RAMA UNIVERSITY

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FACULTY OF NURSING

Urethritis

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Urethritis

Inflammation of the urethra.

Discharge +/- dysuria or maybe

asymptomatic.

Causes of urethritis

Infectious causes-

- Gonococcal – Neisseria gonorrhoea (50-90%)
- Non gonococcal –
  - Chlamydia trachomatis. (20-50%)
  - Ureaplasma urealyticum. (20-80%)
  - Mycoplasma genitalium. (10-30%)
  - Trichomonas vaginalis. (1-70%)
  - Yeast.
  - HSV.

- **Non Infectious Causes**

- Trauma

- Urethral stricture.

- Catheterization.

- Chemical irritants.

- Dehydration.

Gonococcal Urethritis

1. N gonorrhoea – gram negative, non motile, non spore forming diplococci.
2. Oxidase positive
3. Ferments glucose
4. PPNG – penicillinase produc-

   - ing N. gonorrhoea: cefotaxime,

   ceftriaxone, ciprofloxacin, tetrac-

   -ycline can be used.

- N gonorrhoea – present predominantly intracellularly in the polymorphonuclear leucocytes (PMN).
- Penetrates columnar epithelium.

Structure

capsule – polyphosphate

- trilaminar membrane
  - – outer membrane – type 1 protein (por) -A & B
    - - type 2 protein(Opa pro)
    - - RMP protein
  - peptidoglycan – muramic acid & N-acetyl glucosamine.
  - - cytoplasmic membrane – penicillin binding proteins.
- Pili - filaments

Strains

Pathogenic strains – N. gonorrhoea

- N. meningitidis

- Non pathogenic strains – N. catarrhalis

- N. pharyngis sicca

- N. lactamica

- N. subflava

Clinical features

Affects urethra in both sexes.

- Transmission – sexual contact
- Incubation period – 2-5 days
- Intense burning sensation.
- Fever & malaise.

- In men anterior urethritis is more common.
- Discharge – profuse, purulent & yellowish green.
- 15% males – mild or asymptomatic.

Complications

Posterior urethritis

- Epididymitis
- Acute or chronic prostatitis
- Untreated – periurethral abscess & watercan perineum.

- **In females** – 90% infection
- **50**% of infected females are asymptomatic.
- Primary site - endocervical canal
- Symptoms of urethritis includes -

  - Discharge - scanty, mucopurulent cervical discharge.

  - Vaginal pruritus

  - Dysuria

- Proctitis through autoinoculation from cervical discharge or as a result of direct contact from an infected partner's penile secretions.

- Complications in females-
- PID
- Tubo ovarian abscess
- Subsequent ectopic pregnancies
- Chronic pelvic pain
- Infertility
- Fitz-Hugh-Curtis syndrome – inflammation of liver capsule associated with genitourinary tract infection. Present in upto ¼ of women with PID caused either by N. gonorrhoea or C. trachomatis.

Complications common to both sexes

Disseminated gonococcal infection (DGI)

- Acute arthritis-dermatitis syndrome – acute arthritis, tenosynovitis, dermatitis orcombination of these findings.

- Gonococcal arthritis
- Meningitis
- Endocarditis

Laboratory diagnosis –

Microscopy – gram staining

- gram negative
  diplococci

- Culture – thayer martin medium

  - chacko nayer medium

  - martin lewis media

  - new york city media

- PCR
- DNA hybridisation
- ELISA
- The complement fixation
- Latex agglutination immunofluoroscence &anti surface pili assays
- Radioimmunossay
- Immunoblotting

Treatment

- – <u>uncomplicated gonorrhoea</u>

- Cefixime 400 mg stat **<u>or</u>**
- Ceftriaxone 125 mg stat IM **<u>or</u>**
- Ciprofloxacin 500 mg stat **<u>or</u>**
- Ofloxacin 400 mg stat **<u>or</u>**
- Levofloxacin 250 mg stat

+

If chlamydia infection is not ruled out

- Azithromycin 1 gm stat **<u>or</u>**
- Doxycycline 100 gm BD for 7 days.

- **Treatment** – DGI

- Ceftriaxone 1 gm IM or IV every 24 hrs **or**
- Cefotaxime 1 gm IV every 8 hrly **or**
- Ciprofloxacin 400 gm IV every 12 hrs **or**
- Ofloxacin 400 gm IV every12 hrs **or**
- Levofloxacin 250 gm IV daily. **or**
- Spectinomycin 2 gm IV every 12 hrly.

- **Treatment**

- Recommended

Doxycycline 100 mg BD for 47 days **or**

Azithromycin 1 gm stat

- Alternative

Amoxycillin 500 mg TDS for 7 days **or**

Erythromycin 500 mg QID for 7 days **or** Erythromycin ethylsuccinate 800 mg QID for 7 days **or**

Ofloxacin 300 mg BD for 7 days **or**

Tetracycline 500 mg QID for 7 days

THANK YOU