MANAGEMENT OF SEXUALLY TRANSMITTED INFECTIONS IN PRISONS

A SYNDROMIC APPROACH & SPECIAL CONSIDERATIONS

A MANUAL FOR PRISON MEDICAL STAFF

NATIONAL STD/AIDS CONTROL PROGRAMME

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MINISTRY OF HEALTH
SRI LANKA

Management of Sexually Transmitted Infections in Prisons:

A Syndromic Approach and Special Considerations

A Manual for Prison Medical Staff

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National STD/AIDS Control Programme
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Technical Guidance

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Message from the Director - NSACP

It is very important to diagnose and treat sexually transmitted infections at the time of the patient's first contact with the health system. But, management of such infections according to aetiological diagnosis is a difficult task because specialized laboratory facilities are not available.

Prisons are among one of the essential places where we need to consider setting up facilities for screening and treating STIs. National STD/AIDS Control Programme of the Ministry of health Sri Lanka along with the Department of Prison have been trying to improve STI services to prison inmates in Sri Lankan prisons. This manual is prepared to guide Prison medical officers to use syndromic approach to manage Sexually Transmitted Infections in prisons and to improve their knowledge on high risk populations for STIs which can be seen in those settings.

I sincerely acknowledge the support given by the officers in the Department of Prison, medical officers attached to prisons and consultants, senior registrars, medical officers attached to the National STD/AIDS Control programme to prepare this manual.

Dr. Nimal Edirisinghe
Director
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Overview

Sexually transmitted infections (STIs) are a major public health problem. Early detection and treatment of them, preferably at the time of the patient's first contact with the health system is very important. Delays in treatment result in loss to follow up of a considerable proportion of patients and continued transmission of the infection.

About 30,000 people are confined in prisons and detention centers in Sri Lanka at any one time, and the turn over is very high. Most of them belong to reproductive age group, and often come from populations or groups at higher risk of STIs such as sex workers and drug users.

Hence, Prisons and detention centers in Sri Lanka constitute an excellent opportunity to provide treatment, care, and prevention of sexually transmitted infections for a population with possible high risk behaviors that may not otherwise access such services.

This document provides guidance for medical officers and other relevant health care staff who work in prisons and places of detention in Sri Lanka. It aims to provide guidance on syndromic management of sexually transmitted infections, a brief review of some other STIs which can be seen in prisons, guidance on managing pregnant females with STIs and a concise guidance on managing some of the most at risk populations seen within prison settings in Sri Lanka.

This guidance is not intended to replace other resources. It is recommended that it is used in conjunction with any relevant evidenced-based guidance and or guidelines from the National STD/AIDS Control Programme in Sri Lanka.

Acronyms

AIDS	-	Acquired Immune Deficiency Syndrome
ART	-	Antiretroviral Treatment
BV	-	Bacterial Vaginosis
CMV	-	Cytomegalo Virus
CT	-	Chlamydia trachomatis
DNA	-	Deoxyribo Nucleic Acid
FSW	-	Female Sex Worker
HBV	-	Hepatitis B Virus
HCV	-	Hepatitis C Virus
HIV	-	Human Immunodeficiency virus
HPV	-	Human papiloma virus
HSV	-	Herpes simplex Virus
IDU	-	Intravenous Drug User
IUD	-	Intra Uterine contraceptive Device
LGV	-	Lympho Granuloma Venereum
MAC	-	Mycobacterium avium Complex
MSM	-	Men having Sex with Men
NG	-	Neisseria gonorrhoeae
OCP	-	Oral Contraceptive Pill
Pap smear	-	Papanicolaou smear
PCP	-	Pneumocystis jiroveci pneumonia
PEP	-	Post Exposure Prophylaxis
PID	-	Pelvic Inflammatory Disease
RNA	-	Ribo Nucleic Acid
RPR test	-	Rapid Plasma Reagin Test
STI	-	Sexually Transmitted Infection
TCA	-	Tri Chloro Acetic acid
TV	-	Trichomonas vaginalis
VDRL	-	Venereal Disease Research Laboratory
WSW	-	Women having sex With Women

1. Transmission of STIs

MAIN MODE OF TRANSMISSION OF SEXUALLY TRANSMITTED INFECTIONS (STI):

- Unprotected penetrative sexual intercourse (vaginal, anal, oral) with an infected partner

OTHER MODES OF TRANSMISSION:

- Transmission through blood and blood products
- From an infected mother to child

1.1 FACTORS THAT INFLUENCE TRANSMISSION OF STIS

a. Biological factors

- **Age** - younger women are more susceptible to infection than older women
- **Sex** - women are more vulnerable to get infection from men than from women to men
- **Circumcision** - Circumcised men are less likely to get infected than uncircumcised men

b. Social/cultural factors

- Separation from family/partners
- Lack of knowledge about safe sex
- Non acceptance of condoms
- Lack of accessibility to condoms
- Low literacy and poverty
- Lack of recreational facilities
- Stigma of having a STI/stigma among prisoners about STIs

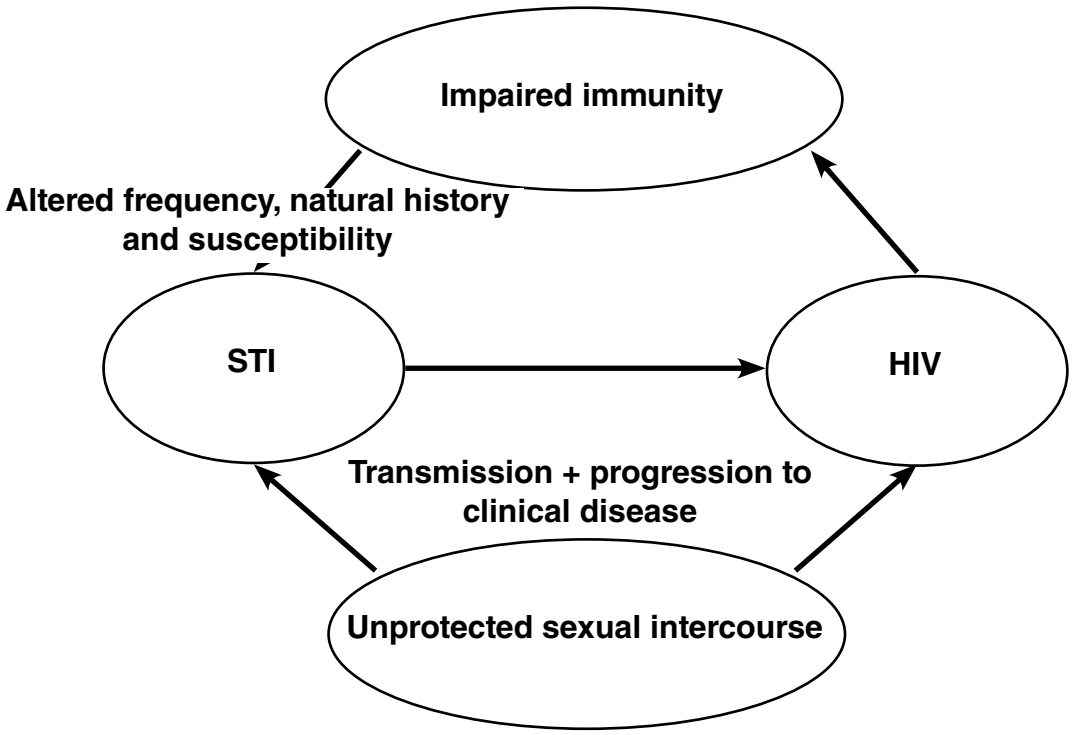
c. Behavioral factors

- Same sex behavior among men (MSM)

- Same sex behavior among women (WSW)
- Sexual abuse
- Recent change of partners
- Having multiple sexual partners
- Commercial sex /clients of sex workers /partners of MSM
- Substance abuse (alcohol, heroin, cannabis, etc)
- Sex in exchange for drugs money and favors
- Inability to negotiate for safer sex
- Poor treatment seeking behavior

1.2 THE LINK BETWEEN HIV AND STIS

Presence of a STI will increase the risk of transmission and acquisition of HIV by 2-9 folds. On the other hand when HIV infected person gets a STI it can cause more complications than in a non HIV infected person. The risk is reduced by identifying STIs early and managing them appropriately.



2. History Taking

When a patient presents with symptoms related to STIs, it gives an opportunity to provide early and effective care for STIs/HIV. Even if they are asymptomatic, it is important to do a risk assessment for STIs and offer screening tests for STIs/HIV. Every visit to the health care provider should be taken as an opportunity to assess presence of symptoms and risky behaviours. Similarly attempts should be made to provide information on STIs and HIV and the services available to prison inmates regularly.

2.1 PHYSICAL ENVIRONMENT

- At the initial visit it is important to welcome the patient and to provide a comfortable and conducive environment to facilitate good history taking.
- All patients should be registered at the initial visit and records should be kept confidentially.
- Attempts should be made to maintain confidentiality.
- The health care providers should not divulge the information to other prison inmates or to prison officers without the consent of the patient.
- Reports and records of patients should be kept under lock and key.

2.2 PRACTICE GOOD COMMUNICATION SKILLS

- Good communication skills are very important in management of STI patients. These include, initial greeting, providing privacy, maintaining eye contact, verbal and nonverbal skills, non judgmental attitude, using appropriate body language, respect and attention to patient.
- Verbal communication should start with general details and move on slowly to sensitive questions like sexual behaviors, towards latter part of the history. The use of culturally acceptable simple language is also important. Use open and closed questions effectively during interview but avoid directed questioning.
- Open questions enable the patient to give a longer, detailed reply.

  eg. What is the problem that troubles you?

- Close questions are the questions that should be answered in one or two words, mostly yes or no answers.

  eg. Are the ulcers painful?

  How old are you?
- Directed questions will direct the patient to answer in the way that you prefer to have. Those should always be avoided.

  eg. You always use condoms with your casual partners, do you?

Care should be taken to avoid conflicts between clinician's values and attitudes towards sexuality and different sexual behaviors of the patient.

2.3 COMPONENTS OF HISTORY TAKING

- General details
- Presenting complaint
- Past medical history
- Sexual history
- Social history
- Substance abuse

Information on history taking

1. GENERAL DETAILS	
• Name	• Age
• Marital status	• Sex
• Permanent address	• Telephone No
• Employed/ unemployed	• Type of employment
2. PRESENT ILLNESS	
• Presenting complaint and duration	
2.1. MEN:	
• If a urethral discharge	Nature of discharge, pain while passing urine, frequency, similar episodes earlier, any treatment taken before, whether partner is symptomatic
• If scrotal swelling	History of trauma, Painful swelling Onset: sudden or Insidious

2.2. WOMEN	
• If a vaginal discharge	Colour and nature of discharge, post coital bleeding, pain during sex (dyspareunia), lower abdominal pain, partner symptomatic
• Lower abdominal pain	Recent childbirth or abortion, fever, dysuria
• Menstrual history	Missed period, Last Regular Menstrual Period
• Obstetric and contraceptive history	
2.3. MEN AND WOMEN	
• If a genital ulcer	Had vesicular lesions or not, painful or not single or multiple lesions, similar lesions in the past, drug history, constitutional symptoms
• If an inguinal swelling	painful or not, associated with genital ulcer, swelling elsewhere in the body
• Itching or discomfort in genital area	
3. MEDICAL HISTORY	
• Any past STI	When? What STI? Treatments and follow up, results of the tests
• Other illnesses	Type, duration, date of diagnosis, treatment, follow up,
• Medications	
• Drug allergies	
4. SEXUAL HISTORY	
• Details of last sexual exposure	Date or period, Gender of the partner, type of partner whether marital, regular, casual, Female Sex Worker (FSW), site of exposure (vaginal, oral, anal), details of condom use and reasons for not using condoms

• Details of previous sexual exposures	During last one month, three months, six months twelve months and lifetime, Gender of the partner, type of partner (marital, regular, casual, FSW), site of exposure (vaginal, oral, anal), Details of condom use and reasons for not using condoms
• Details of first sexual exposure	Age of the patient at that time Gender of the partner, Type of partner (marital, regular ,casual, FSW), site of exposure (vaginal, oral, anal), details of condom use and reasons for not using condoms
• Details of sexual contacts overseas • Partner having sex with more than one partner • Patient/ spouse returning home after a long stay away	
5. SOCIAL HISTORY	Occupation, education, travel abroad, details of the partner/s, income
6. SUBSTANCE ABUSE	Substances used, route/s, duration, current use, date of first use

3. Examination

Assure privacy and confidentiality. Explain the examination procedure to the patient and get the consent. Make sure there is a chaperone always (male chaperone for a male patient /female chaperone for a female patient)

3.1 EXAMINATION OF A MALE PATIENT

1. General examination - Carry out thorough general examination - eye, mouth, skin (including palms and soles), lymph node, joints etc.

2. Genital examination - Advice the patient to lie down on the examination couch and expose the patient preferably from umbilicus to the knee.

3. Examine the pubic area for ulcers, vesicles, warts, folliculitis, nits or other skin lesions such as scabies. Inspect the whole genital area including perianal region for ulcers, rashes, lumps or erythema.

4. Palpate inguinal region in order to detect the presence or absence of enlarged lymph nodes and swellings

5. Examine penis noting rashes or sores. Then retract the foreskin and look at the
   * Glans penis
   * Urethral opening

6. Palpate scrotum feeling the individual parts of the anatomy for tenderness and lumps
   * Testis
   * Spermatic cord
   * Epididymis

7. Record the presence or absence of:
   * Ulcers
   * Urethral discharge (Noting the colour and the amount)
   * Warts
   * Swelling in the genital area and groin
   * Tenderness

8. Examine perineum and anus. Use a proctoscope (when indicated) to visualize rectal mucosa, for the presence of ulcers, discharge, warts etc.

3.2 EXAMINATION OF A FEMALE PATIENT

1. General examination- carry out thorough general examination - eye, mouth, skin (including palms and soles), lymph node, joints etc.

2. Genital examination - ask the patient to remove cloths from waste down and then lie on the examination couch. To minimize embarrassment, use a sheet to cover the legs below knee.

3. Always make sure the presence of a female chaperone.

4. Palpate the abdomen for pelvic masses and tenderness, taking great care not to hurt the patient.

5. Palpate inguinal region to detect the presence or absence of enlarged inguinal lymph nodes or buboes.

6. Keep the patient in lithotomy position,

   Examine the pubic area for rashes, nits or folliculitis

   Inspect the vulva and perianal area for erythema, rashes, ulcers, or lumps

   Note presence of vaginal discharge, it's colour and amount, ulcers or warty lesions in vulva

7. If facilities are available, do a speculum examination after taking consent of the patient (If the hymen is not intact). Inspect the vagina for the presence of erythema, warty lesions and vaginal discharge. Clean the cervix with a dry cotton swab and look for erythema, oedema, discharge, warty lesions or contact bleeding from cervix.

8. Do a pap smear (before cleaning the cervix), if it is not done during last five years if the patient is >35 years of age or otherwise indicated. If facilities are not available, refer the patient to a STD clinic or to other health facility.

9. Do a bimanual pelvic examination. Feel the consistency of the cervix and move the cervix to check cervical motion tenderness. Feel the size and position of the uterus, check the mobility and tenderness. Feel the ovaries in lateral fornices and note any tenderness there.

10. Record the presence or absence of
    * Ulcers/ blisters
    * warts
    * swelling
    * Vaginal discharge (noting colour, amount and odour)
    * Status of the cervix
    * pelvic tenderness

4. Syndromic Management of STIs

Syndromic management is based on the identification of syndromes (which consist of symptoms and easily recognized signs) and treatment for these. A majority of STIs present with symptoms such as urethral discharge/dysuria, genital ulcer/s, vaginal discharge and lower abdominal pain. The syndrome is identified on clinical grounds after a history is taken and an examination carried out. Treatment for each syndrome is directed towards the most common organisms responsible for the syndrome. The appropriate management can be decided according to the clinical management flow chart for the symptom.

This section discusses the management of the most common clinical syndromes caused by sexually transmitted agents. It aims to appropriately treat possible STIs at the first contact between patients and health care providers, preventing the development of serious complications and sequelae such as infertility.

In prison settings, referring a patient to a STD clinic may not be feasible due to limitations in manpower, time and resource. Some patients may be reluctant to go to a STD clinic due to stigma and discrimination. There may be instances where patients may leave the prison very soon, before referral to STD clinic is made. Therefore syndromic management of STI is recommended in such settings.

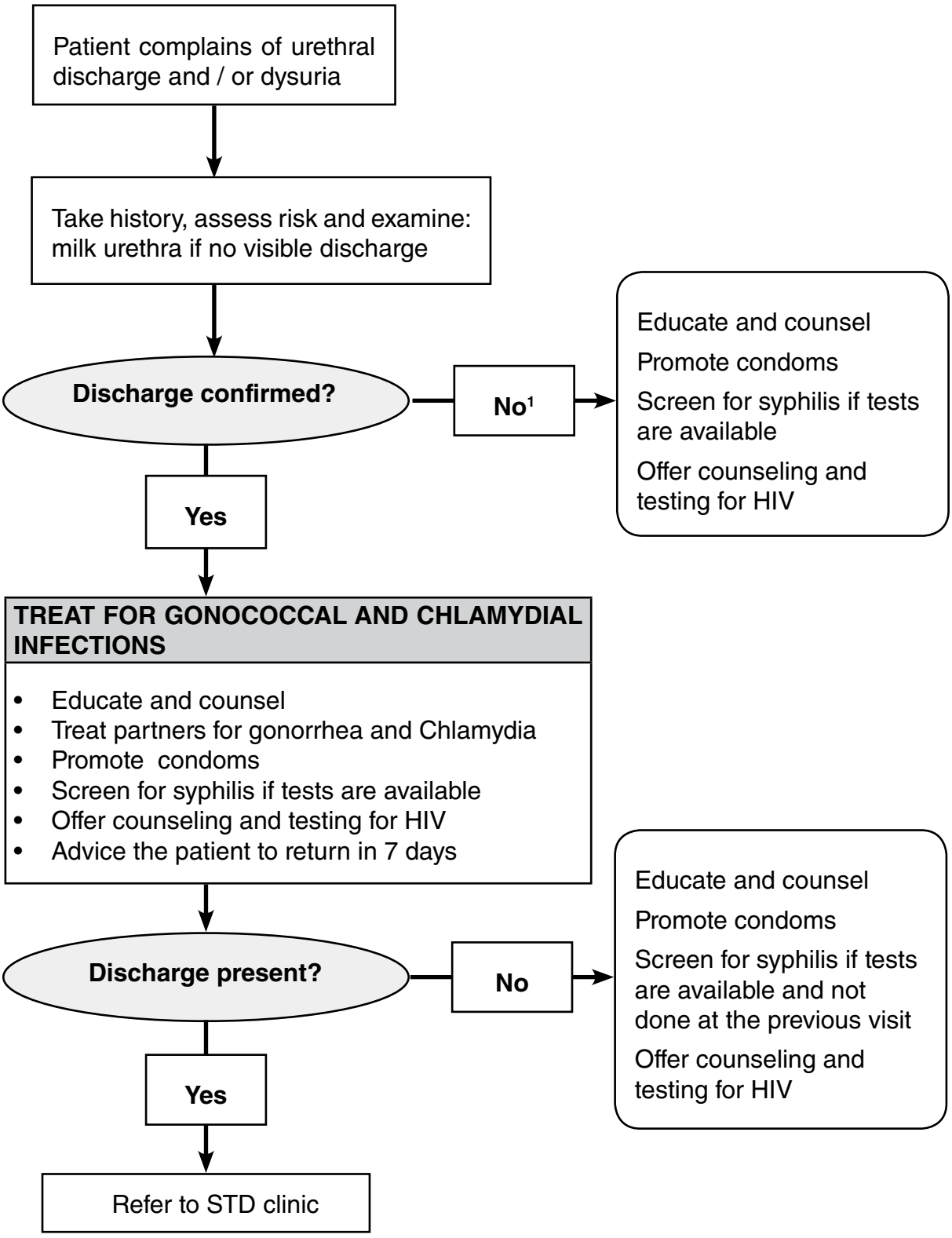
It is ***important to note that syndromic management does not address asymptomatic and/or subclinical infections.*** Therefore, where facilities are available, screening of both men and women who are most at risk for STIs is recommended.

4.1 URETHRAL DISCHARGE

The major pathogens causing urethral discharge are Neisseria gonorrhoeae (N. gonorrhoeae) and Chlamydia trachomatis (C. trachomatis).

In the syndromic management, treatment of a patient with urethral discharge should adequately cover these two organisms (N. gonorrhoeae and C. trachomatis) as dual infection is common.

Figure 1. Management of Urethral Discharge/ Dysuria in Men



1. If feasible, encourage patient to return the following day after holding the urine for 4 hours and reassess for discharge

Male patients complaining of urethral discharge and/or dysuria should be examined, for evidence of discharge. If discharge is not seen, the urethra should be gently massaged from the ventral part of the penis towards the meatus, to see whether any discharge comes out.

If discharge is seen, treat syndromically.
If discharge is not seen, encourage the patient to come back the following day after holding the urine for 4 hours and re-evaluate.

RECOMMENDED SYNDROMIC TREATMENT

Therapy for uncomplicated gonorrhoea

Cefuroxime axetil 1g**,** orally as a single dose

or

Cefixime 400mg, orally as a single dose

or

Ceftriaxone 250mg by intramuscular injection as a single dose

PLUS

Therapy for Chlamydia

Doxycycline 100mg bd orally for seven days

or

Azithromycin 1g orally as a single dose

Δ Urethral discharge in a male

4.2 GENITAL ULCER DISEASE

The genital ulcers commonly seen are those due to herpes simplex virus infection and syphilis. Chancroid is rarely seen in Sri Lanka. More than one of these diseases can be present in a patient with genital ulcers. The clinical differential diagnosis of genital ulcer is not accurate, particularly in settings where several causes are prevalent.

4.2.1 Genital Herpes

It is caused by Herpes simplex virus (HSV) types 1 and 2. Symptomatic patients with genital herpes present with multiple, painful, vesicular lesions or superficial ulcers in genitals.

There is no known cure for genital herpes, but the course of symptoms can be modified if systemic therapy with acyclovir or its analogues is started as soon as possible following the onset of symptoms. Treatment can be expected to reduce the formation of new lesions, duration of ulcers, time required for healing and viral shedding. However, it does not appear to influence the frequency and severity of recurrences. Topical therapy with acyclovir produces only minimal shortening of the duration of symptomatic episodes and is not recommended.

To treat for the first clinical episode of genital herpes, use

Acyclovir, 400mg orally, 3 times daily for 7 days

or

Acyclovir, 200mg orally, 5 times daily for 7 days

Recurrent episodes of genital herpes

Most patients with a first episode of genital herpes will have recurrent episodes of genital lesions. Generally, recurrences are self-limiting and cause minor symptoms. If the recurrences are frequent, the symptoms are severe or the patient is in distress, episodic therapy can be given. Episodic therapy will shorten the duration of genital lesions. Such patients should be provided antiviral therapy, or a prescription for therapy, so that treatment can be initiated at the first sign of a prodrome or genital lesions.

To treat for a recurrent episode of genital herpes, use

Acyclovir, 400mg orally, 3 times daily for 5 days

or

Acyclovir, 200mg orally, 5 times daily for 5 days

Suppressive therapy for recurrent genital herpes

Suppressive therapy for herpes may be considered by a specialist, if a patient suffers repeated recurrences per year. Suppressive therapy has not been associated with the emergence of clinically significant acyclovir resistance among immunocompetent patients. Hence it is important to refer such patients who continue to have unacceptably high rates of recurrences, to a STD clinic.

Δ Genital Herpes in a female

Δ Early lesions of Genital Herpes in a male

4.2.2 Syphilis

Syphilis is a systemic disease caused by infection with the spirochete bacterium Treponema pallidum sub specious pallidum. The infection is transmitted from one person to another either by direct contact with an infectious lesion (usually occurring during sexual contact), during pregnancy from mother to child or via infected blood products.

Syphilis is classified as acquired or congenital. Acquired syphilis is divided into early and late syphilis. Early syphilis comprises the primary, secondary and early latent stages. Late syphilis refers to late latent syphilis, and gummatous, neurological and cardiovascular syphilis.

Primary syphilis is characterized by an ulcer (the chancre) and regional lymphadenopathy. The chancre is classically in the anogenital region, is single, painless and indurated with a clean base discharging clear serum. However, chancres may be multiple, painful, purulent, destructive and extra genital (most frequently oral). There may also be mixed aetiology. Any anogenital ulcer should be considered to be due to syphilis unless proven otherwise.

Secondary syphilis manifests as a skin rash, condylomata lata, mucocutaneous lesions, alopecia and generalized lymphadenopathy.

Latent syphilis has no clinical manifestations. Early latent syphilis is an infection of less than two years' duration. An infection that is of more than two years' duration without clinical evidence of treponemal infection is referred to as late latent syphilis. The early stages are more infectious but respond better to treatment.

In areas with a high prevalence of syphilis, a reactive serological test may only be a reflection of a previous infection. This may give a misleading picture of the patient's present condition. A negative serological test does not necessarily exclude primary syphilis as sero reactivity may take 2–3 weeks to show up.

To treat for primary, secondary and early latent syphilis, use

Benzathine benzylpenicillin, G, 2.4 million IU by intramuscular injection as a single dose after sensitivity test (ST)

or

Procaine benzylpenicillin, 1.2 million IU by intramuscular injection, after ST daily for 10 consecutive days

or

Doxycycline, 100mg orally, twice daily for 14 days

To treat for late latent syphilis, use

Benzathine benzylpenicillin, G, 2.4 million IU by intramuscular injection, once weekly for 3 consecutive weeks (after ST)

or

Procaine benzylpenicillin, 1.2 million IU by intramuscular injection, once daily for 21 consecutive days (after ST)

Alternative regimens for penicillin-allergic non-pregnant patients

Doxycycline, 100mg orally, twice daily for 30 days

or

Tetracycline, 500mg orally, 4 times daily for 30 days

Syphilis in pregnancy

Pregnant women should be regarded as a separate group requiring close surveillance, in particular, to detect possible re-infection after treatment has been given. It is very important to treat their sexual partner(s). Pregnant patients at all stages of pregnancy, who are not allergic to penicillin, should be treated with penicillin according to the dosage schedules recommended for the treatment of non-pregnant patients at a similar stage of the disease.

All pregnant patients diagnosed with syphilis should be referred to the closest STD clinic, as soon as possible.

Alternative regimen for penicillin-allergic pregnant patients

Azithromycin, 2g orally as a single dose

or

Erythromycin*, 500mg orally, 4 times daily for 14 days

* Erythromycin base, ethyl succinate or stearate can be given. Erythromycin estolate is contraindicated in pregnancy.

Follow up of pregnant patients treated for syphilis

Following treatment, quantitative non-treponemal serological tests (VDRL/RPR) should be performed at monthly intervals until delivery, at the STD clinic and re-treatment will be undertaken if there is serological evidence of reinfection or relapse.

Important
Prevalence of syphilis is low in Sri Lanka but Syphilis screening and treatment of pregnant women is cost effective, even in areas of very low prevalence.

Δ Syphilitic chancre in a male

Δ Chancre in a female

4.2.3 Chancroid

Chancroid is caused by the Gram-negative bacillus Haemophilus ducreyi. Patients with chancroid usually present with painful genital ulcer/s with or without inguinal lymphadenopathy.

To treat for chancroid, use

Azithromycin, 1g orally, as a single dose

or

Ceftriaxone, 250mg by intramuscular injection as a single dose

or

Ciprofloxacin, 500mg orally, twice daily for 3 days

or

Erythromycin, base 500mg orally, 4 times daily for 7 days

4.2.4 Lymphogranuloma Venereum

Lymphogranuloma venereum (LGV) is caused by Chlamydia trachomatis serovars L1, L2, or L3. The most common clinical manifestation of LGV is tender inguinal and/or femoral lymphadenopathy that is typically unilateral. Some times a genital ulcer or papule occurs at the site of inoculation, which is self-limiting.

To treat for LGV, use

Doxycycline, 100mg orally, twice daily for 14 days

or

Erythromycin, 500mg orally, 4 times daily for 14 days

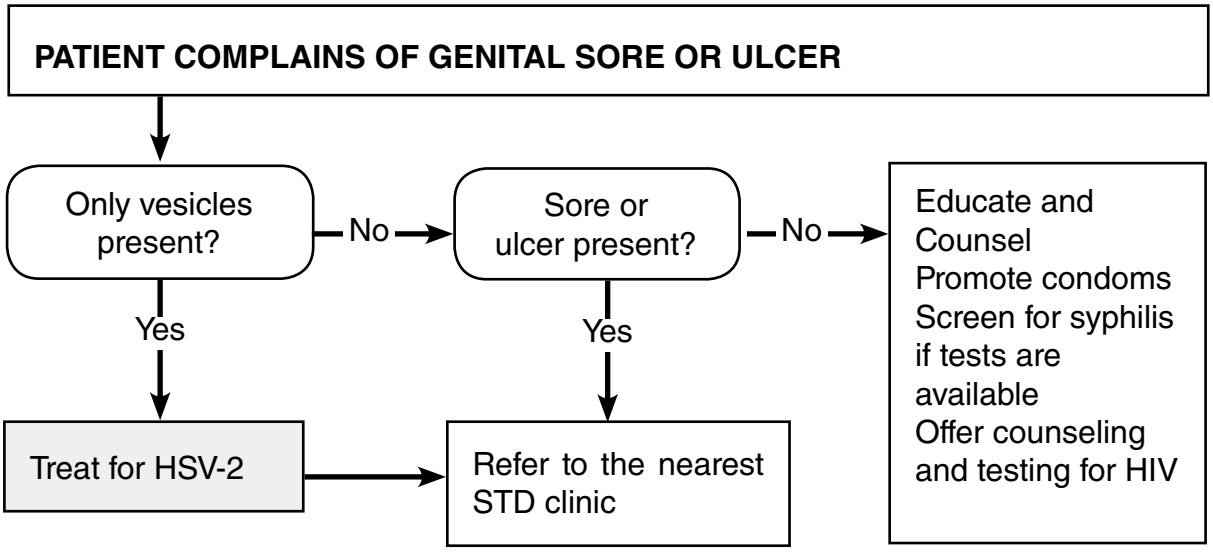
or

Tetracycline, 500mg orally, 4 times daily for 14 days

All patients with genital ulcers should be referred to the nearest STD Clinic

Figure 2. Mangement of Genital Ulcer Disease

A patient complains that he or she has noticed a sore on the genitals. Use the flowchart for genital ulcer disease.



Basic care for genital ulcers

- Advice frequent washing of ulcers with weak salt water solution
- Commence on Ciprofloxacin 500 mg bd or Cotrimoxazole 960mg bd for 7 days if

  secondary infection is present
- Consider pain relief, using Paracetamol
- Educate and Counsel
- Convince to attend STD Clinic

4.3 VAGINAL DISCHARGE

A spontaneous complaint of a change in vaginal discharge (in terms of quantity, colour or odour) is most commonly due to vaginitis/vaginosis but may also be due to cervicitis.

Trichomonas vaginalis (TV), bacterial vaginosis (BV) and Candida albicans are the commonest causes of vaginal discharge. Women with Neisseria gonorrhoeae (NG) and/or Chlamydia trachomatis (CT) infections of the cervix may present with abnormal vaginal discharge. The symptom of vaginal discharge is highly indicative of vaginal infection, but poorly predictive of cervical infection.

Among women with vaginal discharge, assessment of risk may help to identify women with a higher risk of cervical infection. Risk factors such as having multiple partners or a partner with symptoms suggestive of STI or recent change of partner are frequently associated with cervicitis. Women with vaginal discharge and a positive risk assessment should, therefore, be treated for gonococcal and chlamydial cervicitis as well as for vaginitis/vaginosis.

Physiological discharge: healthy women may have a variable amount of clear and white discharge from vagina. It usually increases before and after menstruation, and becomes more watery when a woman is in the mid cycle. It also increases during pregnancy, while taking oral contraceptive pills (OCP) and when an intrauterine device (IUD) is in place.

4.3.1 Trichomoniasis

Caused by the flagellated protozoon, Trichomonas vaginalis. It is sexually transmitted in adults. The majority of women infected with T. vaginalis tend to be asymptomatic; some have symptoms characterized by a diffuse, yellow–green, offensive vaginal discharge and vulval itching.
Most men infected with TV are asymptomatic, but some present with urethral discharge.

Management of sexual partners

The sexual partner/s should be notified and treated, and patients should be advised to avoid sexual intercourse until both the index patient and the partner/s have completed treatment.

4.3.2 Bacterial Vaginosis

BV is a clinical syndrome resulting from replacement of the normal hydrogen peroxide (H_2O_2) - producing Lactobacillus sp. in the vagina with high concentrations of anaerobic bacteria, such as Gardnerella vaginalis and Mycoplasma hominis. The cause of the microbial alteration is not fully understood. BV is an endogenous reproductive tract infection. Treatment of sexual partners has not been demonstrated to be of benefit.
It is recommended that predisposing factors such as use of antiseptic/antibiotic vaginal preparations or vaginal douching should be reduced or eliminated.

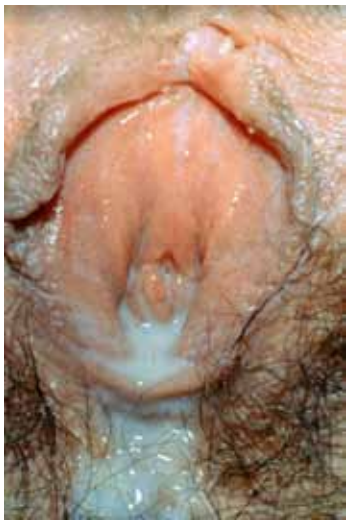
4.3.3 Candidiasis

In the majority of cases, vulvovaginal candidiasis is caused by Candida albicans (C. albicans). Up to 20% of women with the infection may be asymptomatic. If symptoms occur, they usually consist of itching of the vulva, soreness and a non-offensive vaginal discharge, which may be curdy. Clinical examination may reveal vulval erythema (redness) or excoriations from scratching and oedema of the vulva.

Vulvovaginal candidiasis is usually not acquired through sexual intercourse. Treatment of sexual partners is not recommended, but it may be considered for women who have recurrent infection. A minority of male partners may have balanitis, which is characterized by erythema of the glans penis or inflammation of the glans penis and foreskin (balanoposthitis).

Recurrent Candidiasis

It is recommended that predisposing factors such as use of antibiotics and antiseptic/ antibiotic vaginal preparations or vaginal douching should be reduced or eliminated. Other underlying factors for recurrent vulvovaginal candidiasis include uncontrolled diabetes mellitus, immune suppression and corticosteroid use.



Δ Trichomoniasis

RECOMMENDED SYNDROMIC TREATMENT

Treatment for vaginitis (BV, TV)

Metronidazole 400mg bd orally twice daily for 7 days

or

Tinidazole 500mg orally twice daily for 5 days

Treatment for vaginal candidiasis

Miconozole or clotrimazole 200mg vaginal pessaries intravaginally daily at night for 3 days

or

Clotrimazole, 500mg vaginal pessaries intravaginally as a single dose

or

Nystatin vaginal pessaries100 000 units intravaginally once daily at night for 14 days

Treatment for cervicitis (due to NG and CT)

Cefuroxime axetil 1g orally in a single dose

or

Cefixime 400mg orally in a single dose

or

Ceftriaxone 250 mg intramuscular injection, as a single dose

PLUS

Azithromycin, 1g orally as a single dose

or

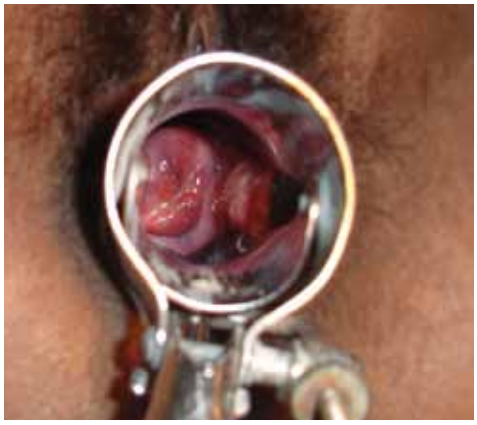
Doxycycline 100mg orally, twice daily for 7 days

or

Erythromycin, 500mg orally, 4 times daily for 7 days

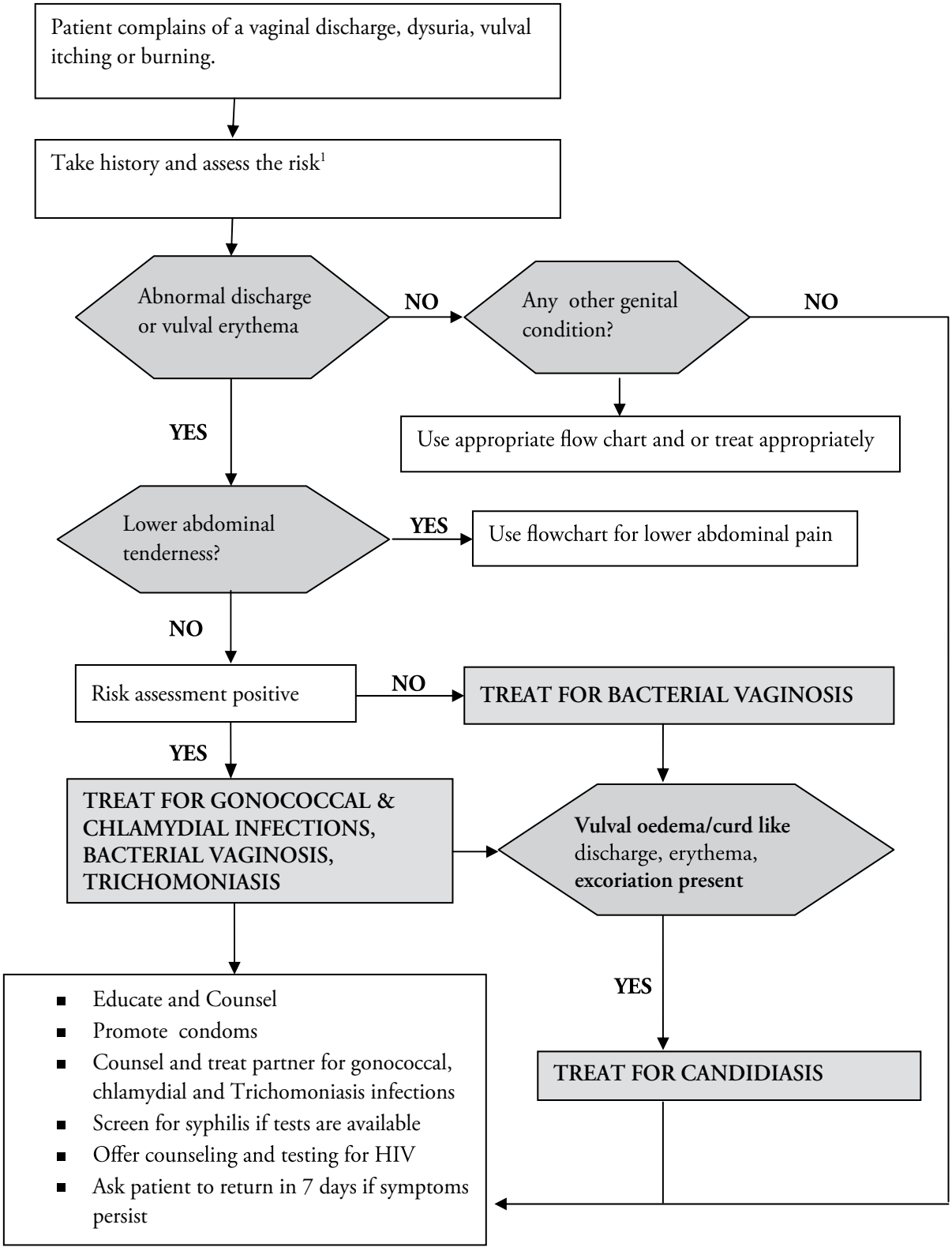
Note

- Doxycyclines and fluconazole are contraindicated in pregnancy.
- Patients taking metronidazole should avoid alcohol for the duration of treatment and for at least 48 hours afterwards.
- Metronidazole has previously not been recommended for use in the first trimester of pregnancy, but studies and meta-analyses have not demonstrated a consistent association between metronidazole use during pregnancy and teratogenic or mutagenic effects in newborns.



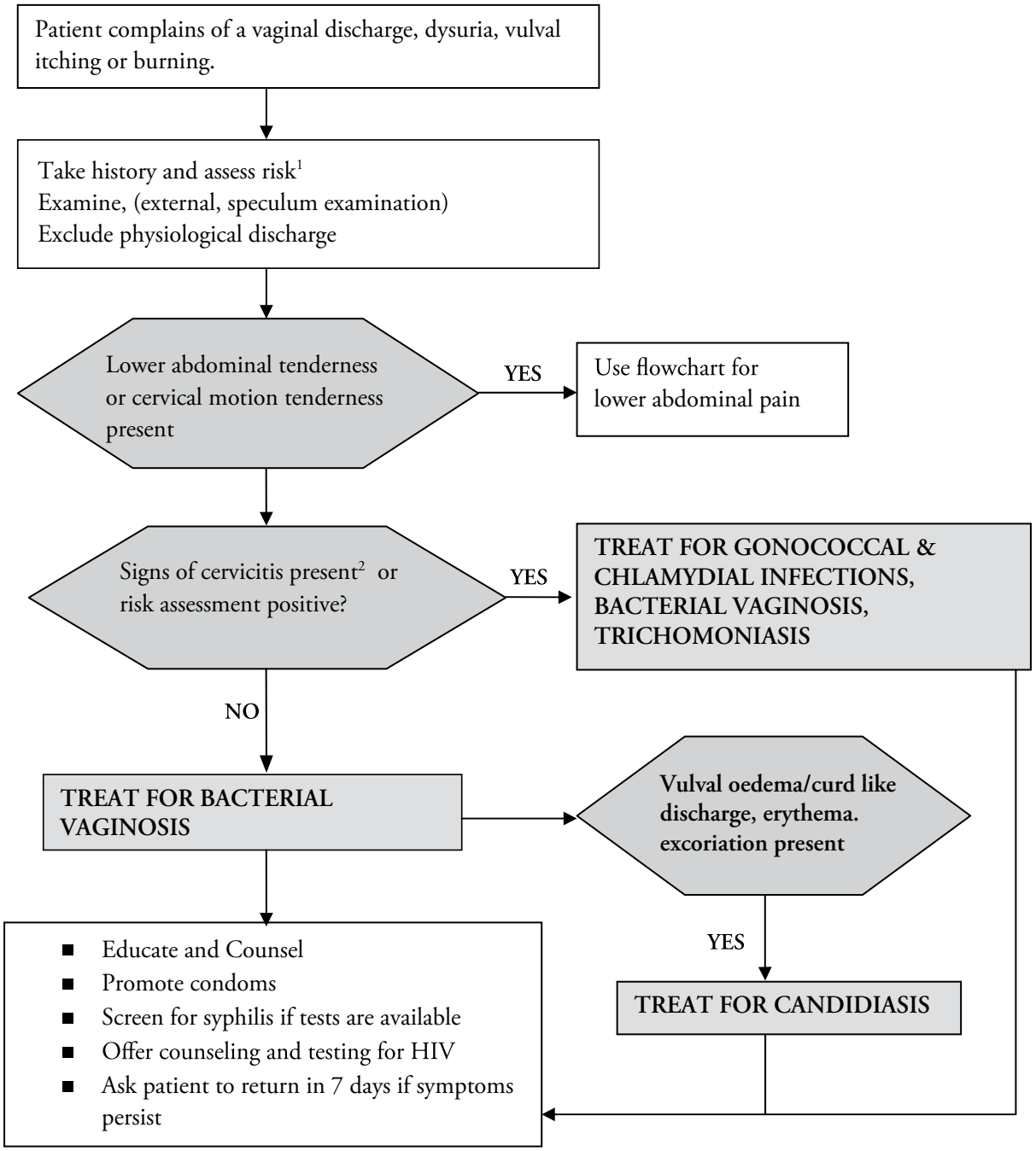
Δ Cervicitis

Figure 3. Management Of Vaginal Discharge Without Speculum Examination



1. Risk factors such as multiple partners, recent change of partners and partners with symptoms frequently associated with cervicitis.

Figure 4. Management Of Vaginal Discharge With Bimanual And Speculum Examination



1. Risk factors such as multiple partners, recent change of partners and partners with symptoms frequently associated with cervicitis.
2. Signs of cervicitis include cervical mucopus/erosion, easily induced cervical bleeding.

4.4 ANORECTAL DISCHARGE

Men and women who practice unprotected receptive anal intercourse are at risk for getting sexually transmitted anorectal infections. These infections can lead to symptomatic or asymptomatic distal proctitis (inflammation of the distal 10–12 cm of the rectum).

N. gonorrhoeae, C. trachomatis (including LGV serovars), are the common sexually transmitted pathogens that may cause proctitis. T. pallidum and HSV also can present with proctitis

Symptoms of acute proctitis

- Pain
- Tenesmus
- Mucopurulent anal discharge
- Anorectal bleeding
- Constipation
- Sensation of rectal fullness or of incomplete defecation
- Perianal pain or discomfort

Chronic proctitis due to LGV, can present with a history of mucus-streaking of the stool, constipation and feeling of incomplete defecation.

Anoscopic examination may reveal the presence of mucopus in the rectum, rectal mucosal oedema and contact bleeding in patients with gonococcal and chlamydial procotitis. In syphilis-, herpes- and LGV-related proctitis, rectal ulceration can be seen. Granulomatous inflammatory masses also may be seen in LGV.

RECOMMENDED SYNDROMIC TREATMENT

To treat for gonococcal rectal infection, use

Ceftriaxone, 250mg by intramuscular injection single dose or

Cefixime, 400mg orally as a single dose or

Cefuroxime 1g orally as a single dose

PLUS

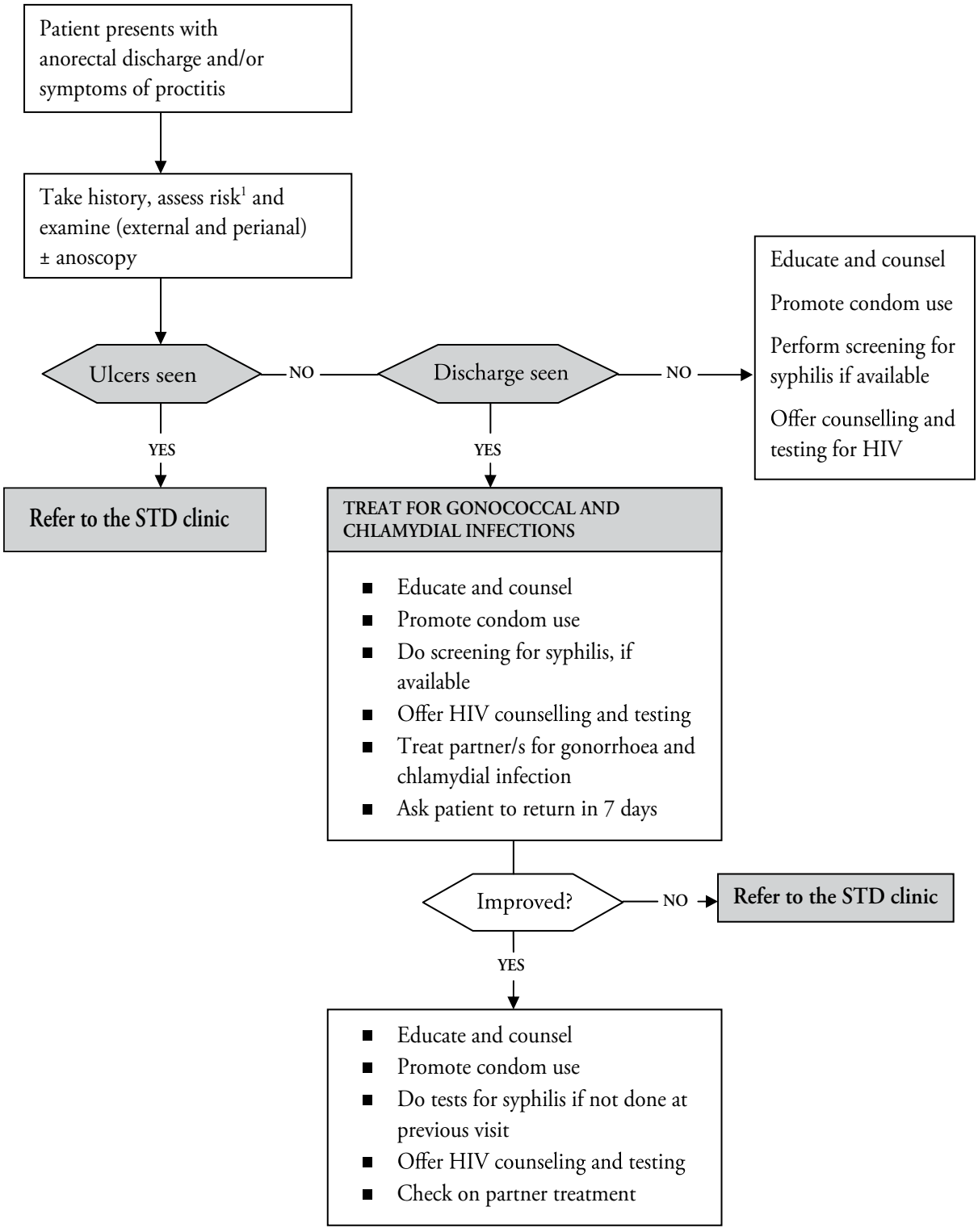
To treat for chlamydial rectal infection, use

Azithromycin 1g orally in a single dose or

Doxycycline 100mg orally, twice daily for 7 days

Patients should be advised to avoid unprotected receptive anal sex until the patient and the partner(s) are completely treated. Patients should be educated on consistent condom use for prevention of sexually transmitted proctitis.

Figure 5. Management of Anorectal Discharge



1. Receptive anal sex during past 6 months, insertive partner has STI, multiple partners, unprotected sex

4.5 LOWER ABDOMINAL PAIN

Lower abdominal pain is often the presenting feature of women with pelvic inflammatory disease (PID).

The term pelvic inflammatory disease (PID) refers to infections of the female upper genital tract: the uterus, fallopian tubes, ovaries or pelvic cavity.

Ascending infection from the cervix caused by N. gonorrhoeae and C. trachomatis, and anaerobic bacteria may lead to PID. Treatment for PID includes treatment for NG, CT and anaerobic bacteria. Facultative Gram-negative rods and Mycoplasma hominis have also been implicated in PID.

Women with PID usually have a history of lower abdominal pain and vaginal discharge. However, some women with PID or endometritis will not complain of lower abdominal pain. Other suggestive symptoms include pain during intercourse (dyspareunia), vaginal discharge, abnormal bleeding from the womb at any time, painful urination, pain during menstruation, fever and sometimes nausea and vomiting.

PID can lead to endometritis, salpingitis, tubo-ovarian abscess and pelvic peritonitis. It can also cause generalized peritonitis, a potentially fatal condition. Salpingitis may lead to a blocked fallopian tube, resulting in decreased fertility or total infertility if both tubes become infected. It may also lead to partial tubal obstruction, allowing spermatozoa to pass through, but not the relatively larger fertilized ovum. The result can be a tubal or ectopic pregnancy, which will eventually rupture, causing massive intra-abdominal haemorrhage and, possibly, death.

Although difficult to diagnose, PID becomes more probable when one or more of such symptoms combine with lower abdominal tenderness, vaginal discharge and cervical motion tenderness.

Women with acute PID may present with sudden onset abdominal pain, fever with or without vaginal discharge. Such patients need hospitalization. It is very important to remember that acute appendicitis, ruptured tubal pregnancy or a twisted ovarian cyst can present as acute PID. It is necessary to refer such patients to hospital immediately. Pregnant mothers with abdominal pain should also be referred to the hospital.

RECOMMENDED SYNDROMIC TREATMENT

a. Treatment for Gonorrhoea

Cefuroxime axetil 1g orally in a single dose, followed by Cefuroxime axetil 500mg orally twice a day for 7 days

or

Cefixime 400 mg orally in a single dose

or

Ceftriaxone 250mg IM in a single dose

PLUS

b. Treatment for Chlamydia infection

Doxycycline 100mg orally, twice daily for 14 days

or

Erythromycin 500mg orally, 4 times a day for 14 days

PLUS

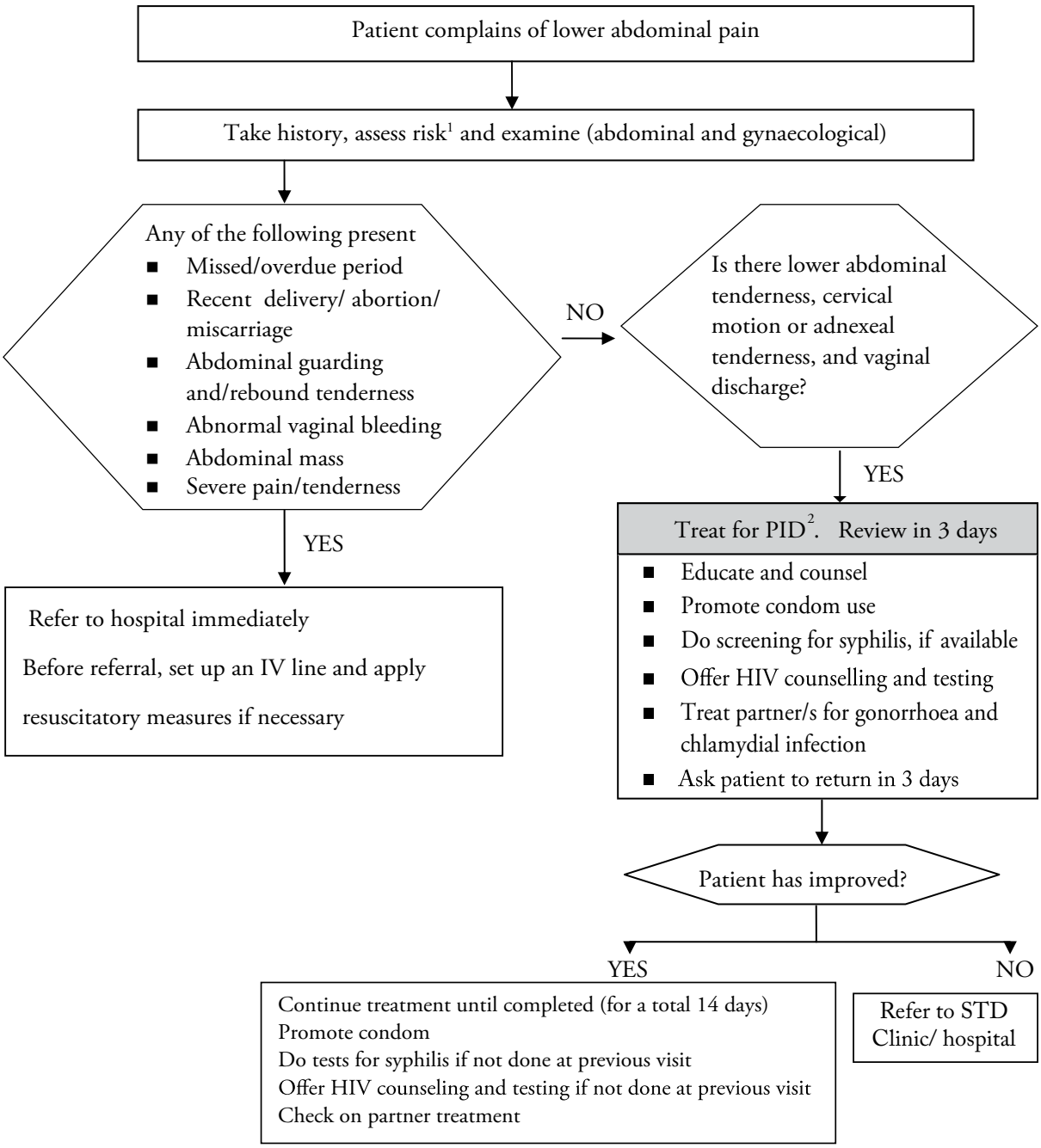
c. Treatment for Anaerobic bacterial infection

Metronidazole 400mg orally, twice daily for 14 days

Note

- Patients should avoid alcohol while on metronidazole therapy
- Doxycycline and tetracycline should not be used during pregnancy or lactation

Figure 6. Management of Lower Abdominal Pain



1. Risk factors such as multiple partners, recent change of partners and partners with symptoms frequently associated with cervicitis.
2. Patients with acute PID should be referred for hospitalization, when:
   - they have severe illness, nausea and vomiting, and/or high fever (>38°C),
   - the patient is pregnant
   - the patient is unable to follow or tolerate an outpatient regimen
   - the patient has failed to respond to outpatient therapy, or
   - there are clinical signs of tubo-ovarian abscess or pelvic peritonitis

4.6 SCROTAL SWELLING

Inflammation of the epididymis (epididymitis) usually manifests by acute onset of unilateral testicular pain and swelling, often with tenderness of the epididymis and vas deferens, and occasionally with erythema and oedema of the overlying skin. The adjacent testis is often inflammed (orchitis), giving rise to epididymo-orchitis.

In men under 35 years this is more frequently caused by sexually transmitted organisms. commonly gonococcal and/or chlamydial in nature.

Other causes of acute epididymo-orchitis include, Escherichia coli, Klebsiella spp. or Pseudomonas aeruginosa, mumps virus and coliforms.

It is important to consider other non-infectious causes of scrotal swelling, such as trauma, testicular torsion and tumours.

Torsion of the spermatic cord (testicular torsion) is the most important differential diagnosis. It is a surgical emergency. It should be considered in all patients and should be excluded first as testicular salvage is required within 6 hours and becomes decreasingly likely with time. Torsion is more common in men who are younger than 20 years but it is important to recognize it can occur at any age.

If not effectively treated, STI-related epididymitis may lead to infertility.

RECOMMENDED SYNDROMIC TREATMENT

a. Treatment for gonorrhoea

Ceftriaxone 250mg by intramuscular injection as a single dose

PLUS

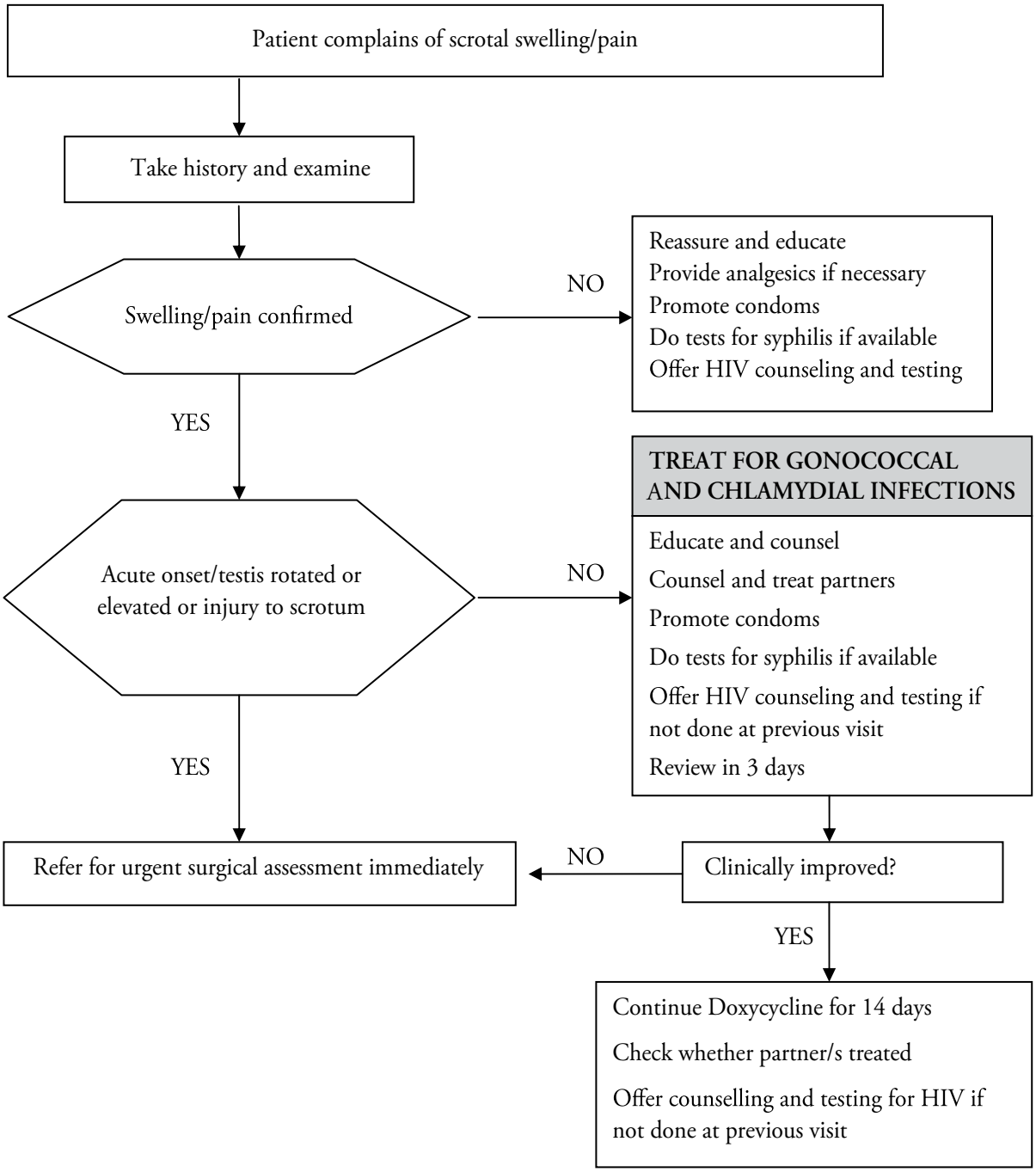
b. Treatment for Chlamydia

Doxycycline 100mg orally twice daily for 14 days

Adjuncts to therapy

Bed rest, antipyratics, analgesics and scrotal support until local inflammation and fever subside.

Figure 7. Mangement of Scrotal Swelling



4.7 INGUINAL SWELLING (BUBO)

These are localized swellings of the lymph nodes in the groin area, which are painful and may be fluctuant.

They are frequently associated with Lympho Granuloma Venereum (LGV) or Chancroid.

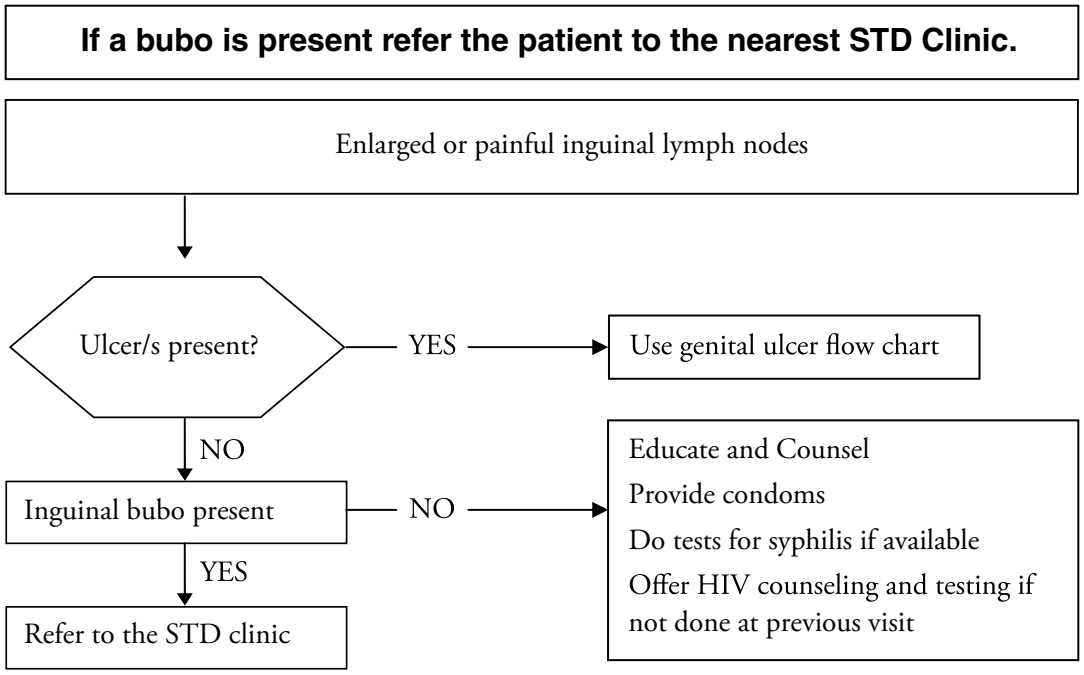
In many cases of chancroid an associated genital ulcer is visible. LGV is characterized by a transitory, herpetiform early lesion in genitals followed by involvement of the lymphatic channels and the lymph nodes in the groin.

Non sexually transmitted local and systemic infections (e.g. infections of the lower limb or tuberculous lymphadenopathy) can also cause swelling of the inguinal lymph nodes and need to be considered in the differential diagnosis.

Occasionally, the bubo might have ruptured and a sinus discharging pus may be present. Enlarged lymph nodes that are not acutely inflamed do not fall into the definition of a bubo.

If a bubo is present refer the patient to the nearest STD Clinic.

Figure 8. Management of Inguinal Bubo Syndrome



4.8 NEONATAL CONJUNCTIVITIS

This is the condition where a neonate develops purulent conjunctivitis (redness and swelling of the eyelids and/or discharge) in one or both eyes within four weeks of birth. There may be some neonates in the prisons and detention centers as mothers are allowed to keep their babies with them during their imprisonment.

The most important sexually transmitted pathogens which cause neonatal conjunctivitis are N. gonorrhoeae and C. trachomatis. Delayed treatment for neonatal conjunctivitis, caused by N. gonorrhoeae can lead to blindness and infections with C. trachomatis can lead to impaired vision.

It should be considered as a medical emergency and baby should be referred to the closest hospital immediately.

It is very important to epidemiologically treat baby's mother and father for Gonorrhoea and Chlamydia. They need referrel to the nearest STD clinic.

RECOMMENDED SYNDROMIC TREATMENT

To treat for gonococcal conjunctivitis, use

Ceftriaxone, 50 mg/kg by intramuscular injection as a single dose, to a maximum of 125 mg total dose

PLUS

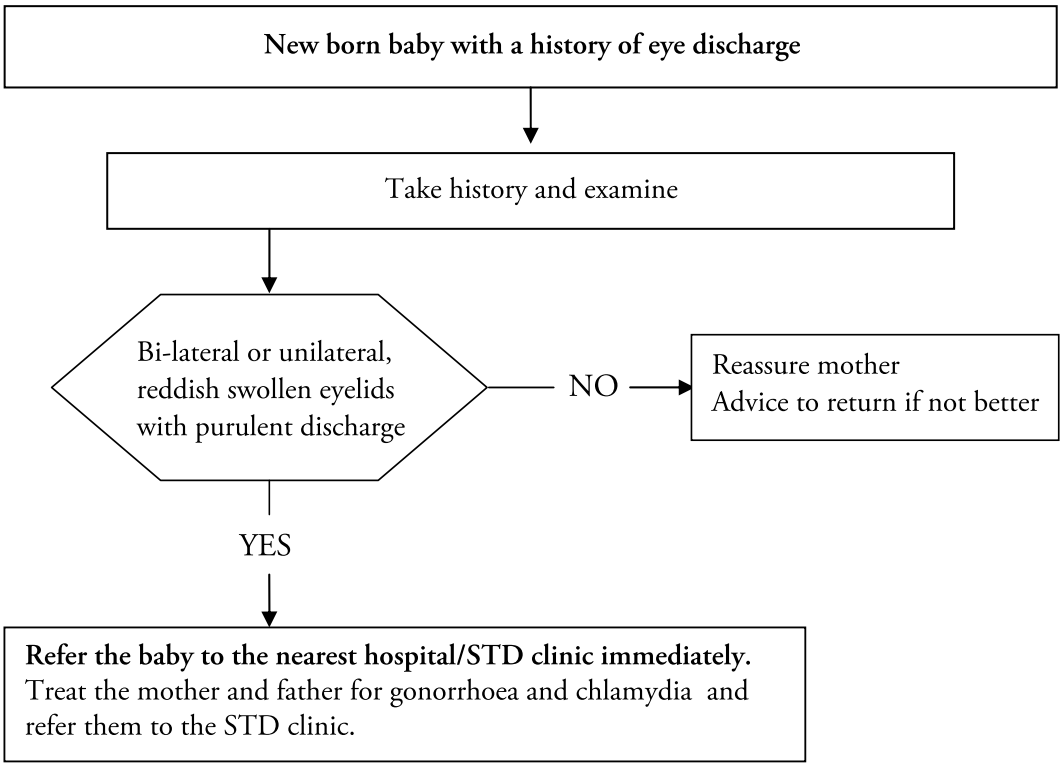
To treat for chlamydial conjunctivitis, use

Erythromycin syrup, 50 mg/kg per day orally, in 4 divided doses for 14 days

Note

- When there is visible discharge, advice the mother to clean the baby's eyes starting from the inner to the outer aspect of the eyes with boiled cooled water or sterile saline if available, using a clean, soft cotton swab.
- Topical antibiotic treatment alone is inadequate for treatment of chlamydial infection, and would not take care of infection in other sites such as chlamydial pneumonia.

Figure 9. Management of Neonatal Conjunctivitis



5. Special Considerations

5.1 GENITAL WARTS

Causative organism:
Human papillomavirus (HPV). There are various genotypes of HPV. Most genital warts are benign and are caused by HPV types 6 and 11. HPV types 16 and 18 are more commonly associated with malignant lesions.

Transmission
Genital warts are usually transmitted sexually. Vertical transmission from mother to child during delivery is also possible but very rare

Clinical features
Genital warts usually appear as single or multiple growths. Soft and non keratinized warts are seen on warm, moist, non-hair-bearing skin. Firm and keratinized warts are usually seen on dry hairy skin. Many warts may produce a cauliflower-like appearance. During pregnancy and in the presence of a discharge, they may grow more rapidly.

Sites
In men - subpreputial area, coronal sulcus, inside the urethral meatus, shaft of the penis, perineum and anus
In women - vulva, vaginal wall, cervix, perineum and anus

Diagnosis is by clinical appearance. It should be done carefully by an experienced clinician.

Treatment for external genital and perianal warts

There is no specific antiviral chemotherapy effective against HPV. Local treatment will remove the wart but recurrences may occur. This should be explained to the patient before commencing therapy.

i. Chemical Methods

a. Podophyllin
25% in compound tincture of benzoin, to be applied carefully to the warts, avoiding normal tissue. The patient should be instructed to wash the podophyllin off after 4–6 hours. Treatment is repeated once a week.

The use of podophyllin is contraindicated during pregnancy and lactation

b. 80–90% trichloroacetic acid (TCA)

TCA can be applied carefully to the warts, avoiding normal tissue, followed by powdering of the treated area with talc or sodium bicarbonate to remove excess acid. Repeat application at weekly intervals.

It is not absorbed systemically and therefore could be safely used in pregnancy.

c. Imiquimod

5% cream can be self applied with a finger/cotton swab at bedtime, left on overnight, 3 times a week on every other day for as long as 16 weeks. The treated area should be washed with soap and water 6–10 hours after application. The safety of imiquimod during pregnancy has not been established.

ii. Physical Methods

a. Cryotherapy

can be given with liquid nitrogen, solid carbon dioxide or a cryoprobe. Repeat applications every 1–2 weeks. Cryotherapy is nontoxic, does not require anaesthesia and, if carried out properly, does not result in scarring.

b. Electrosurgery

c. Surgical removal

Patients with genital warts should be referred to the closest STD clinic.

5.2 SCREENING FOR CERVICAL CANCER

Cervical cancer is a recognized complication of infection with a few specific high-risk strains of HPV (e.g. HPV 16, 18, 31, 33, etc.).

Cervical cancer ranks as the 2nd most frequent cancer among women in Sri Lanka, and the 4th most frequent cancer among women between 15 and 44 years of age. It is very important to use every opportunity to screen all eligible women.

Screening and treatment in the early stages (cervical dysplasia) is effective in reducing morbidity and mortality from cervical cancer.

Cytology by Papanicolaou (Pap) smear is currently recommended as a screening tool for cervical cancer. Screening for cervical cancer is also an opportunity to look for signs of other cervical infections.

It is recommended practice to examine the cervix in all female patients with STI, and to regularly examine Pap smears of the cervix in this population. It is very important to consider referring females in prison settings for Pap smear who otherwise may not seek such services.

Important
Women completing 35 years are considered as the target group for Pap smear tests. Women with STIs and women who voluntarily request Pap smear tests should also be screened if indicated. Re screening is carried out every 5 years for those with normal Pap smear tests. Further details about Pap smears can be obtained from the nearest STD or Well women clinic.

5.3 SCABIES

Causative organism
Scabies is caused by the parasitic mite - *Sarcoptes scabei.*

Transmission
Scabies is transmitted by skin-to-skin contact with someone with scabies, usually among
people who are living in close proximity to each other(such as in prisons), and sexual contacts. Overcrowding and poor personal hygiene in prison setting facilitates transmission of scabies.

Clinical features

- A characteristic itchy rash: may take up to six weeks from the beginning of the infection for this rash to appear. Intense irritation only occurs after immunological reactivity develops. This is why scabies can spread so readily and why treatment of all close and intimate contacts needs to be done at the same time as treatment of the person with confirmed infection.
  - Characteristic silvery lines may be seen in the skin where mites have burrowed
  - Classic sites include the interdigital folds, the wrists and elbows, and around breast nipples in women
  - Papules or nodules that may result from itching often affect the genital area

- People who are immunosupressed can have a very severe form of scabies with an atypical crusting rash that is more difficult to treat (crusted or Norweigan scabies).

Treatment
Scabies treatments are effective and outbreaks of infection can be stopped if treatment is given correctly to the patient and contacts at the same time. Sometimes mass treatment of contacts may be necessary in prison settings.

Recommended regimens

- Permethrin 5% cream.
- Malathion 0.5% aqueous lotion
- Benzyl benzoate(BB) cream

These, except Malathion, should be applied to the whole body from the neck downwards, and
washed off after 12 hours, usually overnight. Malathion should be kept for 24 hours.
Itch may persist for several weeks. Application of Crotamiton cream may give symptomatic relief, and antihistamines may also be helpful.
Mites separated from the human host die within 72 hours.

5.4 PUBIC LICE

Causative organism

A parasite -the crab louse (Phthirus pubis) - They lay small gray oval eggs that attach to the hair and are called “nits”.

Clinical features

It may take several weeks after coming into contact with pubic lice for any symptoms to appear. The most common symptom of pubic lice is itching of the area covered with pubic hair. It can affect eye lashes as well.

- Itching in the affected area that is worse at night
- Dark blue powdery droppings from the lice in underwear
- Gray brown oval eggs attached to the affected hair (eg. pubic hair, eye lashes)

Transmission

Pubic lice are easily passed from one person to another by close body contact, during sex and through formites.

Diagnosis

- This is based on finding adult lice and/or eggs
- Examination under light microscopy can confirm the morphology if necessary

Treatment

- Malathion 0.5%. Apply to dry hair and wash out after at least 2 hours and preferably, 12 hours i.e.: overnight.
- Permethrin 1% cream rinse. Apply to damp hair and wash out after 10 minutes.
- Infestation of eyelashes can be treated with permethrin 1% lotion, keeping the eyes closed during the 10 minute application, or to avoid any risk of eye irritation by topical insecticide, a white or yellow paraffin base ophthalmic ointment may be applied to the eyelashes twice daily for 8-10 days.

General advice

- Patients should be advised to avoid close body contact until they and their close contacts(s) have completed treatment and follow-up.

Follow-up

- Patients should be re-examined for absence of lice after 1 week
- Treatment failures should be given an alternative from the above list
- It should be explained to patients that dead nits may remain adherent to hairs. This does not imply treatment failure and the nits can be removed with a comb designed specifically for that purpose.

5.5 HUMAN IMMUNODEFICIENCY VIRUS (HIV)

Causative organism

HIV is caused by the Human immunodeficiency virus - a retrovirus.
Two types have been identified: type 1 (HIV-1) and type 2 (HIV-2).

Natural history of untreated HIV infection

Characterized by progressive loss of immune function allowing the development of some virulent bacterial infections, certain opportunistic infections and malignancies. The time period between becoming HIV positive and developing advanced HIV can vary from less than a year to up to ten years or longer.

Symptoms of primary HIV infection (sero conversion illness) usually begin 2-6 weeks after infection lasting 5-10 days and rarely >14 days. Fever followed by lymphadenopathy, pharyngitis and skin rash are the usual clinical features and almost all patients enter an asymptomatic phase and will not be investigated for HIV by clinicians.

Early and middle stages of HIV are mostly asymptomatic apart from generalized lymphadenopathy, certain skin disorders (seborrhoeic dermatitis, psoriasis), loss of weight, recurrent herpes simplex or varizella zoster infections, intermittent fever and diarrhea in some patients. Lung infections caused by Mycobacterium tuberculosis and Sreptococci become more common during latter stages.

Advanced and late stages are characterized by classical manifestations of AIDS such as Pneumocystis jiroveci pneumonia(PCP), Kaposi's sarcoma, lymphomas, Cytomegalovirus retinitis(CMV), Mycobacterium avium complex (MAC) and other opportunistic infections.

Transmission

- Unprotected sexual intercourse: between men and women (heterosexual), between men
- Sharing infected needles and syringes among drug users

- Through infected blood or blood products
- From an infected mother to baby: ante partum, intrapartum and post partum (breast feeding)

Diagnosis

Diagnosis is through a blood test which detects antibody produced by the body in response to the infection. There may be a delay of up to 3 months between the time of exposure to HIV and the development of enough antibodies for the HIV test to become positive. During this time, the test will be negative, but the infection can still be transmitted to other people (window period).

It is important to consider testing for HIV following risk assessment. Uptake of HIV testing has to be voluntary with pre test counseling. It is important to refer patients to the closest STD clinics for risk assessment and pre and post test counseling for HIV, when ever possible.

Treatment

With the discovery of Anti retroviral treatments (ART), increasingly many people remain relatively well for many years after becoming HIV positive. Treatment is not a cure, but it can prevent people from becoming ill for many years and transmission of HIV to their partners.

- **All prison inmates with positive HIV screening tests will require referral to a STD clinic.**
- **All known positives must be referred to a STD clinic for follow up. Those who are on anti retroviral therapy should be referred to a STD clinic immediately to avoid interruption of ARV therapy.**

The management consists of a combination of Anti Retroviral drugs when indicated, screening, prophylaxis and treatment for opportunistic infections. The aim of antiretroviral treatment is to control viral replication and facilitating recovery of the immune status.

Prevention

- There is no vaccine available for the prevention of HIV infection.
- Condoms should be used for all sexual contact with sexual partners.
- Individuals who undergo body piercing/ tattooing should ensure that disposable sterile needles are used.
- Sharing of injecting equipment and razors should be avoided.
- Standard infection control precautions should be adhered to; all blood, body fluids and body tissues should be treated as potentially infectious at all times.
- Post exposure prophylactic (PEP) antiviral drugs begun within hours (and certainly not later than 48 to 72 hours after exposure) of a significant exposure to HIV virus may prevent infection occurring. Information, support and advice can be obtained from nearest STD clinic, regarding occupational and non occupational exposure.

5.6 HEPATITIS B

Causative organism
Hepatitis B virus (HBV); a double stranded DNA virus.

Incubation period
Usually 6 weeks to 6 months.
HBV can cause an acute illness that lasts several weeks.10-50% of adults are asymptomatic.

Clinical Features
Common symptoms include:

- Anorexia
- Joint pains
- Nausea and vomiting
- Abdominal discomfort
- Jaundice (yellowing of the eyes)
- Dark urine

Among adults, 90--95% of those infected recover fully, but 5--10% of adults with acute infection become long-term carriers. Carriers may have no symptoms but are infectious. Chronic HBV infection can cause a chronic liver infection that can later develop into cirrhosis of the liver or liver cancer.

Transmission
The virus may be transmitted by contact with infected blood or body fluids
The virus can be spread by the following routes:

- Sharing or use of contaminated equipment during injecting drug use.
- Vertical transmission (from an infected mother to baby) from an infectious mother to her unborn child.
- Sexual transmission.
- Receipt of infectious blood (via transfusion) or infectious blood products (for example clotting factors).
- Injuries from needle sticks or other sharps, and other body fluid exposures.
- Tattooing and body piercing with contaminated equipment.

Infectious period
The failure to clear hepatitis B infection after six months leads to the chronic carrier state.
Many people who become chronic carriers have no symptoms and are unaware that they are infected. These individuals will remain infectious and will be at risk of developing cirrhosis and primary liver cancer.

Laboratory diagnosis
Screening is done by detecting surface antigen (HBsAg).

Interpretation of hepatitis B blood test results
Antigens Antibodies Status

Antigens		Antibodies			Status
HBs	HBe	Anti HBs	Anti HBc	Anti HBe	
-	-	+	-	-	Vaccinated and/ or protective immunity
+	+	-	IgM +	-	Acute infection
+	+	-	+	-	High infectivity carrier
+	-	-	+	+	Low infectivity carrier

Treatment
Treatment is initiated following specialist assessment.
Not all patients are eligible for treatment.

Prevention
As well as precautions to prevent blood-borne virus infections in general, hepatitis B may be prevented by immunization. Standard schedule is 3 doses of vaccination given at 0,1 and 6 months. Checking for protective antibodies at 6 weeks after the full course of vaccination is advisable.

Prevention of transmission of hepatitis B

- The transmission of hepatitis B following a significant exposure may be prevented by vaccination (and in some circumstances immunoglobulin).
- Condoms should be used for all sexual contact with a partner whose HBV status is unknown.
- Individuals who undergo body piercing/tattooing should ensure that disposable sterile needles and equipment are used.
- Sharing of personal items like toothbrushes, injecting equipment and razors should be avoided.
- In a healthcare setting, standard precautions should be adhered to. All blood, body fluids and body tissues should be treated as potentially infectious at all times.

Neonates born to B positive mothers, need prophylaxis with immunoglobulin followed by vaccination for Hepatitis B

5.7 HEPATITIS C

Causative organism
The hepatitis C virus (HCV); RNA virus. Six predominant genotypes exist.

Incubation period
The incubation period is 6-9 weeks but can range from two weeks to six months.

Clinical features
Hepatitis C infection affects people in different ways. Many experience no symptoms while others (20%) may experience:

- Extreme tiredness and can feel very unwell
- Fatigue
- Weight loss, nausea
- Flu like symptoms
- Abdominal pain
- Jaundice

Transmission
Hepatitis C is a blood-borne virus infection. The virus is spread when blood from an infected person gets into the bloodstream of another.

Today, injecting drug use is the most common way to acquire hepatitis C virus infection. Individuals who inject drugs acquire their infections when they share contaminated injecting equipment with other infected individuals.

Unlike many other blood-borne viruses, sexual transmission is thought to be relatively rare. Nevertheless, it may occur and people with new or casual sexual partners are advised to use condoms to protect them against all sexually transmitted infections.

The risk of a mother infecting her newborn baby with hepatitis C is estimated to be less than 10%.

Infectious Period
It is estimated that around 15--20% of infected people clear their infections naturally within the first six months of infection. For the remainder, hepatitis C is a chronic infection that can span several decades and can be life-long. Co-existing HBV, HIV and other chronic liver diseases can lead to a more rapid progression to cirrhosis and liver cancer.

Diagnosis
Diagnosis is by testing hepatitis C antibody (anti-HCV) in blood. This shows that the patient has been infected with hepatitis C in the past, but it does not give any indication of degree of infectivity, which is detected by viral PCR. Patients with hepatitis C should be referred to a specialist for assessment and advice.

Treatment

The treatment of choice for individuals with chronic hepatitis C infection is a combination of two drugs such as: interferon and ribavirin. This combination therapy is successful in clearing virus from the blood of around 40% of those treated. However, not everybody is suitable for treatment or can tolerate it. Factors such as age, sex, duration of infection, the strain of the virus, and the degree of existing liver damage determine the effectiveness of treatment.

Prevention

There is no vaccine available for protection against HCV. Prevention is centred on stopping the blood from infected individuals from coming into contact with others.

- Injecting drug users are at high risk of infection. Sterile injecting equipment should always be used; injecting equipment should never be shared.
- Individuals who undergo body piercing/tattooing should ensure that disposable sterile needles are used.
- Sharing of personal items, like toothbrushes and razors, should be avoided.
- In a healthcare setting, standard infection control precautions should be adhered to; all blood, body fluids and body tissues should be treated as potentially infectious at all times.
- Use of condoms with all sexual contacts can prevent sexual transmission.

5.8 STIS IN PREGNANCY

STIs may affect the outcome of pregnancy, hence it is very important to know the effects of STIs on pregnancy and vice versa.

STI	Effect of STI on pregnancy and neonate	Effect of pregnancy on STI
Gonorrhoea Chlamydial infection	Prematurity Premature rupture of membranes Chorioamnionitis Postpartum sepsis Conjunctivitis in the newborn	Disseminated gonococcal infection is reported to be more common
Syphilis	Abortion Intrauterine growth retardation Stillbirth Congenital syphilis	No effect
Herpes simplex virus infection	Abortion Intrauterine growth retardation Premature delivery Congenital HSV Neonatal herpes	Longer duration of symptoms Primary infection more severe Dissemination may occur
Human papillomavirus infection (genital warts)	Laryngeal papillomatosis (rare)	Increase in size and number
Trichomoniasis	Premature rupture of membranes Pre-term labour Low birth weight	No effect
Candidiasis	Virtually none	Increased frequency and severity of infection
Bacterial vaginosis	Premature rupture of membranes Chorioamnionitis Premature delivery Low birth weight Puerperal sepsis	No effect

Since most STIs are asymptomatic in women, screening facilitates the identification of STIs in pregnant women. Prison medical officers must consider screening of pregnant women, who might be at high risk for STIs, or referring them to the closest STD clinic, since early detection and appropriate treatment of STIs prevents mother-to-child transmission of such diseases.

6. Introduction to Most at Risk Populations

6.1 FEMALE SEX WORKERS (FSWS)

Introduction

Female sex workers are at a high risk of STIs because of multiple sexual contacts. They often have multiple social, psychological and medical problems, so sexual health may not be their top priority. Many FSWs do not access sexual health services and may experience social exclusion as a result of their work, which is a stigmatized activity involving many illegal aspects.

Services important for FSWs

- Screening and treatment of STIs even if asymptomatic
- Sexual health & contraception assessment, advice and provision of such services
- Pre and post test counseling and testing for HIV
- Counseling for risk reduction with promotion and provision of condoms
- Hepatitis B screening and vaccination
- Referral to psychology/mental health services when necessary

Important points in management

- A full history of the presenting complaint should be taken
- Detailed sexual history should be obtained including number of partners per day/ week. Last sexual exposure with a client and a regular partner should be documented. It may be appropriate to ask about specific sexual practices and consistent use of condoms.
- A drug history and general medical history must be recorded
- Ask about alcohol and recreational drug use
- Condom promotion has to be done and demonstration should be performed. Condom accidents should be recorded. Availability and necessarily of emergency contraception should be discussed.
- Contraceptive use should be recorded. Preferably, women should use an additional method to condoms.
- A brief psychological assessment should occur and if necessary a referral should be made.

Investigations

- STI screening should be offered
- HIV testing should be offered with provision of pre and post test counseling
- Cervical screening should be offered

If you have any concerns, please discuss with the closest STD clinic or refer to the closest STD clinic.

6.2 MEN HAVING SEX WITH MEN (MSM)

Introduction

They are a high risk group for HIV and other STIs due to multiple partners and engagement high risk sexual practices (eg: unprotected anal sex), alcohol and drug misuse and abuse. They can present with genitourinary as well as rectal infections, which are transmitted sexually. STD clinics provide services for MSMs but most of them do not disclose their sexual orientation due to stigma and legal restrictions.

Services important for MSMs

- Regular screening and treatment for STIs even if asymptomatic
- Counseling for risk reduction and promotion of condoms
- Pre and post test counseling and regular testing for HIV
- Screening for Hepatitis B
- Vaccination for Hepatitis B (currently not available at government hospitals)

Important points in management

- A full history of the presenting complaint should be taken. In addition, MSM should be asked specifically about the presence of rectal symptoms (pain, bleeding, discharge, changes in bowel habit, irritation and ulceration).
- Details of sexual partners should be documented. It may be appropriate to ask about specific sexual practices.
- A drug history and general medical history must be recorded
- Ask about alcohol and recreational drug use
- Condom promotion has to be done and demonstration should be performed. Condom accidents should be recorded
- Hepatitis B screening and vaccination (not available at government hospitals at present)
- Referral to psychology/mental health services when necessary

Investigations

- STI screening should be offered (urethral/rectal/pharyngeal swabs)
- HIV testing should be offered with provision of pre and post test counseling

If you have any concerns, please discuss with the closest STD clinic or refer to the closest STD clinic.

6.3 DRUG USERS

Introduction

Drug use mostly has links with sex work as well as unsafe sexual practices. Condom use during sex is generally low among drug users. Prisons and other correctional facilities comprised of many people convicted for using drugs. Injecting drug users (IDUs) are vulnerable to HIV, Hepatitis B and C, through the sharing of injecting equipment, as well as through sexual transmission.

Services important for Drug Users

- Regular screening and treatment for STIs even if asymptomatic
- Counseling for risk reduction and promotion of condoms
- Pre and post test counseling and regular testing for HIV
- Screening for Hepatitis B and C with vaccination for Hepatitis B
- Information on safe use of needles and syringes
- Information and referral to psychological services and rehabilitation

Important points in management

- A full history of the presenting complaint should be taken, it is very important to recognize symptoms of drug withdrawal and dependence.
- Details of sexual partners should be documented. It may be appropriate to ask about specific sexual practices
- A drug history and general medical history must be recorded
- Ask about alcohol and recreational drug use including injecting drug use
- Condom promotion has to be done and demonstration should be performed. Condom accidents should be recorded
- Hepatitis B screening and vaccination (not available at government hospitals at present)
- Referral to psychology/mental health/drug rehabilitation services when necessary

Investigations

- STI screening should be offered (urethral/rectal/pharyngeal swabs)
- HIV testing should be offered with provision of pre and post test counseling

7. References

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