg of body weight orally 3 times a day for 7 days (12 years or older, use adult protocol)

11

Medical management Postexposure prophylaxis of STI

- Postexposure prophylaxis of HIV (National Guidelines)
- Prophylactic immunization against hepatitis B
- Tetanus toxoid

12

Module 6.4

STI/RTI case management in People Living with HIV/AIDS (PLHA)

1

Objectives

At the end of this module, the participants will be able to:

- Identify the procedures to detect STIs/RTIs among people living with HIV.
- Discuss how to manage some STIs/RTIs among them.

2

Detection of HIV Infection

- All persons who seek evaluation and treatment for STDs should be screened for HIV infection.
- Screening should be routine, regardless of whether the patient is known or suspected to have specific behavioral risks for HIV infection.
- Because many STDs are asymptomatic, routine screening for curable STDs (e.g., syphilis, gonorrhea, and chlamydia) should be performed at least yearly for sexually active persons.

3

Initial evaluation of HIV-positive patients

In non-emergent situations, the initial evaluation of HIV-positive patients usually includes the following:

- A detailed medical history, including sexual and substance abuse history; vaccination history; previous STDs; and specific HIV-related symptoms or diagnoses;
- a physical examination, including a gynecologic examination for women;
- testing for *N. gonorrhoeae* and *C. trachomatis* (and for women, a Pap test and wet mount examination of vaginal secretions);
- Syphilis serology

4

Gonococcal and non-gonococcal infections

- Patients who have gonococcal infection and NGU and also are infected with HIV should receive the same treatment regimen as those who are HIV negative.
- Patients who have cervicitis and also are infected with HIV should receive the same treatment regimen as those who are HIV negative.
- Treatment of cervicitis in HIV-infected women is vital because cervicitis increases cervical HIV shedding.
- Treatment of cervicitis in HIV-infected women reduces HIV shedding from the cervix and might reduce HIV transmission to susceptible sex partners.

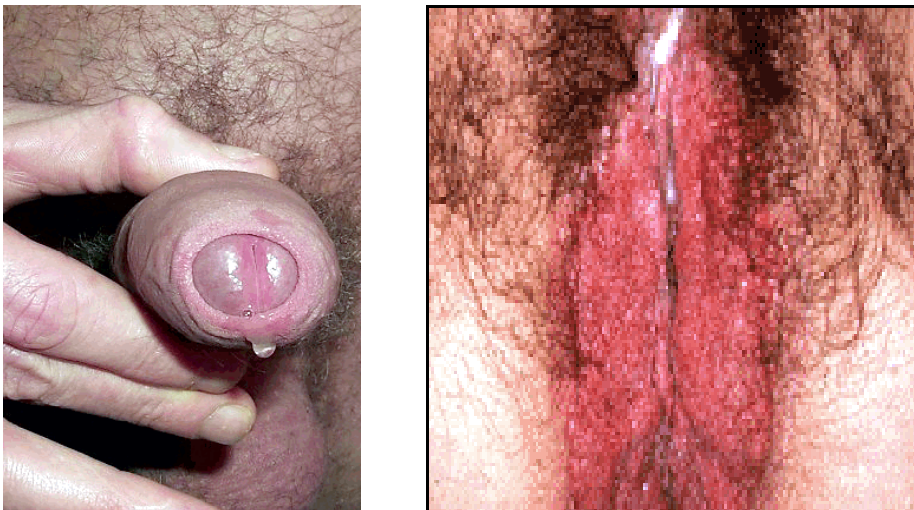
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Gonococcal infections



6

Non-gonococcal infections

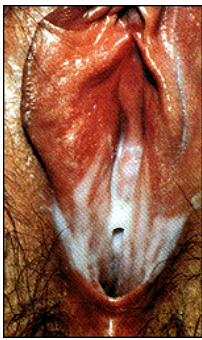


7

Trichomoniasis, Candidiasis and Bacterial Vaginosis

- Patients who have trichomoniasis, BV, Candidiasis and also are infected with HIV should receive the same treatment regimen as those who are HIV negative.
- Although long-term prophylactic therapy with fluconazole at a dose of 200 mg weekly has been effective in reducing *C. albicans* colonization and symptomatic VVC, this regimen is not recommended for routine primary prophylaxis in HIV-infected women in the absence of recurrent VVC.

8



Trichomoniasis, Candidiasis and Bacterial Vaginosis



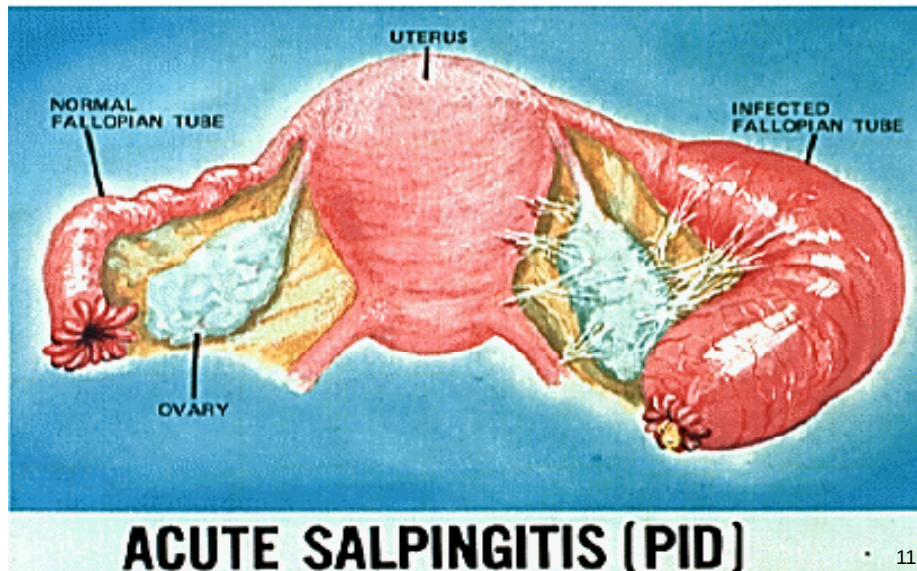
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Pelvic Inflammatory Disease (PID)

- More comprehensive observational and controlled studies (published since the 2002 STD Treatment Guidelines, US-CDC) have demonstrated that HIV-infected women with PID had similar symptoms when compared with uninfected controls.
- The microbiologic findings for HIV-positive and HIV-negative women were similar, except HIV-infected women had higher rates of concomitant *M. hominis*, candida, streptococcal, and HPV infections and HPV-related cytologic abnormalities.

10

Pelvic Inflammatory Disease (PID)



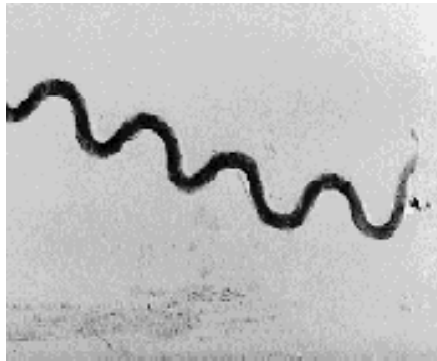
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Syphilis

- Compared with HIV-negative patients, HIV-positive patients who have early syphilis might be at increased risk for neurologic complications and might have higher rates of treatment failure with currently recommended regimens.
- No treatment regimens for syphilis have been demonstrated to be more effective in preventing neurosyphilis in HIV-infected patients than the syphilis regimens recommended for HIV-negative patients. Careful follow-up after therapy is essential.
- Treatment with benzathine penicillin G, 2.4 million units IM in a single dose is recommended for primary syphilis.

12

Primary syphilis



13

Secondary syphilis



14

Chancroid

- HIV-infected patients who have chancroid should be monitored closely because, as a group, these patients are more likely to experience treatment failure and to have ulcers that heal more slowly.
- HIV-infected patients might require longer courses of therapy than those recommended for HIV- negative patients, and treatment failures can occur with any regimen. Some specialists prefer the erythromycin 7-day regimen for treating HIV-infected persons.

15

Herpes simplex viral infection

- Immunocompromised patients might have prolonged or severe episodes of genital, perianal, or oral herpes. Lesions caused by HSV are common among HIV-infected patients and might be severe, painful, and atypical. HSV shedding is increased in HIV-infected persons.
- HIV-infected persons are likely to be more contagious for HSV.
- Recommended Regimens for Daily Suppressive Therapy in Persons Infected with HIV: **Acyclovir** 400–800 mg orally twice to three times a day

16

Herpes simplex viral infection



17

Genital warts

- No data suggest that treatment modalities for external genital warts should be different in the setting of HIV-infection.
- However, persons who are immunosuppressed because of HIV or other reasons might have larger or more numerous warts, might not respond as well as immunocompetent persons to therapy for genital warts, and might have more frequent recurrences after treatment.

18

Lymphogranuloma inguinale (LGV)

- Persons with both LGV and HIV infection should receive the same regimens as those who are HIV negative.
- Prolonged therapy might be required, and delay in resolution of symptoms might occur.

19

Module 7

MONITORING AND SUPERVISION ON STI/RTI PREVENTION AND CARE ACTIVITIES AT STI CLINIC

1

Learning objectives

At the end of this module the participants will be able to:

1. Describe the main objectives of monitoring and supervision on STI/RTI.
2. Describe the specific objectives of monitoring and supervision on STI/RTI.
3. Define the methodology of monitoring and supervision on STI/RTI.
4. Perform the process of monitoring and supervision on STI/RTI.
5. Use the checklist of monitoring and supervision on STI/RTI
6. Use the quarterly reporting form on STI/RTI cases.

2

INTRODUCTION

- In Cambodia, the STI/RTI management is an important component of public health activities, especially for high risk population such as worker.
- Failure to diagnose and treat STIs/RTIs at an early stage may result in serious complications and sequelae, including infertility, ectopic pregnancy, cervical cancer and infant death.
- The presence of STIs greatly increases the risk of acquiring or transmitting the human immunodeficiency virus (HIV).

3

INTRODUCTION

- Realizing its serious impact in society, NCHADS has taken a lead in improving the quality of STI/RTI management and has been working with other NGO partners focusing mainly on the most at risk populations.
- NHADS supports 32 special STI/RTI services that are delivered to the high risk populations like direct and indirect female sex workers, and their clients.

4

Main Objectives

The objective of monitoring and supervision on STI/RTI service delivery, especially STI clinic are:

- To monitor the current quality of STI service delivery
- To identify problems in providing quality STI service
- To improve the overall of clinical service delivery implemented at specialized STI clinics through in-site training during supervision visit.

5

Specific Objectives

- To improved diagnosis and treatment of STIs based on laboratory approach
- To review the quality and adequacy of essential STI drugs, reagents for laboratory test
- To review the quality of record keeping on patient visits and related STI clinic reporting
- To ensure that STI prevention and care services are clinically proficient and provide adequate coverage to the target groups.

6

Methodology

- Supervisor team STI/RTI unit & NCDS convenes the biannual supervision and monitoring.
- Monitor the clinic set up, clinic records, and interview the clinic staffs and clients (if necessary)
- The monitoring and supervision need to adopt a facilitation process in order to encourage, updating and improved quality of care and the supervisor team should not criticize or blame the supervisees.
- A checklist of monitoring and supervision will be need as main tool for supervisor team.

7

Methodology

- assess staff performance through observation of staff work.
- Conduct meeting for self evaluation of the staff and then, discuss with the manager and staff to share their point of view.
- The meeting is an occasion to:
 - Praise for the achievements
 - Find solutions to the problems and difficulties encountered
 - Identify training need

8

Process of monitoring and supervision

Using checklist during supervision

- Interviewing a clinician and the clinical team members
- Observing the consultation, examination, treatment and counseling activities
- Inspecting the equipment and supplies
- Observing the collection of laboratory specimens, procedures, test results and interpretation
- Analyzing the patient's medical records and laboratory records

9

Monitoring and Supervision Checklist

A. Part I (management)

1. Accessibility
2. Staffs
3. Room
4. Infection control
5. IEC material & condom
6. Record keeping and documentation
7. Request the patient's ledger book or register and record the following figures for the last quarter
8. Record the numbers of common type of diagnosed STI in the last quarter

10

Monitoring and Supervision Checklist (cont.)

B. Part II (clinical performance)

1. History taking
2. Clinical & examination
3. STI diagnosis
4. STI treatment
5. STI diagnosis and treatment evaluation
6. Partner notification/follow up

11

Monitoring and Supervision Checklist (cont.)

C. Part III (laboratory performance)

1. Infection control
2. Laboratory procedure and tests
3. Record the numbers of common type of STI lab in the last quarter

D. Problem solving & Recommendations

- Management issues
- Clinical issues
- Laboratory issues

12

SUMMARY OF EVALUATING SCORE FOR PBSI (RELATED TO ASSESSMENT FORM P2: STI)

	Qualify of STI/RTI case management performance	Yes/done	No/ not done well but acceptable	No/ not done	Remarks
		Score 2	Score 1	Score 0	
1	Adequate number of staff				
2	Staff appropriately qualified for their current job				
3	Staff trained on for their current job				
4	Appropriate physical structure (privacy, cleanness)				
5	Standard case management guideline followed				
6	Standard operating procedures practiced				
7	Operating hours acceptable to target population				
8	Provide regular screening of asymptomatic STI among SWs				
9	Essential STI drug available and request on time				
10	Medical equipment are in good condition				
11	Laboratory equipment are in good condition				
12	Gram stain/Methylene blue				
13	Wet preparation				
14	KOH preparation				
15	RPR test				
16	Perform education and counseling the patients				
17	Perform provider initiative for HIV testing to the patients				
Total score...../36		%			

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EW networks consist outreach teams, Mekar (entertainment manager), peer facilitators, peer educators.

QUARTERLY STI/RTI REPORT FOR FAMILY HEALTH CLINIC

Month:..... No of Quarter:..... Year: 200...
Name of Clinic:..... OD:..... Province:.....

		Month 1	Month 2	Month 3
Total number of visits for male patients	Total of men			
	Total of MSM			
Total number of visits for low risk female patients				
Total number of first visits for non-brothel based entertainment workers (NBEWs)				
Total number of follow up visits for non-brothel based entertainment workers (NBEWs)				
Total number of first visits for brothel based entertainment workers (BEWs)				
Total number of follow up visits for brothel based entertainment workers (BEWs)				
Total number of NBEWs identified by EW networks				
Total number of BEWs identified by EW networks				

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	Month 1	Month 2	Month 3
Total number of clients referred to VCCT			
Total number of clients referred to OI/ART services (HIV infected patients)			
Total number of clients referred to ANC services (pregnant women)			
Total number of clients referred to Family Planning (FP) services			

	Month 1	Month 2	Month 3
Total number of clients referred from VCCT			
Total number of clients referred from OI/ART services			
Total number of clients referred from ANC services			
Total number of clients referred from Family Planning (FP) services			

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Men (new cases)									
		Age group						Total	
		<15		15-49		≥ 50			
	Syndrome	<u>Total</u>	<i>MSM</i>	<u>Total</u>	<i>MSM</i>	<u>Total</u>	<i>MSM</i>	<u>Total</u>	<i>MSM</i>
	Urethral discharge								
	Anal discharge								
	Ano-Genital Ulcers								
	Ano-Genital warts								
	Scrotum swelling								
	Inguinal bubo (LGV)								
	Total new cases men								

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Low risk women (new cases)					
		Age group			Total
	Syndrome	<15	15-49	≥ 50	
	Vaginal discharge				
	<i>Vaginitis</i>				
	<i>cervicitis</i>				
	<i>Vaginitis + cervicitis</i>				
	Pelvic Inflammatory Disease (PID)				
	Ano-Genital ulcers				
	Ano-Genital warts				
	subtotal				

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High-risk Women (new cases)									
		<15		15-49		> 50		Total	
		DSWs	EWs	DSWs	EWs	DSWs	EWs	DSWs	EWs
First visit	Vaginal discharge								
	<i>Vaginitis</i>								
	<i>cervicitis</i>								
	<i>Vaginitis + cervicitis</i>								
	Pelvic Inflammatory Disease (PID)								
	Ano-Genital ulcers								
	Ano-Genital warts								
	Syphilis (based on RPR +)								
	Subtotal new cases first visit								

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High-risk Women (new cases)									
		<15		15-49		> 50		Total	
		DSWs	EWs	DSWs	EWs	DSWs	EWs	DSWs	EWs
Follow up visit	Vaginal discharge								
	<i>Vaginitis</i>								
	<i>cervicitis</i>								
	<i>Vaginitis + cervicitis</i>								
	Pelvic Inflammatory Disease (PID)								
	Ano-Genital ulcers								
	Ano-Genital warts								
	Subtotal new cases FU								

NB:

EWs : Entertainment Workers: Karaoke, Massage parlors, beer garden, beer promotion, freelance sex workers,

DSWs : Direct Sex Workers (brothel based)

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QUARTERLY REPORT OF STI/RTI LABORATORY

Endocervical smear	Total number	WBC< 10	WBC 10-25	WBC>25
		GNID** (-)	GNID** (+)	If performed by Gram Stain
Urethral smear	Total number	WBC< 5	WBC≥5	
		ICD* (-)	ICD* (+)	If performed by Methylene Blue
		GNID** (-)	GNID** (+)	If performed by Gram Stain
Anal smear	Total number	WBC< 5	WBC≥5	
Vaginal smear Wet preparation	Total number	Trichomonas vaginalis		
		(-) (+)		
		Budding yeast/hyphae		
		(-) (+)		
		Clue cells		
		(-) (+)		

* ICD : Intra-cellular Diplococci , ** GNID : Gram Negative Intracellular Diplococci

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Vaginal smear Gram stain	Total number	BV		
		Nugent score: 0-3	Nugent score 4-6	Nugent score ≥7
		Budding yeast/hyphae		
		(-)		(+)
Vaginal smear pH (vaginal)	Total number	≤ 4.5		> 4.5
Vaginal smear Whiff test or Amine test	Total number	(-)		(+)
RPR test	Total number	Qualitative		
		RPR (-)		RPR (+)
TPHA/TPPA	Total number	(-)		(+)

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