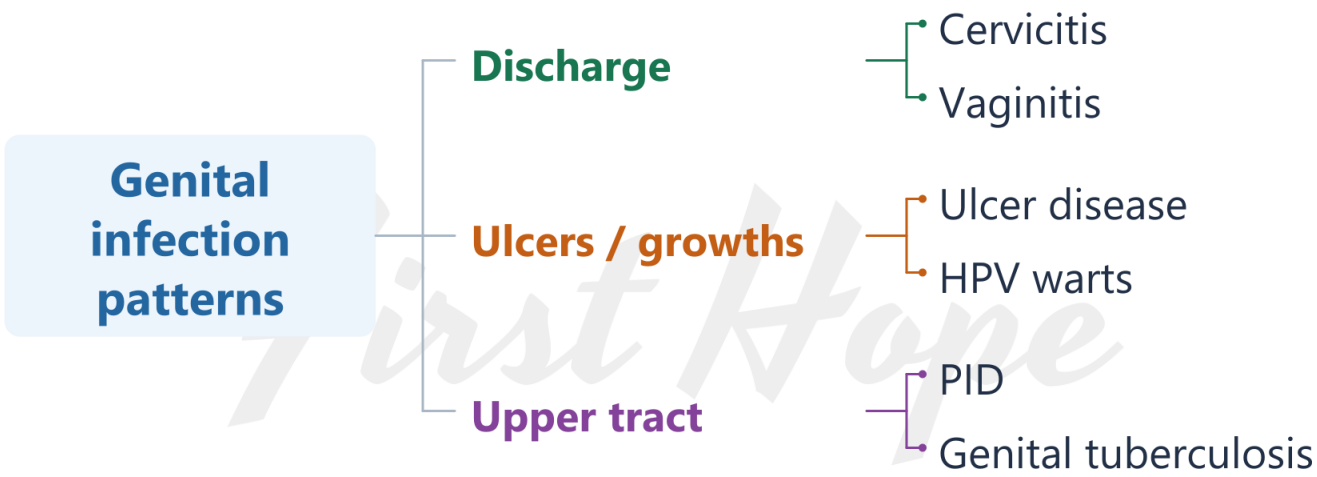
# Obstetrics & Gynaecology - Topic 27 - Genital infections

## Sexually Transmitted and Reproductive Tract Infections

### Basic Principles

- A sexually transmitted infection is acquired mainly through sexual contact, but some infections can also pass through blood or from a mother to her baby.
- Reproductive tract infections also include endogenous infections, such as candidiasis, and infections introduced during procedures.
- An abnormal discharge is therefore not proof of an STI, and many STIs cause few or no symptoms.
- Confidential, non-judgemental care helps patients give an accurate history and return for treatment.




### Assessment of a Suspected Infection

#### History and Examination

- Ask about discharge, ulcers, dysuria, lower abdominal pain, fever, abnormal bleeding and pain during intercourse.
- Clarify symptom onset, recent treatment, allergies, pregnancy possibility and relevant medical conditions.
- Take a respectful sexual history that includes partners, practices, protection, previous infections and pregnancy intentions.
- Explain confidentiality and its legal limits, obtain consent and offer an appropriate chaperone for examination.
- Examine the symptomatic sites and look for cervical inflammation, pelvic tenderness, ulcers, warts and inguinal lymph nodes as appropriate.
- Severe pain, pregnancy, guarding, fever with systemic illness or a suspected abscess needs urgent assessment rather than routine syndromic treatment alone.

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### Investigations

#### Organism and Exposed-Site Testing

- Nucleic acid amplification tests are preferred for genital chlamydia and gonorrhoea where available, using an appropriate vaginal, cervical or urine sample.
- Collect samples from other exposed sites when the history and test availability justify them.
- Gonococcal culture with susceptibility testing is important when treatment failure or antimicrobial resistance is suspected.

#### Associated Infection, Pregnancy and Clinical Interpretation

- Offer HIV and syphilis testing, and assess hepatitis B vaccination and other infection risks.
- A pregnancy test helps select safe treatment and exclude ectopic pregnancy in a patient with pelvic pain.
- Laboratory findings should be interpreted with the clinical picture because colonisation and past infection do not always explain current symptoms.

## Syndromic Management

### Purpose and Recognised Syndromes

- Syndromic management uses a recognised group of symptoms and signs to treat likely causes when immediate laboratory diagnosis is unavailable.
- Common syndromes include vaginal or cervical discharge, genital ulcer disease, lower abdominal pain and inguinal bubo.

### Use, Limitations and Continuing Care

- Use the current national algorithm, check pregnancy and allergy status, and give the complete regimen for the syndrome identified.
- This approach allows prompt treatment but may miss asymptomatic infection or treat organisms that are not actually present.
- Use available tests to refine treatment, and reassess persistent symptoms instead of repeatedly issuing the same kit.
- Counselling, condoms, partner services, adherence and follow-up are essential parts of syndromic care.

# Gonorrhoea and Chlamydia

## Cervical Infection and Ascending Disease

### Pathology and Clinical Features

- Neisseria gonorrhoeae and Chlamydia trachomatis commonly infect the endocervix and urethra.

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- Cervicitis may produce mucopurulent discharge, easy cervical bleeding, dysuria or bleeding after intercourse.
- Both infections may ascend into the endometrium and tubes, causing PID and later tubal damage.
- Gonorrhoea may occasionally disseminate and cause joint or skin manifestations.
- A woman can have clinically important infection despite little discharge or a normal-looking cervix.

### A. Gonococcal Infection

- Gonorrhoea particularly affects columnar-lined mucosa and can cause purulent cervicitis or urethritis.
- Disseminated infection may produce tenosynovitis, skin lesions or septic arthritis and needs systemic assessment.

### B. Chlamydial Infection

- Chlamydial cervicitis is often silent but can still ascend and damage the tubes.
- Perihepatitis associated with upper-genital infection can cause right-upper-quadrant pain and is called Fitz–Hugh–Curtis syndrome.

## Treatment and Follow-Up

### National Regimens and International Differences

- The following examples use the updated Indian national STI guidance and require checking pregnancy, allergy, body size, infection site and local resistance advice.

| Infection | Adult treatment example | Important qualification |
|---|---|---|
| Uncomplicated gonorrhoea | Ceftriaxone 500 mg IM once is an Indian first-line option; use 1 g if body weight exceeds 150 kg. | Cefixime 800 mg orally once is a national oral alternative; site and resistance matter. |
| Uncomplicated chlamydia | Doxycycline 100 mg orally twice daily for seven days. | Avoid this regimen in pregnancy; azithromycin 1 g orally once is a pregnancy option. |
| Gonorrhoea with chlamydia not excluded | Treat gonorrhoea and add the appropriate chlamydia regimen. | Do not assume the cephalosporin alone treats chlamydia. |

- WHO international guidance uses a 1 g intramuscular ceftriaxone dose for uncomplicated gonorrhoea; this should not be silently substituted for or confused with the named Indian protocol.
- Pharyngeal infection, suspected resistance and treatment failure need the relevant site-specific testing and specialist pathway.

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### Partner Care, Reinfection and Test of Cure

- Treat or evaluate recent sexual partners and advise avoiding sexual contact until the required treatment interval is complete and partners have been treated.
- Repeat testing for reinfection is usually arranged after treatment according to the programme, commonly around three months for chlamydia or gonorrhoea.
- A test of cure has separate indications, including chlamydia in pregnancy and some gonococcal sites or suspected failures.

# Syphilis

## Stages and Clinical Clues

- Treponema pallidum enters through mucosa or skin and can spread throughout the body.

### 1. Primary Syphilis

- Primary syphilis classically causes a painless indurated ulcer, but an ulcer may be multiple, painful or otherwise atypical.

### 2. Secondary Syphilis

- Secondary syphilis may cause a generalised rash, including palms and soles, mucosal lesions, condylomata lata and lymphadenopathy.

### 3. Latent Syphilis

- Latent syphilis has reactive serology without current clinical manifestations.

### 4. Late Syphilis

- Late disease can involve cardiovascular, neurological or gummatous complications, while neurological, ocular or auditory involvement can occur at any stage.

## Testing and Interpretation

- Diagnosis uses a treponemal test together with a non-treponemal test such as RPR or VDRL, interpreted with symptoms and treatment history.
- Treponemal tests may remain reactive after adequate treatment, so they are not used alone to measure response.
- Quantitative RPR or VDRL titres help establish a baseline and monitor response using the same test method where possible.
- A fourfold change means two dilution steps, such as 1:32 to 1:8, rather than a small numerical fluctuation.
- Early infection can initially test negative, and a high clinical suspicion may require repeat testing and treatment under the appropriate protocol.

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# Treatment in Non-Pregnant Adults

## Stage-Appropriate Penicillin Regimens

- For uncomplicated early syphilis, the Indian guideline uses benzathine penicillin G 2.4 million units intramuscularly once.
- Late latent syphilis or infection of unknown duration requires 2.4 million units intramuscularly each week for three doses.
- The national early-latent boundary is infection of less than one year's duration; uncertainty about duration changes the regimen.
- Neurosyphilis, ocular syphilis and otosyphilis require urgent specialist assessment and an appropriate intravenous penicillin regimen, not benzathine penicillin alone.

## Preparation, Allergy and Treatment Reactions

- Confirm the correct penicillin preparation, assess allergy properly and ensure facilities can recognise and treat anaphylaxis.
- A Jarisch–Herxheimer reaction can cause transient fever and worsening symptoms after treatment and is distinct from immediate penicillin allergy.

# The Indian Pregnancy Test-and-Treat Protocol

## Programme Doses and Adequacy Before Birth

- The Indian programme gives an on-spot dose of benzathine penicillin G 2.4 million units intramuscularly to pregnant women with a reactive syphilis screening test.
- Pregnant women with reactive RPR or VDRL complete three weekly doses of 2.4 million units, even when the disease appears to be at an early stage.
- This is a programme decision to prevent vertical transmission and differs from the general stage-based schedule for non-pregnant adults.
- A final dose given less than thirty days before delivery is considered inadequate for prevention of vertical transmission under this programme.

## Follow-up, Allergy and Interrupted Courses

- Arrange the programme's serological follow-up, partner care, institutional delivery and assessment of the exposed infant.
- Confirmed penicillin allergy requires specialist evaluation and, when indicated, desensitisation followed by penicillin because alternatives do not reliably prevent congenital infection.
- Missed weekly doses need prompt review under the pregnancy protocol rather than assuming that an interrupted course is adequate.

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