

## P-GU-003 GENITAL ULCER DISEASE (GUD)

### DEFINITION & EPIDEMIOLOGY

- Genital ulcer diseases (GUD) is characterized with *ulcerative, erosive, pustular or vesicular genital lesion(s)*, with or without regional lymphadenopathy, caused by a number of sexually transmitted infections (STIs) and non-STI-related conditions.(1)
- The global incidence of genital ulcer disease is estimated to be more than 20 million cases annually.(2) Males are predominantly affected with gender incidence ratio 1:05 in males as to females. Individuals between 14 to 49 years of age are commonly affected.(2)
- A study conducted in India presents 62% cases of GUD being caused by herpes simplex virus, 23% by T. Palladium and 13% by unknown factors.(3)

### ETIOLOGY (1,2)

Etiology	Risk factors
<ul style="list-style-type: none"><li>• Herpes Simplex Virus and T. Palladium are the main causative organisms for GUD.</li><li>• Other organisms like candida, Chlamydia trachomatis are also responsible for the ulcerative lesions.</li></ul>	<ul style="list-style-type: none"><li>• Multiple sex partners</li><li>• Non recognition of ulcers in prodrome stage</li><li>• Serodiscordant sex partners (i.e., one partner with herpes simplex virus and one without)</li><li>• Unprotected sexual contact</li><li>• Unprotected skin-to-skin contact with ulcers</li><li>• Lack of male circumcisio</li></ul>

### PATHOPHYSIOLOGY

GUD is caused by multiple organisms including viruses (HSV), bacteria (T. Palladium, Chlamydia), Fungi (Candida). The pathology of GUD depends on the infective organism. The first stage is development of firm, non-movable, painless or painful nodule on the genitals which further progresses to form ulcer. In case of HSV infection the ulcers are painful with fever, pain in genitals and tender lymph nodes. In case of T. Palladium the ulcer is painless and heals within 10 to 20 days to manifest later as secondary syphilis. The Chlamydia infection cause painful ulcer with pain during micturition.(1,2)

### Signs & Symptoms (1-3)

Specific symptoms	Common symptoms
<ul style="list-style-type: none"><li>• Genital ulcer</li><li>• Anal ulcer</li></ul>	<ul style="list-style-type: none"><li>• Genital itching</li><li>• Burning micturition, ↑ frequency, Urgency</li><li>• Dysuria</li><li>• Genital complaints in sexual partners</li></ul>

### History

<b>H/O Present Illness</b> <ul style="list-style-type: none"><li>• Onset of symptoms: when it started</li><li>• Duration : duration of illness</li><li>• Character of ulcer: shape, location, Painful or not, Single or multiple</li></ul>
<b>Past H/o</b> <ul style="list-style-type: none"><li>• Previous H/o similar illness</li></ul>

**Personal H/o**

- H/o Unprotected sexual encounter/s
- H/o Multiple sexual partners
- H/o Recent change in sexual partners
- H/o Condom breakage or other issues in its usage

**Vital Signs**

- Body temperature: Possible raised body temperature
- Heart rate: Normal
- Respiratory rate: Normal
- Blood Pressure: Normal

**Patient Examination (4)**

Systems	Inspection	Palpation	Percussion	Auscultation	Positive sign
<b>General examination</b>	None	None	None	None	No specific finding
<b>CVS</b>	None	None	None	Routine CVS	No specific finding
<b>RS</b>	None	None	None	Routine RS	No specific finding
<b>Abdomen</b>	None	None	None	Bowels sound	No specific finding
<b>Musculoskeletal system</b>	None	None	None	None	No specific finding
<b>CNS</b>	None	None	None	None	No specific finding

**Genital Examination**

*"Before genital examination explain the procedure, make sure proper privacy and get a consent from patient"*

- Presence of genital ulcer-single or multiple
- Ulcer characteristics:
  - Painless ulcer with firm lymph nodes- Syphilis
  - Painless ulcer without inguinal lymph nodes - Granuloma inguinal
  - Transient painless penile ulcer with painful, enlarged inguinal lymph nodes – LGV
  - Painful ulcers usually multiple and associated with painful bubo- Chancroid
  - Presence of vesicles, genital erosions/ulcer-Herpes.

**Diagnostic Test**

- Diagnosis can be done based on symptoms itself, if possible do genital examination.
- Lab investigation is additional option. If available the following can be done; however it is not necessary.
  - Gram stain for chancroid
  - Leishman stain for donovanosis
  - RPR test for syphilis

**Diagnosis**

Genital Ulcer Disease (GUD)

**Differential Diagnosis**

If provider is in doubt about the clinical diagnosis then treat for herpes, syphilis and chancroid together.

**Treatment (1-4)**

### **Non-pharmacological Management**

- Advise sexual abstinence during the course of treatment
- Advise to use Condom

### **Pharmacological Management**

#### **Adults:**

#### **Antimicrobial**

#### **If vesicles are not seen and only ulcer is seen, treat for syphilis and chancroid**

- Inj. Benzathine penicillin 2.4million IUIM single dose after test dose in two divided doses (with emergency tray ready) (for syphilis)\* **PLUS**
- Tab. Azithromycin 1 gm orally single dose/ Erythromycin 500 mg four times a day for 7 days or Tab. Ciprofloxacin 500mg orally, twice a day for 3 days (for chancroid)

#### **\*In individuals allergic or intolerant to penicillin:**

- Cap. Doxycycline 100mg orally, BID for 14 days **OR**
- Tab. Azithromycin 2 gm as a single dose to treat early syphilis

#### **If vesicles or multiple painful ulcers are present treat for herpes**

- In Primary episodes (first episodes): Tab .Acyclovir 400mg TDS a day for 7 days
- For Recurrences: Tab. Acyclovir 400mg orally, TDS a day for 7 days.

#### **Special groups:**

#### **Pregnant:** Refer

#### **Geriatrics:** similar dose as adult

\*If penicillin allergy - Tab. Erythromycin 500mg orally four times a day for 15 days.

If provider is in doubt about the clinical diagnosis then treat for herpes and herpes (syphilis and chancroid) together.

*Note: Treat all sexual partners in the last 30 days with the above regimen*

### **When to Refer**

- Non-responsive to treatment
- Recurrent cases
- Secondary syphilis

### **References**

1. Government of Canada PHA of C. Genital Ulcer Disease (GUD) - Section 4 - Management and Treatment of Specific Syndromes - Canadian Guidelines on Sexually Transmitted Infections - Public Health Agency of Canada [Internet]. 2013 [cited 2016 Nov 30]. Available from: <http://www.phac-aspc.gc.ca/std-mts/sti-its/cgsti-ldcits/section-4-3-eng.php>
2. Guidelines for the Management of Sexually Transmitted Infections. February 2004: 2. TREATMENT OF STI-ASSOCIATED SYNDROMES: 2.2. Genital ulcer [Internet]. [cited 2016 Nov 30]. Available from: <http://apps.who.int/medicinedocs/en/d/Jh2942e/3.2.html>
3. Prabhakar P, Narayanan P, Deshpande GR, Das A, Neilsen G, Mehendale S, et al. Genital ulcer disease in India: etiologies and performance of current syndrome guidelines. Sex Transm Dis. 2012 Nov;39(11):906–10.
4. National AIDS Control Organisation, STI/RTI Division. National Guidelines on Prevention, Management and Control of Reproductive Tract Infections and Sexually Transmitted Infections [Internet]. Department of AIDS Control, Ministry of Health and Family Welfare Government of India; 2014 Jul. Available from: <http://www.naco.gov.in/upload/2014%20mslns/National%20RTI%20STI%20technical%20guidelines%20Sep2014.pdf>