

Introduction to Sexually transmitted infections (STIs)

- STI - acquired through sexual intercourse
- STD is Symptomatic disease acquired through sexual intercourse
- STI is the most commonly used because it applies to both symptomatic and asymptomatic infections.
- Prevalence and Incidence of STIs: higher among urban residents,

Sexually transmitted infections (STIs)

- STIs are infectious disease
- STIs are caused by more than 30 different pathogens including bacteria, viruses, protozoa, fungus and Ecto-parasites.

The Transmission of STIs

- The most **common** mode of transmission is unprotected sex
- Other forms of transmission are
 - Mother to child
 - During pregnancy (HIV & syphilis)
 - At delivery (gonorrhea ,chlamydia &HIV)
 - Through breast feeding
- Unsafe (unsterile) use of needles or injections
- Contact with blood or blood products (syphilis, HIV & hepatitis)

Factors increasing transmission of STIs

- **Biological factors**

- Age, young age more susceptible
- Gender, women more easily infected than males
- Immune status

- **Behavioral factors**

- changing sexual partners frequently
- having more than one sexual partner
- having sex with 'casual' partners, sex-workers or their clients
- having unprotected penetrative sexual intercourse in a situation where either partner has an infection
- use of alcohol or other drugs before or during sex

Factors increasing transmission of STIs

- **Socio-cultural factors**

- in most cultures, women have very little decision making power over sexual practices and choices, including use of condoms
- women tend to be economically dependent on their male partners and are therefore more likely to tolerate men's risky behaviour
- sexual violence tends to be directed more towards women by men, making it difficult for women to discuss STI with their male counterparts

Socio-cultural factors cont..

- In some societies the girl-child tends to be married off to an adult male at a very young age, thus exposing the girl to infections
- In some societies a permissive attitude is taken towards men allowing them to have more than one sexual partner.
- Harmful traditional practices
 - Skin-piercing
 - The use of unsterile needles to give injections or tattoos
 - scarification or body piercing
 - circumcision using shared knives

- Prevention and Control of STIs Involves
 - Early diagnosis and treatment
 - Promotion of safer sexual behavior
 - Promotion of health care-seeking behavior,
 - Targeting vulnerable groups

Primary prevention

➤ **Safer sexual behaviors**

- Abstinence from sexual activity altogether/ delaying the age of sexual debut
- Life-long mutual monogamy
- Correct and consistent use of condoms
- Safer sex practices

Secondary prevention

- Promoting STI care-seeking behaviour, through:
 - Public education campaigns
 - Providing non-stigmatizing and non-discriminatory health facilities
 - Providing quality STI care
 - Ensuring a continuous supply of highly effective drugs
 - Ensuring a continuous supply of condoms

Secondary prevention continued

- Early diagnosis and prompt and correct treatment using comprehensive STI syndromic management
- Case finding and screening:
 - examining minimally symptomatic women attending clinics for maternal and child health and family planning
 - partner notification and treatment
 - education, investigation and treatment of targeted population groups who may have placed themselves at risk of infection
 - testing of blood donors for syphilis, HIV and hepatitis B
- Integration of STI services within primary

APPROACHES TO STIs MANAGEMENT

- Etiologic diagnosis – using lab to identify the causative agent
- Clinical diagnosis –using clinical experience to identify causative agent

Etiologic management

- **Advantages:-**

- ✓ Avoids over treatment
- ✓ Conforms to traditional clinical training
- ✓ Satisfies patients who feel not properly attended to
- ✓ Can be extended as screening for the asymptomatics

Disadvantages of Etiologic Approach

- Requires skilled personnel & consistent supplies
- Treatment does not begin until results are available
- It is time consuming & expensive
- Testing facilities are not available at primary level
- Some bacteria fastidious are difficult to culture (*H. ducreyi*, *C. trachomatis*)

Clinical Management

- **Advantages:-**

- ✓ Saves time for patients
- ✓ Reduces laboratory expenses

- **Disadvantages:-**

- ✓ Requires high clinical acumen
- ✓ Most STIs cause similar symptoms
- ✓ Mixed infections are common & failure to treat may lead to serious complications
- ✓ Doesn't identify asymptomatic STIs
- ✓ Atypical presentation on the era of HIV

Syndromic Approach

- Syndrome – is group of symptoms patient complains & clinical signs you observe during examination
- Different organisms that cause STIs give rise to **only** limited number of syndromes
- There are seven syndromes (aim is to identify & manage accordingly)

Why Syndromic Approach?

- STI sign and symptoms are rarely specific to a particular causative agent
- Laboratories are either non-existent or non functional due to lack of resources
- Dual infections are quite common and both clinician and laboratory may miss one of them
- Waiting time for lab. results may discourage some patients
- Failure of cure at first contact

Syndromic management key features

- Problem oriented (responds to patient's symptoms)
- Highly sensitive & does not miss mixed infections
- Treats the patient at first visit
- Can be implemented at primary health care level
- Use **flow charts** with logical step

Syndrome Flow Charts for SCM

1. Urethral discharge
2. Genital ulcer disease (M & F)
3. Vaginal discharge
4. Pelvic Inflammatory Disease (PID)
5. Scrotal swelling
6. Inguinal swelling
7. Ophthalmia neonatorum

DIAGNOSIS AND TREATMENT OF STI SYNDROME

1. URETHRAL DISCHARGE SYNDROME

- Urethral discharge is the presence of abnormal secretions from the distal part of the urethra and it is the characteristic manifestation of urethritis.
- In Ethiopia the recommended drugs of choice
 - Ceftriaxone 250mg IM stat/Spectinomycin 2 gm IM stat **plus** Azithromycin 1gm po stat/Doxycycline 100 mg po bid for 7 days/Tetracycline 500 mg po qid for 7 days/Erythromycin 500 mg po qid for 7 days in cases of contraindications for Tetracycline (children and pregnancy)

Note: **The preferred regimen is Ceftriaxone 250mg IM stat plus Azithromycin 1gm po stat**

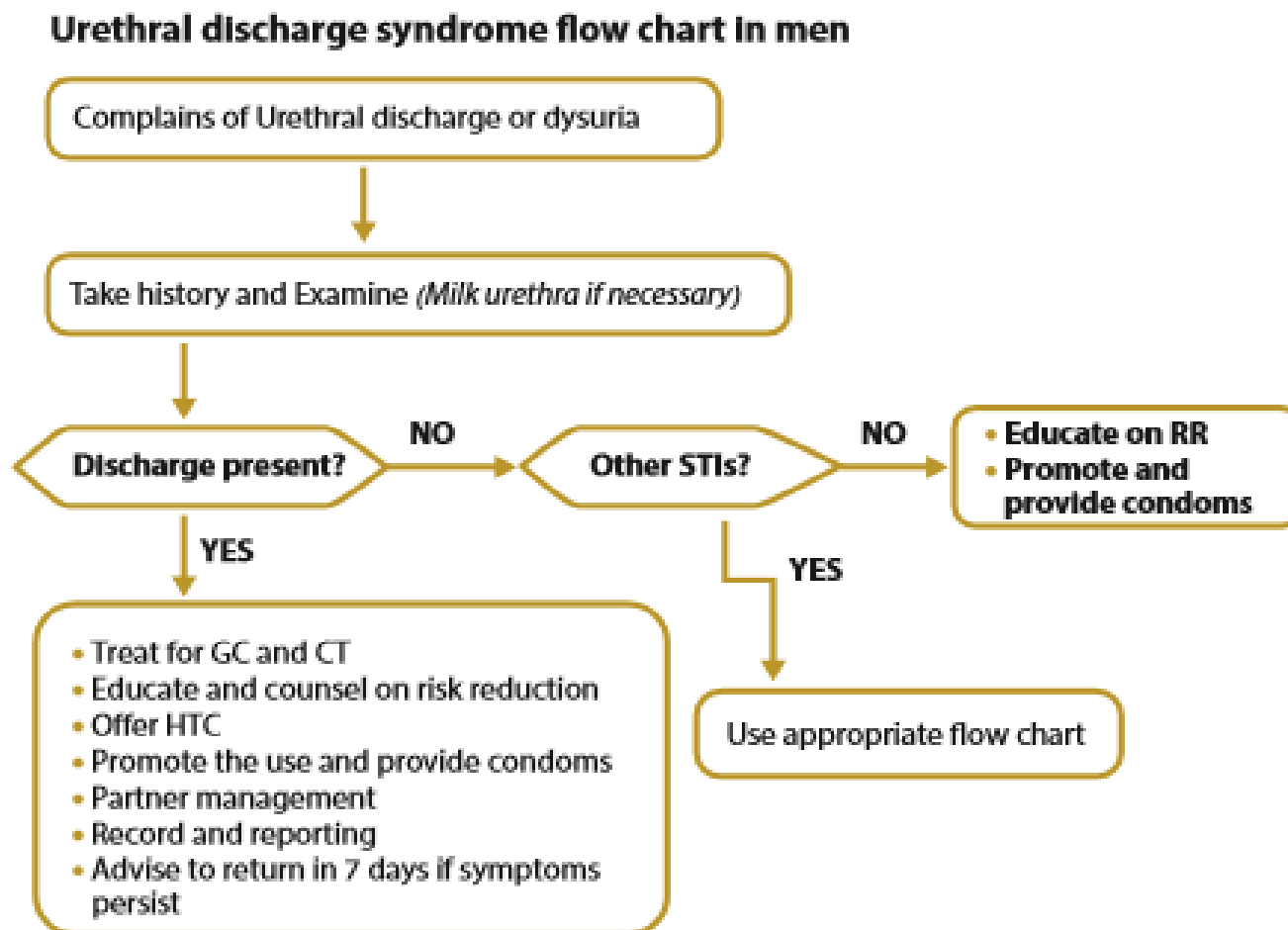
Agents: **N. gonorrhea**
trachomatis
T. vaginalis

C.



Urethral discharge

Figure 3. The algorithm of syndromic case management of urethral discharge syndrome



GENITAL ULCER SYNDROME

Genital ulcers

❖ Herpes simplex virus (HSV-1 and HSV-2) →
VESICULAR

- ❖ • *Treponema pallidum*
- ❖ *Haemophilus ducreyia*
- ❖ *Chlamydia trachomatis*

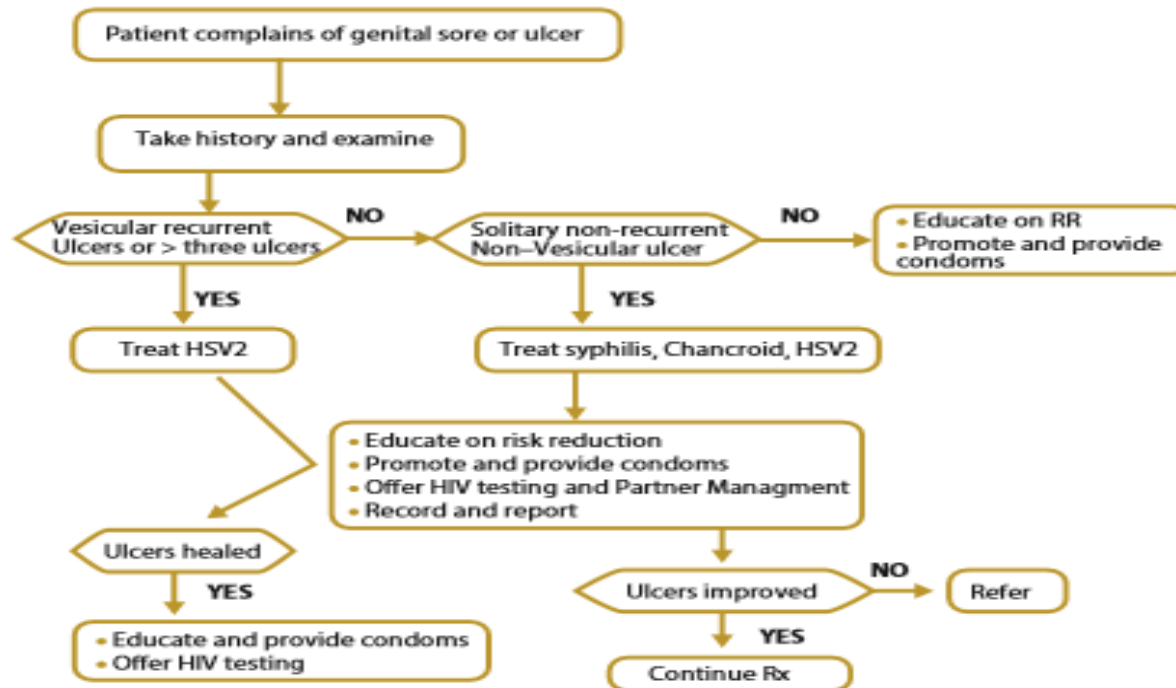
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- ❖ *Klebsiella granulomatis* (donovanosis)



GENITAL ULCER SYNDROME CONT...

Figure 5. THE ALGORITHM OF SYNDROMIC CASE MANAGEMENT OF GENITAL ULCER SYNDROME



promptly. The recommended treatment regimen for genital ulcer in Ethiopia is depicted below.

1. Treatment for Non- Vesicular Genital Ulcer

- Benzathine penicillin 2.4 million units IM stat /Doxycycline(in penicillin allergy) 100mg bid for 14 days

plus

- Ciprofloxacin 500mg bid orally for 3 days /Erythromycin 500mg tab qid for 7 days

plus

- Acyclovir 400mg tid orally for 10 days (or 200mg five times per day of 10 day)

2. Treatment for Vesicular, multiple or recurrent genital ulcer

Acyclovir 200 mg five times per day for 10 days

Or

Acyclovir 400 mg tid for 7 days

3. Treatment for recurrent infection: Acyclovir 400 mg tid for 7 days

VAGINAL DISCHARGE SYNDROME

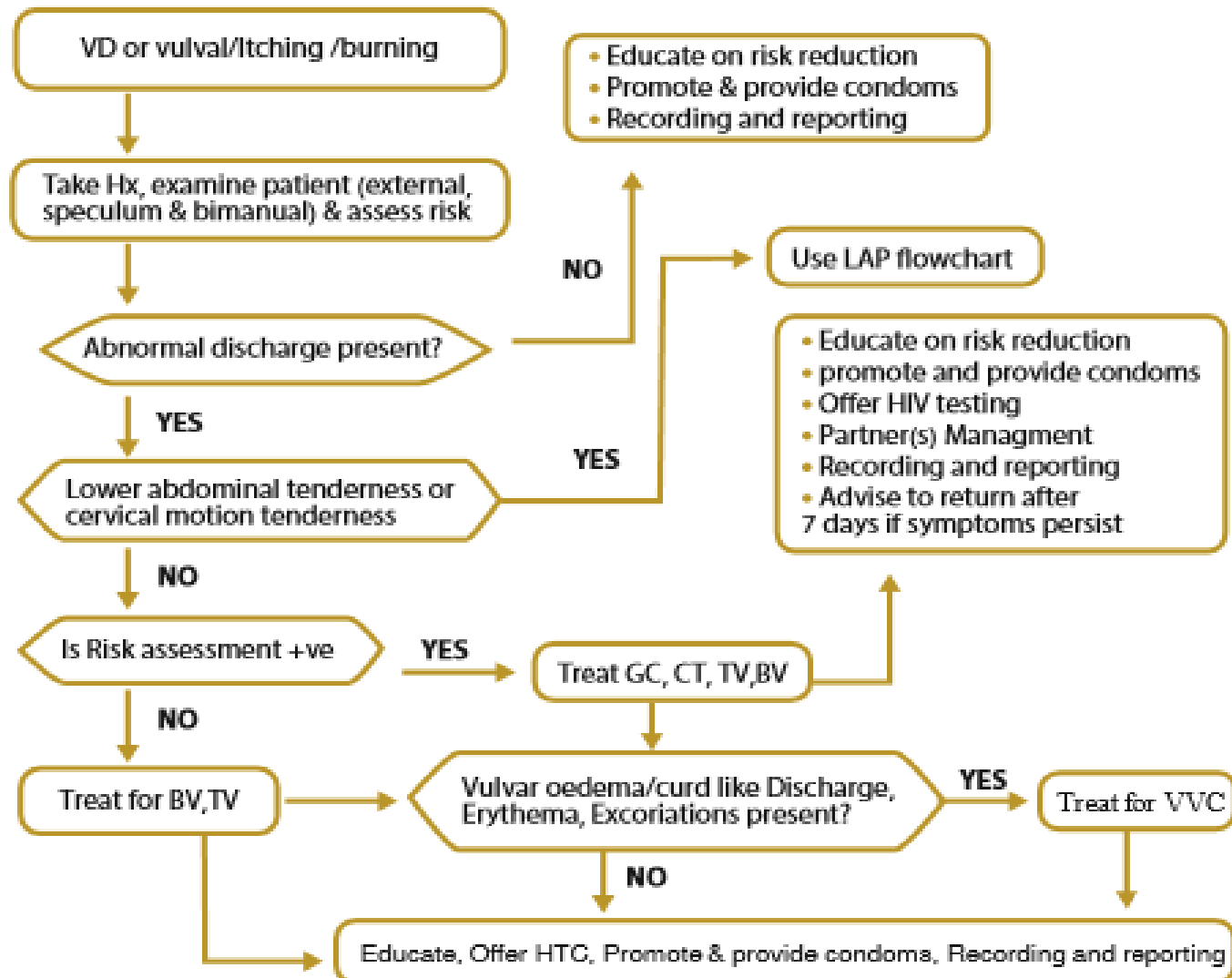
Agents

- ❖ *Neisseria gonorrhoea*
- ❖ *Chlamydia trachomatis*
- ❖ *Trichomonas vaginalis*
- ❖ *Gardnerella vaginalis*
(Polymicrobial)
- ❖ *Candida albicans*



VAGINAL DISCHARGE SYNDROME CONT

Figure. 6: THE ALGORITHM OF SYNDROMIC CASE MANAGEMENT OF VAGINAL DISCHARGE SYNDROME



Recommended treatment for vaginal discharge

RISK ASSESMENT POSITIVE	RISK ASSESMENT NEGATIVE
Ceftriaxone 250mg IM stat/ Spectinomycin 2 gm IM stat Plus Azithromycin 1gm po stat/Doxycycline 100 mg po bid for 7 days Plus Metronidazole 500 mg bid for 7 days The preferred regimen is Ceftriaxone 250mg IM stat plus <i>Azithromycin 1gm po</i> <i>stat plus</i> Metronidazole 500 mg bid for 7 days	Metronidazole 500 mg bid for 7 days Plus Clotrimazole vaginal tabs 200 mg at bed time for 3 days

Recommended regimens for pregnant women

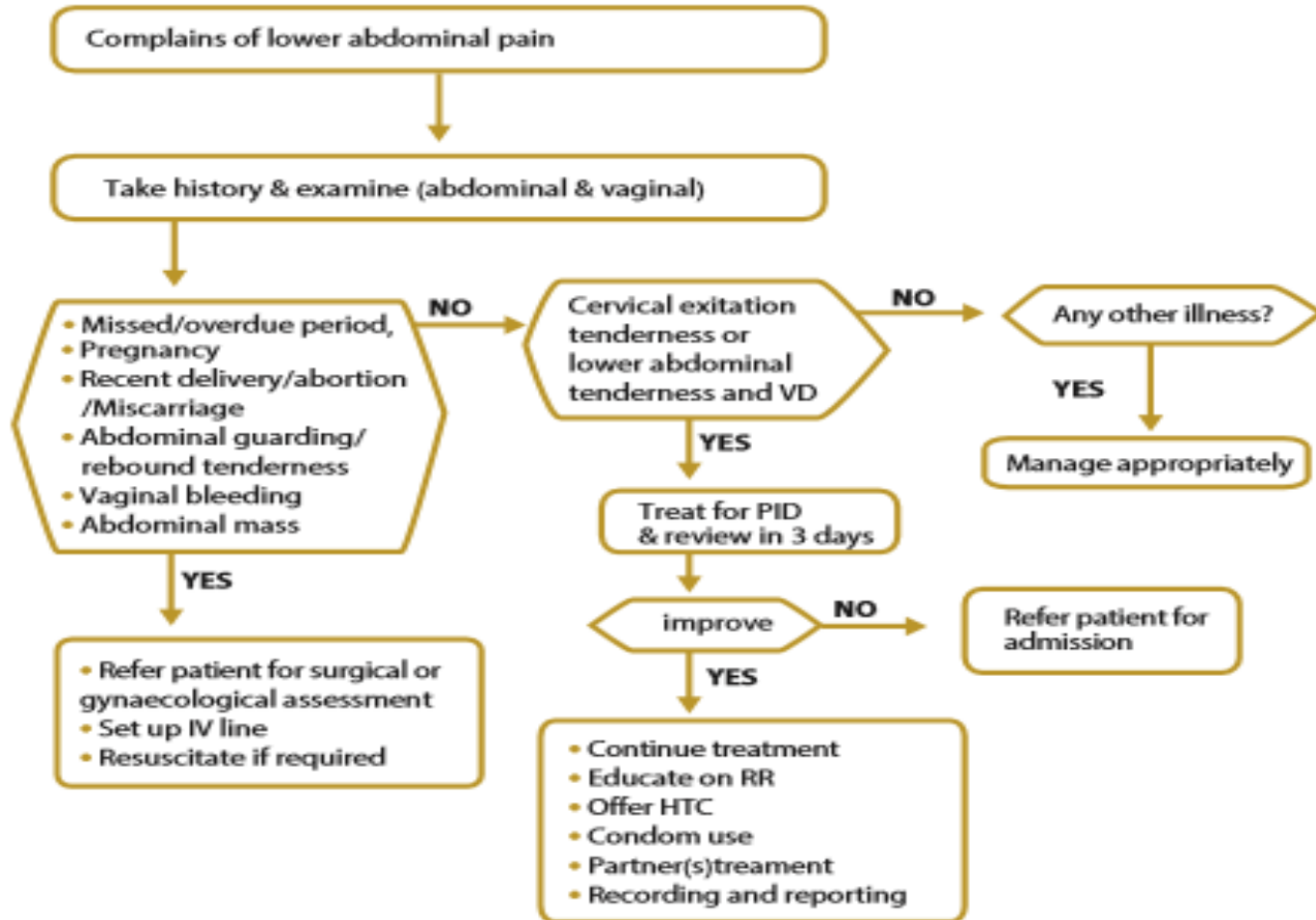
- Metronidazole is not recommended for use in the first trimester of pregnancy
- Treatment may be given where early treatment has the best chance of preventing adverse pregnancy outcomes
 - Metronidazole, 200 or 250 mg orally, 3 times daily for 7 days, after first trimester
 - Metronidazole 2g orally, as a single dose, if

LOWER ABDOMINAL PAIN (PID)

- **PID** - Ascending infection of the uterus, fallopian tubes, ovaries, & peritoneum
- Sexually transmitted
- Causes include *N.gonorrhea*, *C.trachomatis* & Anaerobes i.e (poly microbial)
- Bilateral lower abdominal pain & vaginal discharge support diagnosis

LOWER ABDOMINAL PAIN (PID) CONT...

Figure. 7: THE ALGORITHM OF SYNDROMIC CASE MANAGEMENT OF LOWER ABDOMINAL PAIN SYNDROME



Recommended treatment for PID

Out patient	In patent
Ceftriaxone 250 mg IM stat/ Spectinomycin 2 gm IM stat Plus Azithromycin 1gm po stat/Doxycycline tablet 100 mg po bid for 14 days Plus Metronidazole 500 mg bid for 14 days Admit if there is no improvement within 72 hours The preferred regimen is Ceftriaxone 250mg IM stat plus Azithromycin 1gm po stat plus Metronidazole 500 mg bid for 7 days	Ceftriaxone 250 mg IV/IM daily /Spectinomycin 2 gm im bid Plus Doxycycline 100 mg bid for 14 days Plus Metronidazole 500 mg bid for 14 days or chloramphenicol 500 mg IV qid.

Scrotal swelling

Painful testis/ epididymis

- Causes depend on the age of patients
 - **< 25 years** N. Gonorrhoea & C.Trachomatis
 - **> 25 years other organisms**

(Other infectious causes are brucellosis, mumps, onchocerciasis or W. bancrofti)

- **In pre-pubertal children - mumps virus**
 - Mumps epididymorchitis is usually noted within a week of parotid enlargement
- Other causes of scrotal swelling
 - *testicular torsion; Trauma;*
 - *incarcerated inguinal hernia*

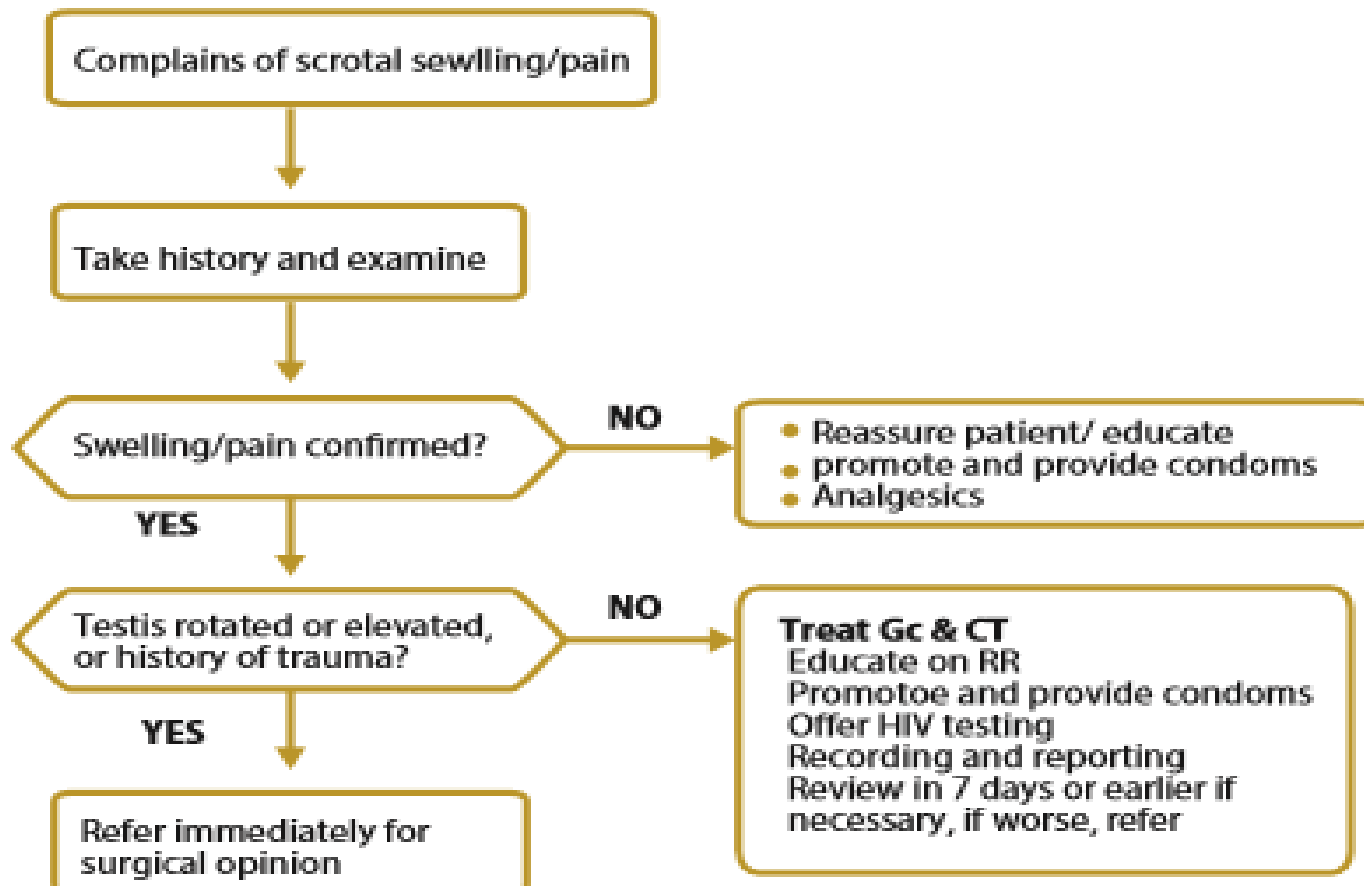


Scrotal swelling Presentation

- **Clinical presentations**
 - Testicular infarction and atrophy
 - Abscess formation
 - Chronic epididymitis
 - Impotence and Infertility
- **Complications**
 - Epididymitis
 - Infertility
 - Impotence
 - Prostatitis

Scrotal swelling cont...

Figure, 8: THE ALGORITHM OF SYNDROMIC CASE MANAGEMENT OF SCROTAL SWELLING SYNDROME



Recommended treatment of scrotal swelling

- Ceftriaxone 250 mg Imstat/Spectinomycin 2 gm im stat

Plus

- *Azithromycin 1gm po stat/Doxycycline 100 mg PO bid for 7 days/Tetracycline 500 mg PO bid for 7 days*
- **The preferred regimen is Ceftriaxone 250mg IM stat plus *Azithromycin 1gm po stat***

Neonatal Conjunctivitis

- Neonatal conjunctivitis (ophthalmia neonatorum) is
- defined as purulent conjunctivitis occurring in a baby less than one month of age.
- Sight-threatening condition
- The most important causes are *gonorrhoea* and *chlamydia*
- If caused by *gonorrhoea*, it follows



Prevention of neonatal conjunctivitis

- As soon as the baby is born, carefully wipe both eyes with dry, clean cotton wool;
- Then apply 1 % tetracycline eye ointment into the infant's eye.

Recommended treatment for neonatal conjunctivitis

SYNDROME	TREATMENT
Neonatal conjunctivitis	Ceftriaxone 50mg/kg IM stat- maximum dose 125 mg /Spectinomycin 25 mg/kg IM stat- maximum dose 75mg Plus Erythromycin 50 mg/kg PO in four divided doses for 14days

See you

