
UNIT 5 SEXUALLY TRANSMITTED DISEASES

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5.0 OBJECTIVES

After completing this unit, you should be able to:

- list the causes and social factors responsible for sexually transmitted diseases;
- identify different sexually transmitted diseases associated syndromes with the help of history and physical examination;
- use WHO flow charts for the management of specific sexually transmitted diseases syndromes;

- teach the community about the prevention of sexually transmitted diseases; and
- motivate community for the regular use of condoms.

5.1 INTRODUCTION

In Unit 4, you have learnt about sexuality, fertility and infertility. If sexual health is not maintained it may lead to sexually transmitted diseases (STDs). Under the Reproductive and Child Health Programme, reproductive tract infections (RTI), sexually transmitted infections (STI) (diseases) and HIV/AIDS have received a special focus. Efforts are being made to simplify diagnostic and treatment procedures so that these facilities are available even at the grassroot level. Innovative methods like the syndromic approach are being tried out so that maximum people can gain from it. Assessing and treating RTIs and STDs has gained importance and wider awareness in RCH programme. The ANMs and health workers will have to assume greater responsibility for identification and treatment in this area. In this unit you will learn about definition, causes of STDs and magnitude of the problem. You will also learn about syndrome approach, management of associated syndromes and prevention of sexually transmitted diseases.

5.2 MEANING AND DEFINITIONS

We shall try to understand the meaning and definition of RTIs and STDs as given below:

5.2.1 Reproductive Tract Infections

Reproductive Tract Infections (RTIs) are infections which affect any organ of the reproductive tract such as vulva, vagina, cervix, uterus, tubes and ovaries in women. These could be transmitted through sexual contact or through other unhygienic measures. They are caused by different organisms/germs and may result in chronic lower abdominal pain, backache, dysmenorrhoea and vaginal discharge.

Three out of four women affected with RTI are below the age of 25 years. The incidence decreases with increasing age.

5.2.2 Sexually Transmitted Diseases

Sexually transmitted diseases (STDs) are diseases that can spread from one person to another by sexual contact. STDs can cause pain, disability and psychosocial stress. Some of them can cause infertility and death if not treated. The common curable STDs are gonorrhoea, trichomoniasis, chlamydial infection, and syphilis.

HIV can be transmitted not only by sexual contact, but also from a pregnant woman to her child during pregnancy, childbirth, or breast-feeding. The resulting infection is called AIDS, which is fatal in blood.

These three types of infections, i.e. RTIs, STDs and HIV/AIDS are all closely related because of the importance of the person's behaviour in acquiring the infection. On the treatment scale, they are on different levels. Whereas reproductive tract infections and STDs are curable, AIDS is not. The common factor in all is the level of individual responsibility for transmission, treatment and prevention.

5.3 MAGNITUDE OF THE PROBLEM

Each year there are more than 330 million new cases of curable STDs and one million new cases of HIV infection. The problem is becoming more severe due to new types of organisms being discovered. India has a high incidence of STDs and 5% of all infections are due to STDs.

5.3.1 Distribution by Age and Sex

Most children below 14 years of age are free from infection. But between the ages of 14 and 19 years, cases occur more commonly among females because:

- the start of sexual activity is usually earlier for girls than for boys.
- girls have sex with older partners, who are more experienced and also more likely to carry infections.
- the reproductive tract of young girls is more vulnerable to infection with STD.

Both males and females, rates of STD tend to be highest in the 15-30 age group when sexual activity is highest. After the age of 19, cases occur more or less equally in both sexes.

- Sexually transmitted infections often produce no symptoms or only mild symptoms in women, so fewer women come forward for treatment because of cultural and economic constraints
- Services in general may be more accessible to men than women. For example, when men migrate to urban areas for employment, they have access to the urban services and therefore are more likely to appear in statistics
- Large number of men might be infected after practising unsafe sex with sex workers
- Older men may be more sexually active than women of the same age
- Men are more likely to change partners than women

5.3.2 Vulnerable Groups

There are certain people in most communities who may be vulnerable to STD such as.

- Teenage girls who are sexually active
- Commercial sex workers and their clients
- Men and women whose jobs force them to be away from their families or their Regular sexual partners, for longer period of time.

5.3.3 Links between Human Immuno Deficiency Virus and Sexually Transmitted Diseases

The presence of sexually transmitted disease (STD) makes it easy for HIV to pass from one person to another. The common STDs which enable the easier transmission of HIV are:

- Chancroid
- Chlamydia
- Gonorrhoea
- Syphilis
- Trichomoniasis

Linking Factors

The factors which can link HIV and STD are:

- The higher number of white blood cells (WBC) present in patients with STDs. WBCs are targets of HIV infection and also the sources of HIV.
- Presence of STDs and genital ulcers increases the risk of cuts and injuries in the genital tract laying it open to the entry of HIV into the body.

- People with HIV are resistant to treatment for STDs. Studies have shown that treatment of STD patients having HIV, failed more often than STD patients who did not have HIV.
- HIV also prolongs the healing of lesions in syphilis.
- HIV patients are more likely to get gonorrhoea.

Treatment and control of RTI/STD is very important because persons suffering from RTI/STD are 5-10 times at greater risk of acquiring HIV/AIDS infection. It means sure death.

5.3.4 Complications of Sexually Transmitted Diseases

The complications of STDs in men, women and children are given below:

In Women

- Chronic abdominal pain or infertility
- Death due to sepsis in ectopic pregnancy
- Cervical, anal and genital cancers
- Spontaneous abortion and still birth
- Social and family consequences

In Men

- Urethral stricture
- Infertility

In Children

- Blindness due to neonatal eye infections
- Pneumonia

5.4 CAUSES AND MODE OF TRANSMISSION OF SEXUALLY TRANSMITTED DISEASES

Some of the causative organisms for STDs are as follows:

- Neisseria gonococcus causes gonorrhoea
- Treponema pallidum causes syphilis
- Herpes simplex virus causes genital herpes
- Human immunodeficiency virus causes AIDS
- Candida albicans causes candidiasis
- Chlamydia trichomatis causes chlamydia
- Trichomonas vaginalis causes trichomoniasis

RTI and STD are infectious diseases which can be transmitted from an infected person to a healthy person through unprotected sex. And in case of RTI also through improper aseptic precautions during gynaecological procedures such as abortion, and deliveries by untrained persons.

Social Factors in Transmission

- A recent change of partner;
- Having more than one sexual partner;
- Having a partner who has other partners;

- Having sex with 'casual' partners, commercial sex-workers or their clients (partners whose other contacts are not known and whose status in terms of STD is not known);
- Continuing to have sex with the partner having symptoms of STD;
- Having partners with STD and not informing sexual partners that they need treatment.
- Irresponsible sexual behaviour which increase the spread of RTIs and STDs.

There are two types of irresponsible sexual behaviour:

Firstly, a person at risk of getting infected does not use protective mechanisms, e.g. persons who use multiple partners, persons who suspect a partner of having been infected or a person who was infected earlier and was treated but has not stopped engaging in sexual relationship with the risk-causing person. Fear, habit, poor level of awareness and a negligent attitude are responsible for this. The wife or female partner may be afraid of repercussions if she refuses to engage in sexual act or insists on protective measures.

Secondly, an infected person who knows of the infection but does not reveal it to the partner or even has multiple partners is spreading the infection and promoting the progress of illness. This could be a commercial sex worker, or even a husband who has contracted the disease and does not reveal it to his wife.

- Lack of awareness regarding use of condom and availability of treatment.

5.5 COMMON SIGNS AND SYMPTOMS OF SEXUALLY TRANSMITTED DISEASES

Most of the signs and symptoms of STDs are common to many diseases. The common signs and symptoms of STDs are:

Discharge	:	vaginal or urethral
Itching	:	vaginal or urethral
Pain	:	on urination, during sexual intercourse, lower abdominal, scrotal, inguinal
Swelling	:	scrotal, vaginal, on the penis, inguinal lymph nodes
Redness	:	over the scrotum, penis, vagina
Frequent urination	:	

Most of these signs and symptoms may be present whatever may be the causative organism infection. Infection with each organism is characterized by a combination of signs and symptoms which are characteristic of that infection. This set of signs and symptoms is called a syndrome. The chart given below lists the syndromes and the signs and symptoms for the infection.

Signs and symptoms	Signs and symptoms	Signs and symptoms	Most common aetiological agent
Vaginal discharge	Vaginal discharge Vaginal itching Dysuria (pain on urination) Pain during sexual relations	Vaginal discharge	VAGINITIS: — Trichomoniasis — Candidiasis CERVICITIS: — Gonorrhoea — Chlamydia
Urethral discharge	Urethral discharge Dysuria Frequent urination	Urethral discharge (if necessary ask patient to milk urethra)	Gonorrhoea Chlamydia

Genital ulcer	Genital sore	Genital ulcer Enlarged inguinal lymph nodes	Syphilis Chancroid Genital herpes
Lower abdominal pain	Lower abdominal pain and pain during sexual relations	Vaginal discharge, Lower abdominal tenderness on palpation	Gonorrhoea Chlamydia Mixed anaerobes
Scrotal swelling	Scrotal pain and swelling	Scrotal swelling	Gonorrhoea Chlamydia
Inguinal bubo	Painful enlarged inguinal lymph nodes in both men & women	Swollen lymph nodes Fluctuation Abscesses or fistulas	Lymphogranuloma/Venereum (LGV) Chancroid
Neonatal conjunctivitis	Swollen eyelids Discharge Baby cannot open eyes	Oedema of the eyelids Purulent discharge	Gonorrhoea Chlamydia

5.6 IDENTIFICATION OF SEXUALLY TRANSMITTED DISEASE

You can identify the STDs by history and physical examination as given below.

5.6.1 History Taking

History taking and collecting information about a patient is extremely important in identifying patients with RTIs/STDs and providing the correct treatment.

Use of History Taking for STD

- To make a syndromic diagnosis of STD which is accurate and efficient.
- To establish the patient's risk of contracting or transmitting STD.
- To find out about partners who have been infected and or are at risk.

Areas in which Information is to be Gathered

- General information about the clients.
- Present problems, signs and symptoms.
- Medical history including previous illness and treatment.
- Sexual history.

Data to be Collected During History Taking

a) *General Details*

- Age
- Number of children
- Locality or address
- Employment

b) *Present Illness*

- Presenting complaints and duration

For Men

- If an inguinal bubo - Is it painful? Associated with genital ulcer? Swellings elsewhere in the body?
- If a urethral discharge - Pain while passing urine? Frequency?
- If scrotal swelling - History of trauma?

For Women

- If a vaginal discharge - Pain while passing urine? Frequency? Risk assessment positive?
- Lower abdominal pain - Vaginal bleeding or discharge? Painful or difficult pregnancy or childbirth? painful or difficult or irregular menstruation? Missed or overdue period?

For Both Men and Women

- If a genital ulcer - Is it painful? Recurrent? Appearance? Spontaneous onset?
- Other symptoms, such as itching or discomfort

c) *Medical History*

- Any past STD - Type? Dates? Any treatment and response? Results of tests?
- Other illness - Type? Dates? Any treatment and response? Results of tests?
- Medications
- Drug allergies

d) *Sexual History*

- Currently active sexually?
- New partner in the last three months?
- Risk assessment

Ask the following questions to women to obtain information:

- Do you have pain in the lower abdomen?
- Do you have pain when you have sexual intercourse?
- Do you have an unusual vaginal discharge?
- When did you last have your monthly period?
- Are your periods regular?
- Was the period unusual in any way?
- Are they painful?
- Have you missed a period?
- Are you late for a period?

5.6.2 Physical Examination

The purpose of physical examination is to confirm any STD symptoms. Physical examination for STDs has to be done more carefully because genital organs are being examined and also because of the stigma and fear attached to illness of the sexual parts.

Care to be Taken Before Physical Examination

- Ensure privacy and confidentiality

- Explain to the patient what is going to be done and its importance
- Conduct the examination in a confident and professional manner. If you yourself hesitate, the patient will not have confidence
- Use all principles of communication and counselling
- Behave in a calm and friendly manner and treat the person with respect
- Make sure you have enough light to do the examination
- Make sure you have the time to examine and question the patient. Time should be spent before starting the examination to make the patient feel comfortable and confident
- If the patient is female and service provider is male, then another female must always be present during examination
- Never force a person to be examined.

Examining Patients for STD Syndromes

For Male Patients

- Ask the patient to stand up and lower his pants so that he is stripped from the chest to the knees. It may be possible to examine him while he is standing up, though you will sometimes find it easier if the patient lies down.
- Palpate the inguinal region in order to detect the presence or absence of enlarged lymph nodes and buboes.
- Palpate the scrotum, feeling for individual parts—testes, spermatic cord, epididymis.
- Examine the penis, noting any rashes or sores. Then ask the patient to retract the foreskin if present, and look at the glans penis and urethral meatus.
- If you cannot see an obvious urethral discharge, ask the patient to milk the urethra in order to express any discharge.
- Record the presence or absence of:
 - buboes
 - urethral discharge, noting the colour and amount
 - ulcers

For Female Patients

- Ask the patient to remove her clothing from the waist down, and then to lie on the couch. In order to save her embarrassment, use a sheet to cover the parts of the body that you are not examining.
- Ask the patient to bend her knees and separate her legs, then examine the vulva, anus and perineum.
- Palpate the inguinal region in order to detect the presence or absence of enlarged lymphnodes and buboes.
- Palpate the abdomen for pelvic masses and tenderness, taking great care not to hurt the patient.
- Records the presence or absence of:
 - buboes
 - ulcers
 - vaginal discharge—note the type, colour and amount

Always use gloves if you wish to avoid a vaginal or anal STD infection.

5.7 THE SYNDROMIC APPROACH

The WHO and Government of India is promoting diagnosis of STDs on the basis of a set of symptoms called syndromes. This approach is popularly known as the syndrome management of STD. It is based on symptom and signs which can be easily observed by the health worker. It uses simple flow charts which can help the health worker to assess and provide treatment accurately. It requires minimum training to train health workers.

The ANM in the community is the closest to the women who complain of several symptoms of reproductive tract infections. The syndromic approach provides her with the capacity to help such women who would not or cannot go to the hospital or doctor.

Essential Components of Syndromic Approach

- Syndromic diagnosis and treatment
- Education and risk reduction
- Condom provision and demonstration of use
- Counselling on prevention and care
- Partner notification and treatment
- Follow-up services
- Education regarding complications and risk of HIV

Check Your Progress 1

Seven STD syndromes are given below. Write the signs, symptoms and etiologic agent for each in the boxes provided.

Vaginal discharge			
Urethral discharge			
Genital ulcer			
Lower abdominal pain			
Scrotal swelling			
Inguinal bubo			
Neonatal conjunctivitis			

5.8 MANAGEMENT OF SPECIFIC SEXUALLY TRANSMITTED DISEASES ASSOCIATED SYNDROMES

The management of most common clinical syndromes caused by sexually transmitted agents can be done effectively with the help of flow chart. These provide simple steps and rules for identification and management. The WHO has developed flow chart for management of seven STD syndromes as given below.

Before we discuss about the treatment of these syndromes, you should remember that your main responsibility is to identify the STDs, provide counselling and education for prevention and treatment and refer all cases to PHC for treatment.

- Urethral discharge
- Genital ulcers
- Vaginal discharge
- Lower abdominal pain
- Scrotal swelling
- Inguinal bubo
- Neonatal conjunctivitis

5.8.1 Urethral Discharge

Male patients complaining of urethral discharge and/or dysuria should be examined for evidence of discharge. The major pathogens causing urethral discharge are *N. gonorrhoea* and *C. trachomatis*. Unless the diagnosis of gonorrhoea can be definitively confirmed by laboratory tests, the treatment of the patient with urethral discharge should provide adequate therapy to cover both these pathogens. If the patient has received any medication before coming to the facility, treatment should be provided for both pathogens even if there is no laboratory evidence of gonorrhoea.

Flow Chart on Urethral Discharge

A man presents to your health facility complaining that he has noticed a discharge from the penis. Use the flow chart given on next page for urethral discharge to manage the case.

Treatment

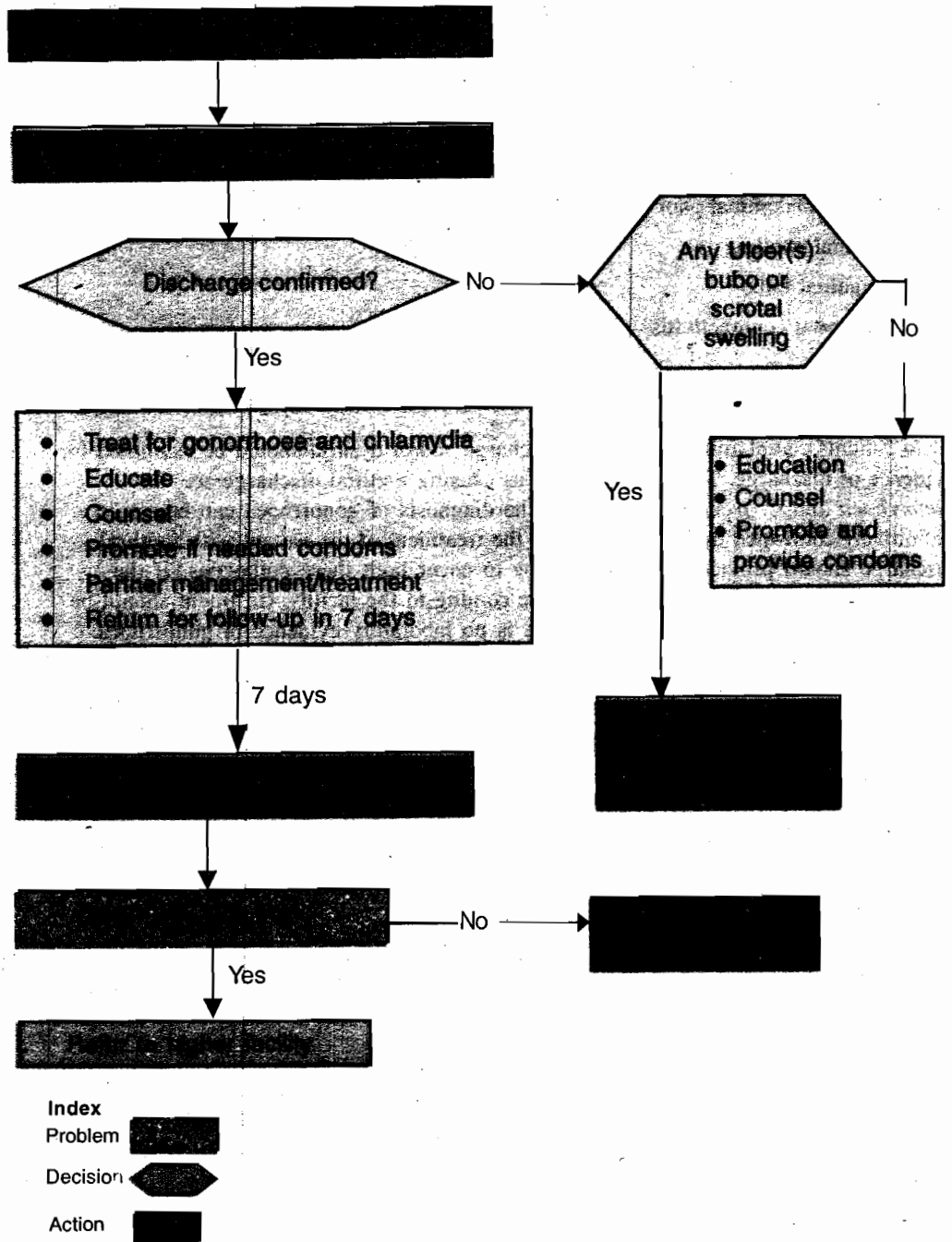
- The patient with confirmed urethral discharge should be treated for gonococcal and chlamydial infections. All recommended treatment regimens have been included here. The antibiotics should be in accordance with national guidelines. The common treatment is given below:
 - Give CIPROFLOXACIN 500 mg as a single oral dose (for the treatment of gonococcal urethritis). Make sure that the patient swallows the tablet(s) under supervision.

Alternatively, the patient may be treated with:

 - NORFLOXACIN 800 mg single oral dose, or
 - CEFIXIME 250 mg single l/m dose, or
 - SPECTINOMYCIN 2 g single l/m dose- DOXYCYCLINE 100 mg orally twice daily for 7 days to 14 days (for chlamydial urethritis). Make sure that the patient receives 14 tablets (capsules) with instructions to take one tablet in the morning and one in the evening, preferably before meals. Advise patients against taking antacids along with the drug and to avoid taking large quantities of alcohol and milk during treatment.

Alternatively, the following drugs may be used:

- TETRACYCLINE 500 mg orally 4 times a day for 7 days, or
- ERYTHROMYCIN 500 mg orally 4 times a day for 7 days.

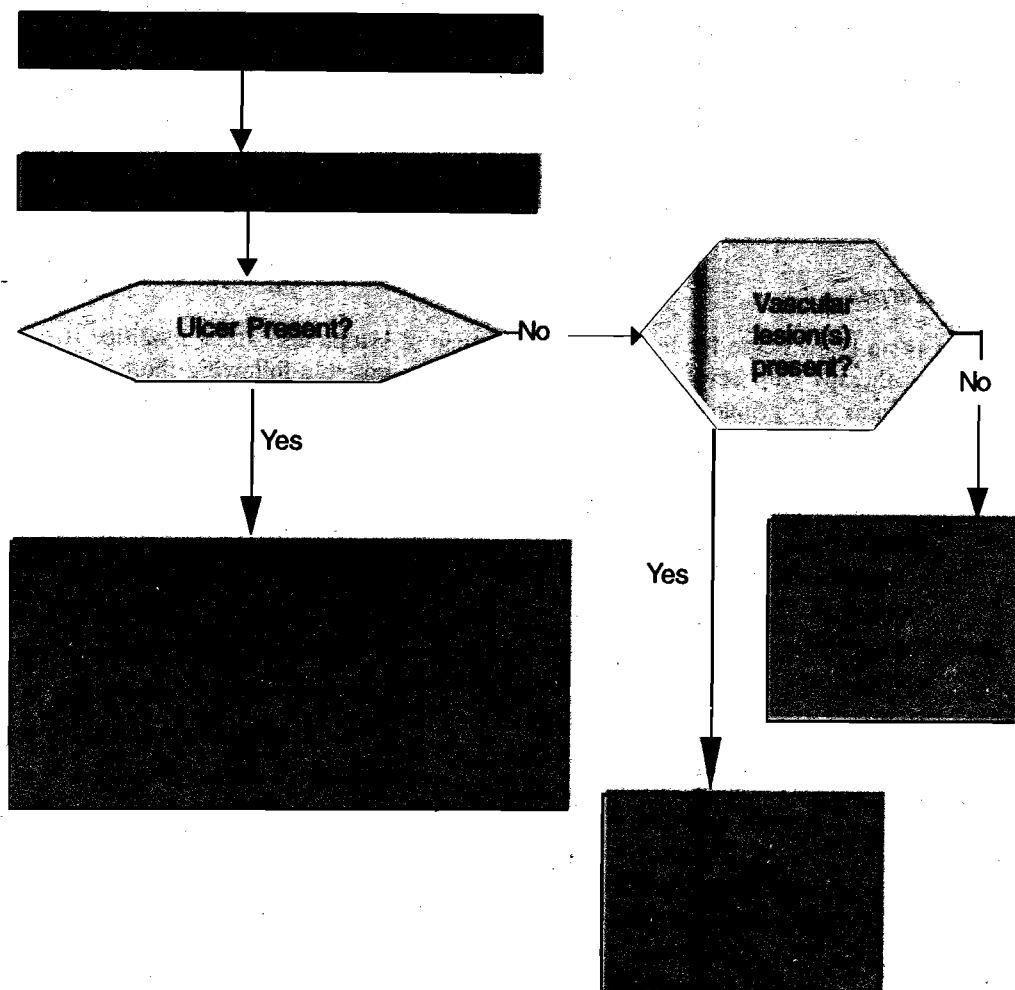


- Ask the patient to return in a week's time for follow-up. If the follow-up visit will be inconvenient for him, such as loss of day's earnings or difficulties in finding transport to the health facility, instruct the patient to return only if his symptoms persist.
- Several studies have demonstrated that a 7-day treatment with Doxycycline is sufficient for treatment of chlamydia. If STD experts in the country are of the opinion that this regimen is inadequate, the period of treatment may be extended to 10 or 14 days according to the general consensus.

5.8.2 Genital Ulcers

A genital ulcer is a break in the continuity of the skin or mucous membrane surface on the genital area. If a patient at your clinic complains that he/she has noticed a sore on the genitals. The most common STDs presenting with genital ulcer/s are syphilis, chancroid and genital herpes. Use the following flow chart for genital ulcers to treat this patient:

Flow Chart on Genital Ulcers



While examining men: Look at external genitalia including the inner surface of the foreskin and the parts covered by the foreskin.

While examining women: Look at the skin of the external genitalia, ask patient to separate the labia and look carefully at the mucous surface for breaks and ulcers.

Treatment

Treat for syphilis, chancroid and herpes. Treatments for both are given here :

For Syphilis

Give Benzathine Penicillin 2.4 million units intramuscularly. Either carry out a sensitivity test for penicillin or take a careful history (whichever is the practice in your area), in order to exclude possible hypersensitivity reactions by persons allergic to penicillin.

Alternatively, if the person is allergic to penicillin, use:

TETRACYCLINE 500 mg orally 4 times a day for 15 days, or

DOXYCYCLINE 100 mg orally twice daily for 15 days, or

ERYTHROMYCIN 500 mg orally 4 times a day for 15 days.

For Chancroid

Give ERYTHROMYCIN 500 mg orally 4 times daily for 7 days. Make sure that the patient receives a full supply of the drugs with clear instructions on how to take them.

Alternatively, the following may be used:

CIPROFLOXACIN 500 mg single oral dose, or

CEFTRIAXONE 250 mg single I/m dose, or

SPECTINOMYCIN 2g single I/m dose, or

TRIMETHOPRIM 160 mg/SULPHAME-THAXAZOLE 800 mg (2 tablets) orally twice daily for 7 days.

For Herpes

There is no known cure for herpes, but the course of symptoms can be modified if systemic therapy with acyclovir is started as soon as possible following the onset of the symptoms of a primary episode. A primary episode is one appearing for the first time, and characterized by severe clinical presentation with constitutional symptoms but one marked by few or no vesicles clustered together in the genital area.

First Clinical Episode

A careful history-taking will establish this fact. All women and most men having a primary attack of symptomatic disease will benefit immensely from acyclovir therapy, if available, due to reduction in: the formation of new lesions; the duration of pain; the time required for healing; and viral shedding. Most of the first episodes of genital ulcers are not primary attacks and usually can be managed without acyclovir.

The recommended regimen for primary genital herpes:

ACYCLOVIR 200 mg orally 5 times daily for 7 days.

Recurrences

Most recurrences can be managed by keeping the genital area clean by using saline washes. Educate the patient and arrange for counselling since the patients are greatly distressed by the recurring lesions. When patient experiences severe pain, especially early in the disease, you should give analgesics and reassure that it is part of the natural course of the disease.

5.8.3 Vaginal Discharge

A small amount of discharge is normal in every woman. This physiologic discharge varies during the different periods of the menstrual cycle. The amount of discharge is also more just before and after sexual intercourse and during pregnancy and lactation. If the amount of discharge is copious and causes itching or discomfort or smells it may be due to infection.

The causes of vaginal discharge are vaginitis, cervicitis or both. It is difficult to make out the difference between vaginitis and cervicitis without an internal examination. The differences between the two are given below:

Cervicitis is more serious and can lead to severe complications and diseases. You can identify cervicitis without examination by asking the following questions:

- Does the patient also have pain in the lower abdomen
- Does the patient's partner have any symptoms of STDs
- Does the patient's circumstances fit with any risk factors for cervicitis. Based on some studies in Africa, the risk factors have been identified:
 - patient is less than 21 years old
 - patient is single
 - patient has had sex with more than one person in proceeding three months

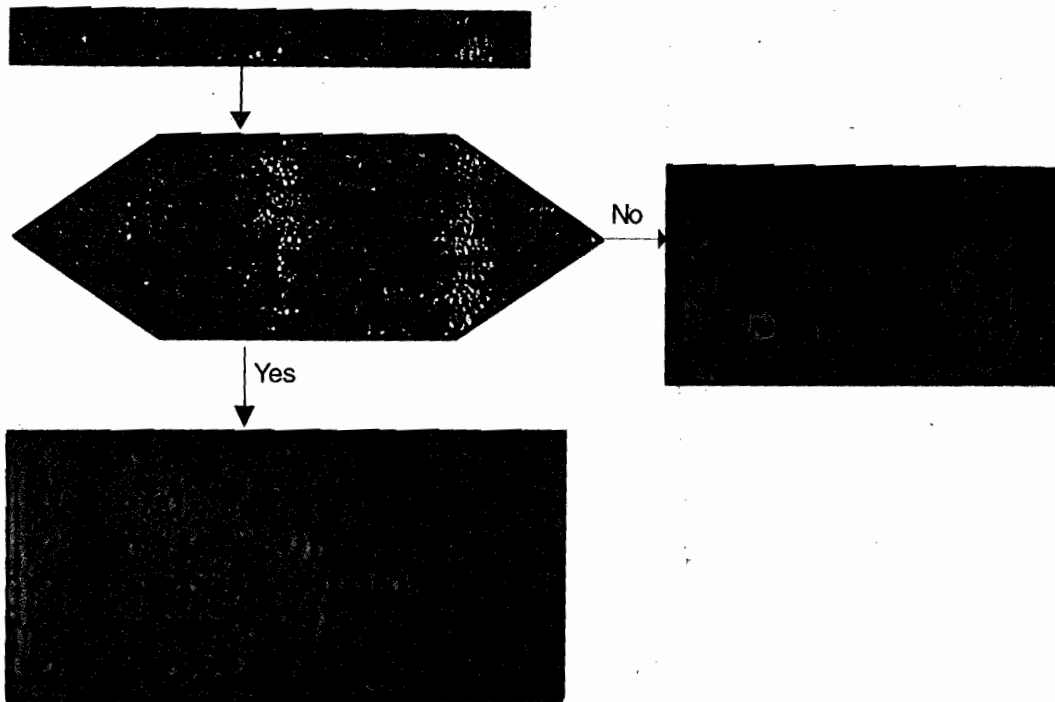
- patient has had sex with a new partner in the preceding three months

If any of the risk factors are present or if the answer to one of the first two questions is yes then the patient has to be treated for both vaginitis and cervicitis.

Vaginitis can be identified by asking the following questions:

- Is the patient's partner symptomatic?
- Does the patient also complain of lower abdominal pain?
- Does the patient have one of the four risk factors.
- If the patient answers YES to any of these questions, she and her partner must be treated for both cervicitis and vaginitis.
- If the patient responds negatively to all questions, she can be treated for vaginitis only.

Flow Chart for Management of Vaginal Discharge



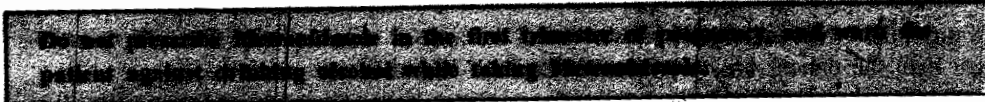
Treatment of Vaginitis

Treatment for vaginitis includes treatment for trichomoniasis, candidiasis and bacterial vaginosis.

- For effective treatment for both trichomoniasis and bacterial vaginosis, give METRONIDAZOLE 2 g as a single oral dose at the clinic under supervision. METRONIDAZOLE 400-500 mg given orally twice daily for seven days is also effective.
- Effective treatment for vaginal candidiasis is NYSTATIN 100000 units (one pessary), inserted intravaginally once a day for 14 days, or
MICONAZOLE or CLOTRIMAZOLE 200 mg, inserted into the vagina once a day for three days, or
CLOTRIMAZOLE 500 mg, inserted into the vagina once only.

Advise the patient to take the complete course of tablets and inform her of the mode of transmission of STD and possible complications of infection. There is no need to treat

the patient's partner because vaginitis rarely has serious complications. In men trichomoniasis usually resolves spontaneously.



Treatment for Cervicitis

- For the treatment of gonococcal cervicitis, give CIPROFLOXACIN 500 mg in a single oral dose, or CERTRIAZONE 250 mg single I/m. dose, or CEFIXIME 400 mg single oral dose, or SPECTINOMYCIN 2 g single I/m dose.

In regions where kanamycin and cotrimoxazole show continuing efficacy in the treatment of gonorrhoea, these drugs may also be used:

Kanamycin 2 g single I.M. dose. or, when single dose therapy is not available.

Trimethoprim 80 mg/Sulphamethoxazole 400 mg (Cotrimoxazole) 10 tablets orally, once a day for three days.

PLUS

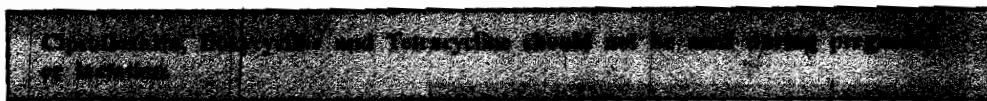
- For the treatment of chlamydial cervicitis, give DOXYCYCLINE 100 mg orally twice daily for seven days, or

TETRACYCLINE 500 mg orally four times daily for seven days.

Alternatively, the following drugs may be used:

ERYTHROMYCIN 500 mg orally four times daily for seven days, or

SULFISOXAZOLE 500 mg orally four times daily for 10 days (equivalent doses of other sulphonamides may also be used).



5.8.4 Lower Abdominal Pain

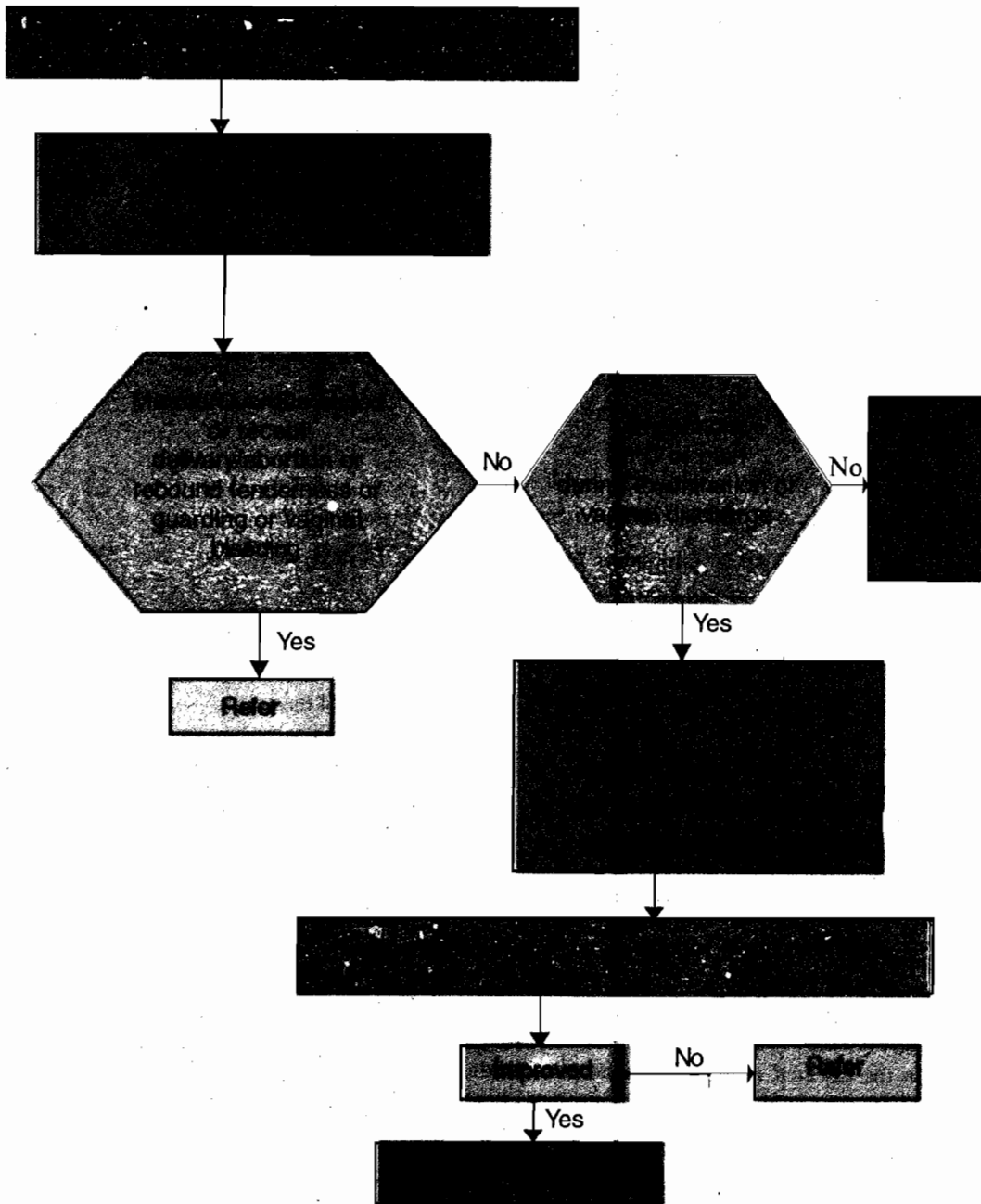
Lower abdominal pain is usually due to infection of the upper genital tract in the female. This is commonly referred to as pelvic inflammatory disease (PID). Pelvic inflammatory disease is defined as an infection of the female genital tract above the internal os of the cervix. The infection ascends from the lower genital tract, through the cervix. It is usually caused by gonorrhoea, chlamydia and anaerobic bacteria.

PID includes endometritis, salpingitis, tubo-ovarian abscess and pelvic peritonitis. In severe cases it can lead to generalized peritonitis. Salpingitis can lead to the blockage of the fallopian tubes and result in decreased levels of fertility. If both the tubes are infected and blocked, it can result in infertility. Tubal pregnancy can also take place because if the tubes are blocked the sperm can pass through even tiny spaces and fertilize the ovum, but the fertilized ovum cannot travel through the tube to the uterus and so develops in the tube itself. The pregnancy cannot progress, it may lead to rupture, haemorrhage and even death.

Thus, PID, if not recognized and treated correctly, could result in serious complications. Hence, it is very important to have a very clear concept of when management as an outpatient should be discontinued and when the patient should be admitted to hospital for inpatient and expert therapy.

When examining a patient with lower abdominal pain, carry out the following:

- i) Check the patient's temperature. A high temperature indicates infection.



ii) Palpate the abdomen for tenderness, rebound tenderness, guarding and detection of a mass.

Abdominal palpation should first be superficial to detect pain on light palpation—this is known as tenderness.

Then make a careful and deep palpation. In the area where you found tenderness to light palpation, press down slowly and very gently and release the pressure suddenly. Any severe pain that results is known as rebound tenderness.

When the peritoneum is inflamed, upon palpation the abdominal muscles will become rigid and will not allow you to apply pressure. This is known as guarding. Guarding and rebound tenderness are features of peritonitis or an intra-abdominal abscess.

Light abdominal palpation will also enable you to detect a swelling or lump in the patient's abdomen. This is known as a mass. Upon deep palpation of the lower right and lower left abdomen, you might detect a tender mass deep in the pelvic cavity. This may be a tubo-ovarian abscess.

- iii) See whether the patient has vaginal bleeding. This should alert you to the possibility of an ectopic pregnancy or abortion.
- iv) See whether the patient has an abnormal vaginal discharge.

Treatment

When treating a woman for PID, you must give treatment simultaneously for gonococcal, chlamydial and anaerobic bacterial infections. You must also provide education, counselling and condoms, and give information on partner treatment.

For Gonorrhoea

CIPROFLOXACIN 500 mg single oral dose, or

NORFLOXACIN 800 mg single oral dose, or

CEFIXIME 400 mg single oral dose, or

CEFTRIAXONE 250 mg single I/m dose, or

SPECTINOMYCIN 2 g single I/m dose.

Plus Chlamydial Infection

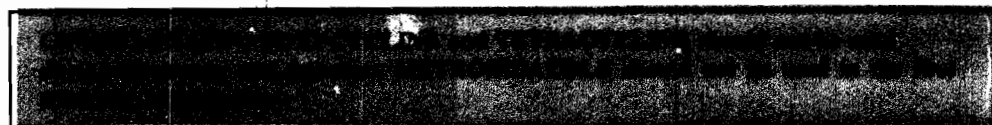
DOXYCYCLINE 100 mg orally twice daily for 14 days, or

TETRACYCLINE 500 mg orally four times daily for 14 days, or

ERYTHROMYCIN 500 mg orally times daily for 10 days.

Plus Anaerobic Bacterial Infection

METRONIDAZOLE 400 mg given orally twice daily for 14 days



5.8.5 Scrotal Swelling

Urethritis is the infection of the urethra. This can also lead to infection of the testes which is manifested as scrotal swelling. The infected testis is hot, red and painful. If timely and effective treatment is not given the process may spread or the inflammatory process may resolve by itself. But the result is scarring and formation of fibrous tissue in the affected testis. This leads to testicular tissue destruction and reduced fertility. The common causes are gonococcal urethritis and chlamydial urethritis.

While taking the history from the patient, the following must be noted:

- Has the patient injured himself
- Has the patient had an STD in the last six weeks

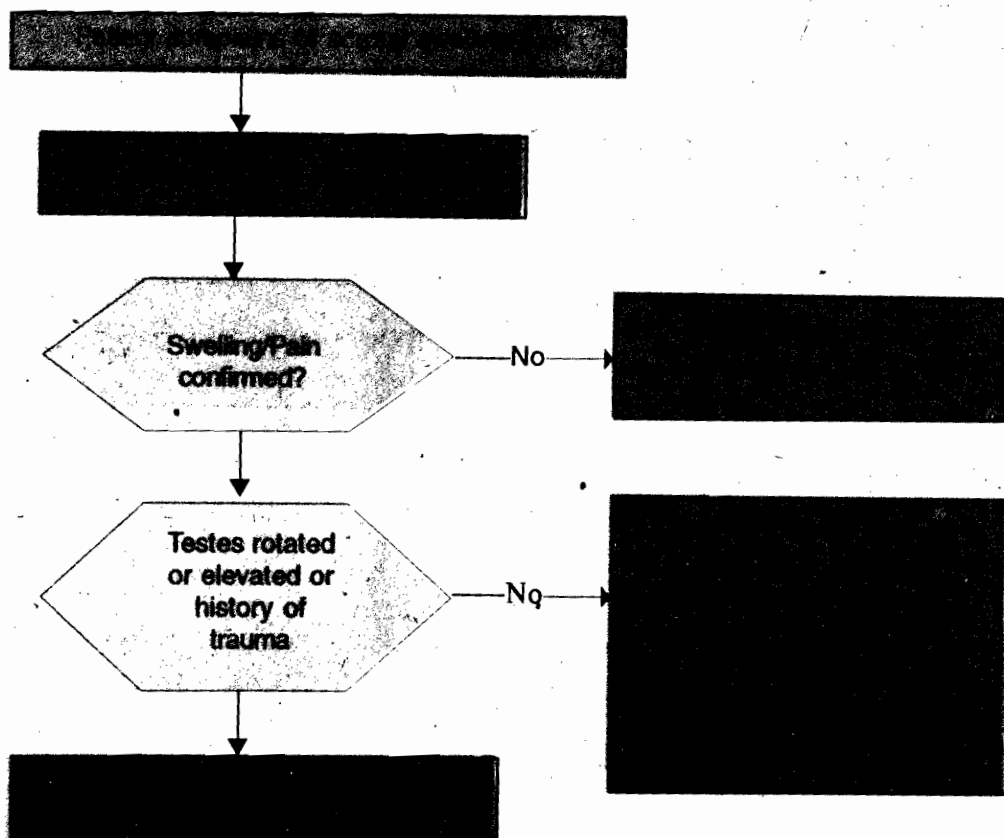
While examining the patient, the health care provider must take care of six points:

- 1) Palpate the scrotal sac and compare the two sides. Which side is swollen, is there pain?
- 2) What is the position of testis in the scrotal sac, is it elevated or rotated, i.e., is there torsion?
- 3) Is there any bruising of the skin. This may indicate injury?
- 4) Is there urethral discharge either directly observed or on squeezing the penis and milking the urethra?
- 5) Is there evidence of any other STD?
- 6) Is there swelling in the inguinal area, or does the scrotal swelling increase when the patient raises the intra abdominal pressure pretending to pass motion?

If none of the above are present, then there is no scrotal swelling and the patient can be reassured.

Flow Chart for Scrotal Swelling

Sexually Transmitted
Diseases



Treatment for gonorrhoea and chlamydial infection is as follows:

- for the treatment of gonococcal urethritis, give CIPROFLOXACIN 500 mg in a single oral dose, or CEFTRIAXONE 250 mg single I/m dose CEFIXIME 400 mg single oral dose, or SPECTINOMYCIN 2 g single I/m, dose.

In regions where Kanamycin and Cotrimoxazole show continuing efficacy in the treatment of gonorrhoea, these drugs may also be used:

KANAMYCIN 2 g single I/m dose, or, when single dose therapy is not available:

Trimethoprim 80 mg/Sulphamethoxazole 400 mg (Cotrimoxazole) 10 tablets orally, once a day for three days.

Plus : For chlamydial urethritis

DOXYCYCLINE 100 mg orally twice daily for seven days, or

TETRACYCLINE 500 mg orally four times daily for seven days.

Alternatively, the following drug may be used :

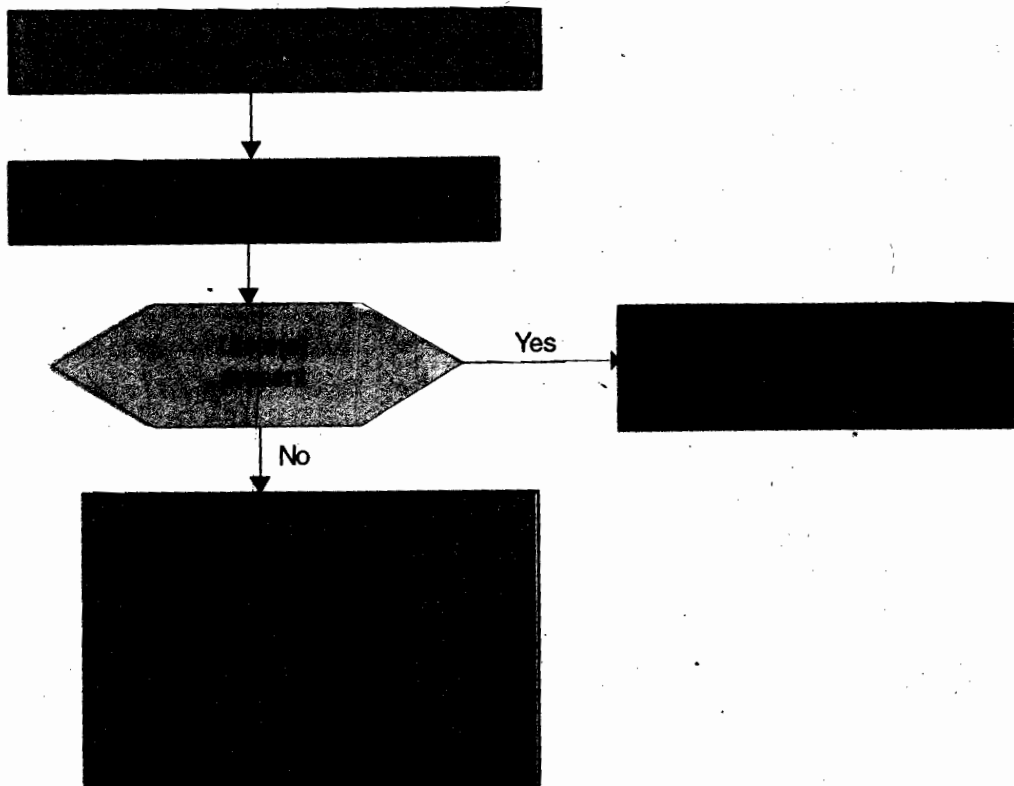
Erythromycin 500 mg orally four times daily for seven days, or

Sulfisoxazole 500 mg orally four times daily for 10 days (equivalent doses of other sulphonamides may also be used).

5.8.6 Inguinal Bubo

A bubo is a painful swelling in the groin. This is due to a swelling of the lymph nodes of the inguinal region. Bubos are caused by chancroid and lymphogranuloma venereum (LGV). When the patient has LGV there is usually a swelling in the groin but there is no ulcer.

Flow Chart for Management of Inguinal Bubo



Treatment

For the treatment of lymphogranuloma venereum (LGV), give DOXYCYCLINE 100 mg orally, twice daily for 14 days, or TETRACYCLINE 500 mg orally, four times daily for 14 days.

Alternatively, for those who cannot tolerate tetracycline, give Erythromycin 500 mg orally, four times daily for 14 days, or Sulfadiazine 1g orally, four times daily for 14 days.

5.8.7 Ophthalmia Neonatorum

Neonatal conjunctivitis or ophthalmia neonatorum is defined as purulent conjunctivitis occurring in a baby less than one month of age. The common causes of this potentially sight-threatening condition are gonorrhoea and chlamydia. If the baby is older, the cause is unlikely to be an STD.

Prevention of Neonatal Conjunctivitis

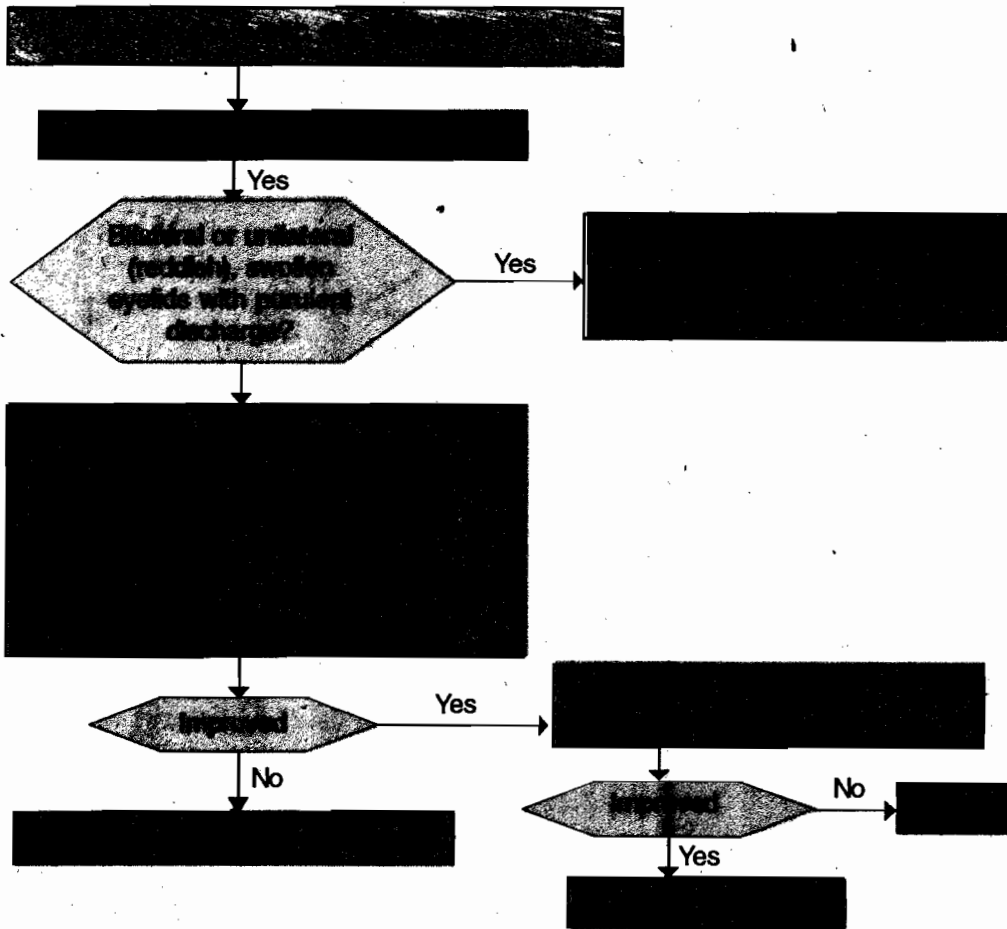
All newly born babies should have preventive therapy carried out as follows:

- as soon as the baby is born, wipe both eyes with dry, clean, cotton wool;
- then apply 1% tetracycline eye ointment into the lower conjunctival sacs of both eyes;
- remember that the baby's eyes are usually swollen soon after birth and may be difficult to open. Therefore, the eyes should be opened and the eye ointment placed in the lower conjunctival sacs and not on the eyelids.

Management of Neonatal Conjunctivitis

If a baby of less than one month has swollen eyes and pus, use the flow chart for management.

Flow Chart for Neonatal Conjunctivitis



Treatment for Baby

- ^{Cyan} **CERTRIAXONE** 50 mg/kg (maximum 125 mg) in a single I/m. dose.
Where ceftriaxone is not available, use Kanamycin 25 mg/kg (maximum 75 mg) in a single I/m dose, or Spectinomycin 25 mg/kg (maximum 75 mg) in a single I/m dose.

Treatment of Mother and Mother's Partner(s)

- For gonorrhoea, give **CETRIAXONE** 250 mg single I/m dose, or **SPECTINOMYCIN** 2 g single I/m dose, or **CEFIXIME** 400 mg single oral dose, or **CIPROFLOXACIN** 500 mg in a single oral dose.

If the above therapies are not available, give Kanamycin 2 g single I/m dose, or, if single dose therapy is not available.

Trimethoprim 80 mg / Sulphamethoxazole 400 mg (Co-trimoxazole) 10 tablets orally, once a day for three days.

PLUS: Chlamydial Infection

- DOXYCYCLINE** 100 mg orally, twice daily for seven days, or,
- TETRACYCLINE** 500 mg orally, four times daily for seven days.

Check Your Progress 2

- How does an inguinal bubo differ from an enlarged inguinal lymph node?

.....

- have sex with others
- have any STDs
- have HIV infection
- take drugs through injection
- have sex with others of the same sex

Personal Risk Factors

- Is there risk of HIV infection
- Use of skin piercing instruments like needles, tattoos, injections, body piercing tools, circumcision knives.
- Has the patient ever had a blood transfusion, when, and where
- If the patient is a child, did the parents have STD or were exposed.

Drugs and Alcohol Use

- Does the person using drugs and alcohol also engage in sex? How often, with whom
- Does a person using drugs or alcohol exchange sex - buy or sell

Personal Protective Mechanisms

- Are some forms of protection used during sex, what are they
- Are condoms used, how often, method of use
- Is exposure to sex limited to one partner or many

5.9.2 Promoting Condom Use

You should be able to promote use of condoms among people who are at high risk. Although condoms do not provide absolute protection from any infection, they greatly

- Reduce the risk of infection if properly used.
- Condoms should be available in any health care facility providing clinical STD services.
- Condoms should be provided free of charge.
- Instruction on the proper use of the condom should also be provided.
- large and clear posters should be exhibited on the correct use of the condom.
- Demonstration of use of condom with the help of models should become a part of the health centres routine activity.

Reasons for Resistance to Condom

- Not available at the right time
- Problems of storage, use and disposal
- It interferes with sex and spoils it
- Condom is itself infected, maybe someone else used it

Giving correct information and demonstration on use, making it available and encouraging its use may promote a wide use of condoms. So you should explain the advantages of condom use and how it is used to the people for its under use.

Advantages of Condom Use

- Condoms prevent transmission of STD and HIV
- Avoids pregnancy
- Patient under treatment for STD can engage in sex without waiting for sores to heal
- Both partners will feel safe and free

Demonstrating the Use of the Condom

You as a health care provider must demonstrate the use of the condom clearly with the help of a model, emphasizing each step. The client must be asked to repeat the demonstration till all the steps are done right.

What Points should be Stressed while Demonstrating Use of Condom?

- Demonstrate how to check for expiry date and for the quality of the rubber. It should be smooth, without breaks, not sticky or smelly.
- Demonstrate how to open the package from the correct point of tearing
- Demonstrate the correct side to be rolled over the penis
- Explain at what point during the sexual act the condom has to be slipped over the penis — after erection
- Demonstrate at which point to hold the condom and how to expel air before putting it over the erect penis
- Demonstrate the method of rolling over the erect penis with both hands
- Demonstrate that it should be rolled till the base of the penis
- Explain that the small space at the end is necessary for collection of the semen
- Emphasize that the condom has to be rolled down just as the penis is losing its erection
- Demonstrate how the edge should be held so that the semen does not leak out
- Demonstrate how the knot is tied around the condom before it is disposed off

Important

- Never use the condom a second time.
- Never throw it away without tying it up.
- Do not throw it where children can pick it up and open it.

The client should be given some condom and told that if he/she is likely to engage in risky sexual behaviour they should always carry condoms with them. Tell them the places where they will be available.

5.9.3 Prevention through Changing Sexual Behaviour

What are the barriers to changing sexual behaviour?

Gender imbalances force women to silently undergo sexual acts from men even if they are infected. They may not be in a position to say no or even to insist on use of condom and to seek treatment. Many women coming to the notice of the health care provider will not be in a position to convince their husbands to come to the centre for a discussion or even go for a check up or treatment.

The health worker may have to use her communication skills with the woman, support and encourage her to talk to the man. She herself may have to talk to the partner in a matter of fact and mature manner about the risks and the treatment. Treating partners and counselling them is the most challenging task before health care providers.

5.9.4 Counselling a Client

Counselling is a confidential dialogue between a client and a health care provider aimed at enabling the client to cope with stress and take personal decisions.

The counselling process includes an evaluation of personal risk of HIV/STD transmission and facilitation of preventive behaviour. A consultation on STD provides an opportunity for the health worker to discuss on a one-to-one basis with the patient, his/her risk factors for HIV/STD. Education for prevention is an essential part of STD consultation.

Some issues which arise during a STD consultation may provoke emotional reactions in the patient. Health workers should be able to recognize these and ensure that time is set aside in a counselling session to discuss them.

- Explaining the partner or spouse about STD diagnosis
- Assessing their own risk for HIV, and deciding to test for HIV
- Concerns about passing on the sexually transmitted diseases to the children
- Dealing with an incurable STD such as herpes genitalis which may be transmitted to the partner
- Symptoms suggesting HIV-related disease.

For any of the above issues, a decision needs to be made whether education alone, i.e., the provision of information is enough or whether counselling is needed.

Before offering counselling to STD patients, the care provider needs to:

- Identify the needs of the client which may relate to stress or anxiety about aspect of the STD, or it may be a special need for confidential risk assessment and planning for risk reduction, and
- Have counselling skills, privacy, and time (usually 15-20 minutes), including the availability for follow-up discussions.

When a counselling need is identified, the patient should be referred to a nearby counselling service, if this is available. If not, then a health or social worker may be designated to provide the counselling.

Counselling consists of compassion, sensitivity, listening skills and the necessary basic knowledge to provide useful, practical advice.

5.9.5 Notification and Management of Sexual Partners

The sexual partners of STD patients are likely to be infected themselves and should be offered treatment. Further transmission of STD and re-infection are prevented by referral of sexual partners for diagnosis and treatment. Partner notification should be considered whenever STD is diagnosed, irrespective of where care is provided.

Patient is likely to have two types of partners or contacts. The person who infected the patient is referred to as the source or primary contact and is often a sex worker. A person/s infected by the patient is referred to as the secondary contact and is usually the spouse or the girl friend.

Partner notification should be conducted with great concern for confidentiality. The process should be voluntary and non-coercive. The aim is to ensure that the sexual partners of STD patients, including those without symptoms, are referred for evaluation.

5.9.6 Messages to Community to Prevent STD

All health providers, including family planning providers, should help to fight STDs. Some ways to fight STDs are listed here:

- Routinely tell clients how to prevent STDs and how to know if they have an STD. Find or make posters on signs and symptoms.
- Encourage people to seek care if they suspect infection or if they develop symptoms, and tell them where to find care.
- Ask standard questions to find out if clients are likely to get an STD.
- Encourage people to use condoms who might get STDs.
- Make condoms available freely and easily.
- Learn which STDs are common in your area, know their symptoms, and recognize them among your clients.
- Offer diagnosis and treatment, if possible. Arrange for referral.
- Know and use good infection-prevention techniques in the clinic because many STDs can be spread in body fluids, especially blood.
- Help to educate the community. Mass-media and person-to-person programs help clients recognize their risk and change their sexual behaviour. They also can encourage people to seek treatment.
- Some STDs cannot be cured. This includes HIV/AIDS
- ABC prevents STD:
 - Abstain from sex
 - Be faithful to one partner
 - Condom use
- Protect yourself against AIDS. Other STDs increase your risk of getting HIV/AIDS.

If you have already become infected with STD:

- Seek cure quickly even if you do not find symptoms.
- Do not spread STDs: If you think you might have an STD, avoid sex or use condoms with every sex partner. If you are told you have an STD avoid sex for 3 days after you have taken all of your medicine and you have no more symptoms.
- Help your sex partners get treatment: Tell them to come for treatment.
- Come back to make sure you are cured: If you still have symptoms, you can get more medicine to cure your infection.
- Protect your baby: Go (or encourage your wife to go) to an antenatal clinic within the first 3 months of pregnancy for a physical exam and syphilis test.

5.10 LET US SUM UP

In this unit, you have reviewed the problem of STDs. You have studied the causes of STDs and the impact of STDs on people. You have learnt about the syndromic approach and the features and advantages of this approach. Details of identification of the syndromes have been provided to you for your study. The unit also dealt with seven common STD associated syndromes and the flow charts indicating their management. You have learnt how to manage each syndrome using these flow charts. You have also reviewed and discussed the measures to be taken for the prevention of STDs including promotion of condom use, information to community and counselling.

5.11 MODEL ANSWERS

Check Your Progress 1

Signs and symptoms and etiologic agents of STD syndromes

Syndrome	Symptoms	Signs	Most common etiologies
Vaginal discharge	Vaginal discharge Vaginal itching Dysuria (pain on urination) Pain during sexual relations	Vaginal discharge	VAGINITIS: — Trichomoniasis — Candidiasis CERVICITIS: — Gonorrhoea — Chlamydia
Urethral discharge	Urethral discharge Dysuria Frequent urination	Urethral discharge (if necessary ask patient to milk urethra)	Gonorrhoea Chlamydia
Genital ulcer	Genital sore	Genital ulcer Enlarged inguinal lymph nodes	Syphilis Chancroid Genital herpes
Lower abdominal pain	Lower abdominal pain and pain during sexual relations	Vaginal discharge Lower abdominal tenderness on palpation	Gonorrhoea Chlamydia Mixed anaerobes
Scrotal swelling	Scrotal pain and swelling	Scrotal swelling	Gonorrhoea Chlamydia
Inguinal bubo	Painful enlarged inguinal lymph nodes in both men & women	Swollen lymph nodes Fluctuation Abscesses or fistulae	Lymphogranuloma/Venereum (LGV)Chancroid
Neonatal conjunctivitis	Swollen eyelids Discharge Baby cannot open eyes	Oedema of the eyelids Purulent discharge	Gonorrhoea Chlamydia

Check Your Progress 2

- i) Inguinal bubo is painful, warm and tender on palpation. There may be pus or discharge coming out of a sinus.
- ii)
 - a) Bruising of scrotal skin
 - b) Obvious urethral discharge
 - c) Elevated or rotated testes
 - d) Evidence of any other STD
 - e) Swollen/Scrotalsae
 - f) Swelling in the inguinal area
- iii)
 - Vaginitis is caused by trichomoniasis, candidiasis and bacterial vaginosis, whereas cervicitis is caused by gonorrhoea and chlamydia.
 - Vaginitis is easy to diagnose but cervicitis is difficult to find out.
 - Vaginitis is simple and uncomplicated whereas cervicitis has serious complications.

Therefore, it is necessary to treat the partner in cervicitis but not necessary in vaginitis.

- iv) a) Tenderness
- b) Rebound tenderness
- c) Guarding
- d) Mass

5.12 FURTHER READINGS

World Health Organisation, *STD Case Management Workbooks*, 1995.

World Health Organisation, *Management of Sexually Transmitted Diseases at District and PHC Level*, 1997.

Burns, August A. Ronnie Lovich, Jane Maxwell, and Katharine Shapiro, *Where Women have no Doctor. A Health Guide for Women*, Malasia, 1997.