# Sexually transmitted infections (STI)

## *Executive summary*

## Introduction

Sexually transmitted infections are infections that can be transferred through sexual contact, from one individual to another. They include: syphillis, gonorrhoea, chlamydia, chancroid, genital herpes, genital warts, *Trichomonas vaginalis* and HIV (discussed in a separate guideline).

Majority of people with STIs are asymptomatic or may present with non-specific signs and symptoms. Early detection and treatment are however of great significance as some STIs may result in serious long-term reproductive health problems.

## Target users

* Nurses
* Doctors

## Target area of use

* Gate Clinic
* OPD
* Ward

## Key areas of focus / New additions / Changes

This guideline provides information on the diagnosis and treatment of common STIs using a syndromic approach. Patients with typical presentation do not require further workup beyond HIV screening unless specific indications are present. Treatment involves use of oral and/or parenteral antibiotics. Inpatient therapy may be indicated in some patients with acute pelvic inflammatory disease.

A section has been added on the specific treatment of syphilis.

## Limitations

Culture and sensitivity studies are currently not available at Keneba and Basse**.**

## Presenting symptoms and signs

### Men:

* Urethral discharge: It is usually accompanied by dysuria. Frequency and itchy sensation may also be present
* Genital ulcers
* Inguinal mass
* Scrotal swelling
* Painful micturition
* May be asymptomatic

### Women:

* Vaginal discharge
* Genital ulcers
* Inguinal mass
* Lower abdominal pain
* Fever
* May be asymptomatic

## Examination findings

## Following a general and abdominal examination, in-depth examination of the genitalia should be undertaken.

### Men:

Inspection: the penis should be inspected. The opening of the urethra should be examined for discharge. Discharge should be milked-out if none is seen at initial inspection. The phallus skin should be examined for ulcers. If ulcers are present, note their number and the presence of any tenderness.

Palpation: palpate for inguinal lymph nodes

### Women:

Inspection: the vulva region should be inspected first for any discharge, ulcers or warts. Following this, a speculum examination should be carried out. Inspect the cervix, and vagina as the speculum is eased out. The origin of vaginal discharge is of importance. If it is seen to come from the cervix, gonorrhoeal and chlamydial infections are more likely.

### Important things to look for

* Colour and consistency of discharge if present
* Number of ulcers if present and associated tenderness
* Presence of inguinal lymph nodes

## Differential diagnoses

**Urethral discharge**: gonorrhea, chlamydia

**Genital ulcer**: syphilis (*Treponema pallidum*), chancroid (*Haemophilus ducreyi*), granuloma inguinale (*Klebsiella granulomatis*), lymphogranuloma venereum (LGV) (*Chlamydia trachomatis*), genital herpes (*Herpes Simplex Virus 1,2*)

**Scrotal swelling**: testicular torsion, epididymitis (gonorrhea, chlamydia)

**Vaginal discharge:** candidiasis, bacterial vaginosis, chlamydia, gonorrhea, *Trichomonas vaginalis*

**Neonatal conjunctivitis**: gonorrhea, chlamydia, other organisms: *Staphylococcus aureus, Streptococcus pneumoniae, Haemophilus spp*

## Investigations

HIV Screen should be offered to all patients.

Syndromic management does not require other investigations to be done. If there are specific indications appropriate investigations might include:

FBC, Urethral swab M,C&S, High vaginal swab M,C&S, Endocervical swab M,C&S

Test for syphilis (VDRL, TPHA) – especially for patients with genital ulcer.

## Management

Ask all patients about their sexual partners.

Describe sexual transmission of infections and advise on reducing the risk of this by being faithful to one partner who is also faithful (or group of partners in a polygamous marriage) and by condom use if this is not possible.

Ask patients to bring partners to the clinic for treatment. Advise them to abstain from sexual contact until all partners have been treated.

Provide pre-test counselling for HIV testing and offer a test if accepted.

Advise patients to seek further medical attention if their symptoms have not resolved by a week after treatment. Give them an appointment 7 days later to check on their progress and to facilitate partner management.

A syndromic approach to management is currently advocated for by WHO in low-resource settings due to the lack of appropriate investigations. This involves the use of certain signs and symptoms to guide treatment.

There are 6 syndromes:

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

Note that urethral discharge, scrotal swelling and vaginal discharge coming from the cervix are all treated in the same way.

**Urethral discharge, scrotal swelling, vaginal discharge**

Examine men complaining of discharge to identify it. If none is seen, gently milk the penis to see if discharge is produced. Swab the discharge and send for urgent microscopy. Gram stain may demonstrate the presence of gonococci. In the male, more than 5 polymorphonuclear leukocytes per high power field (x 1000) are indicative of urethritis.

Examine men with scrotal swelling to exclude other causes of scrotal swelling, such as trauma, testicular torsion or tumour. Consider requesting an ultrasound.

All women with vaginal discharge should be examined with a speculum and a high vaginal swab taken and sent for microscopy.

Treat patients thought to have STI as the cause of these symptoms with Ciprofloxacin 500 mg orally as a single dose PLUS Doxycycline 100 mg orally BD for 7 days.

If a woman is pregnant and cannot take these medications, use azithromycin 2 g orally as a single dose.

Recommend bed rest and scrotal support for men with scrotal swelling until the inflammation has reduced.

### Vaginal discharge (not from the cervix)

Treat this with Metronidazole 500 mg BD for 7 days (OR Metronidazole 2 g as a single dose) PLUS Clotrimazole 200 mg intravaginally OD for 3 days (OR Fluconazole 150 mg orally as a single dose).

### Genital ulcer

**Vesicular, multiple or recurrent**: Aciclovir 400 mg TDS for 7 days

**Non-vesicular:** Doxycycline 100 mg twice daily for 15 days PLUS Ciprofloxacin 500 mg twice daily for 3 days. This covers chancroid, LGV and syphilis.

If the patient is pregnant, then use im Ceftriaxone 250 mg as a single dose PLUS erythromycin 500 mg QDS for 14 days.

### Lower abdominal pain

Lower abdominal pain may be caused by pelvic inflammatory disease (PID). There may also be pain during intercourse, vaginal discharge, dysuria, increased length and frequency of menses, increased pain during menses, fever, nausea and vomiting.

Women complaining of lower abdominal pain should be fully examined. On pelvic examination there may be adnexal tenderness, cervical motion tenderness and visible discharge. They may also have a tender pelvic mass, and rebound tenderness.

Inpatient care of patients with acute pelvic inflammatory disease should be considered when one or more of the following are present:

* Uncertain diagnosis
* Failure to exclude surgical emergencies for example appendicitis and ectopic pregnancy
* Suspected pelvic abscess
* A severe illness which will prevent outpatient management
* A pregnant patient
* Inability to tolerate outpatient regimen
* Failure to respond to therapy on an out-patient basis.

**Outpatient management:** Ceftriaxone 250 mg IM as a single dose PLUS Doxycycline 100 mg orally BD for 14 days *PLUS* Metronidazole 500 mg orally BD for 14 days

Inpatient management: Ceftriaxone 250 mg by intramuscular injection OD PLUS Doxycycline, 100mg orally or by intravenous injection BD PLUS Metronidazole 500mg orally or iv TDS.

Inpatient therapy should be continued until at least 2 days after the patient has improved, after which doxycycline should be given at 100mg orally, twice daily for 14 days.

### Ophthalmia neonatorum

Ceftriaxone 50 mg/kg by intramuscular injection as a single dose, to a maximum of 125 mg PLUS Erythromycin syrup 50 mg/kg per day orally, in 4 divided doses for 14 days.

### Syphilis

Syphilis is diagnosed on the basis of a combination of serology tests. It may be early or late. Early syphilis implies infection in the last year and can include primary, secondary and early latent syphilis. Late syphilis includes long standing latent disease as well as tertiary disease. Neurosyphilis can occur at any stage in the disease and is treated with a different regime.

A diagnosis of syphilis is suggested by a positive VDRL or RPR test taken 2-4 weeks after infection. However, there can be both false positive and false negative tests. If the TPHA is also positive, this confirms the diagnosis. Once the TPHA is positive, it will remain positive for life, whereas the VDRL or RPR will become negative once the infection is treated. Therefore, a patient with a negative VDRL or RPR does not have active infection and does not require treatment.

Early syphilis: A single dose of 2.4 MU of benzathine penicillin im is adequate, giving cure rates of above 90% even in patients with HIV. For penicillin allergic patients, doxycycline 100 mg BD for 14 days is a suitable alternative.

Late syphilis: 3 doses of 2.4 MU of benzathine penicillin im each 1 week apart. If a gap of more than 2 weeks occurs between doses, the course should be started again. For penicillin allergic patients, doxycycline 100 mg BD for 28 days is recommended.

Neurosyphilis: im benzathine penicillin does not penetrate the CSF, so a course of iv benzylpenicillin is given at a dose of 3-4 MU every 4 hours or 18-24 MU over 24 hours as a continuous infusion for 10-14 days. This is followed by a single dose of benzathine penicillin 2.4 MU im to cover for late syphilis. There is no ideal regime for penicillin allergic patients. Those who can tolerate ceftriaxone should be given 2g iv daily for 10-14 days. If there is no other alternative, a 28 day course of doxycycline can be used.

## Key Issues for Nursing care

Refer the following patients to see a doctor:

* A man with persistent or recurrent urethritis.
* Patients with genital ulcers that do not improve with treatment.
* Patients with genital ulcers where the diagnosis is unclear.
* Men with inguinal mass which is fluctuant or of uncertain cause.
* Men with scrotal swelling of uncertain cause.
* Women with vaginal discharge unless you can do a speculum and pelvic examination yourself.
* Women with lower abdominal pain unless you can do a pelvic examination yourself.

## References

<http://www.who.int/news-room/fact-sheets/detail/sexually-transmitted-infections-(stis)>

WHO guidelines for management of sexually transmitted infections <http://apps.who.int/medicinedocs/en/d/Jh2942e/3.1.html>

<http://apps.who.int/medicinedocs/documents/s22268en/s22268en.pdf>

Hicks and Clement, 2021. Syphilis: Screening and diagnostic testing. In: UpToDate, Post, TW (Ed), UpToDate, Waltham, MA.

Hicks and Clement, 2021. Syphilis: Treatment and monitoring. In: UpToDate, Post, TW (Ed), UpToDate, Waltham, MA.

|  |  |  |
| --- | --- | --- |
| **Written by:** | Name: Azeezat Sallahdeen | Date: 22 May 2018 |
| **Reviewed by:** | Name: Fatai Akemokwe | Date: 11 June 2018 |
| **Reviewed by:** | Name: Fatoumatta Sawaneh | Date: 15 January 2021 |
| **Reviewed by:** | Name: Karen Forrest | Date: 31 January 2021 |
| **Version:** | **Change history:** | **Review due date:** |
| 1.0 | New document |  |
| 2.0 | Adapted from previous version and MeG-CLS-016 to combine into one document relevant to all areas | 31 July 2020 |
| 2.1 | Executive summary added | 31 July 2020 |
| 3.0 | Section on treatment of syphilis added | 18 February 2023 |
| Review Comments (*if applicable)* |  |  |