### **Chancroid (Haemophilus ducreyi)**

### *Based on the 2017 European BASHH/IUSTI guideline*

#### **1. Causative Organism**

* *Haemophilus ducreyi*: small, fastidious Gram-negative coccobacillus.
* Produces β-lactamase; plasmid-mediated resistance reported to tetracyclines, sulfonamides, chloramphenicol, aminoglycosides.

#### **2. Epidemiology & Public Health**

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| **Aspect** | **Key facts** | **Exam pearls** |
| Global trend | Marked decline worldwide; still endemic pockets in **North India** (~24 % GUD) & **Malawi** (~15 %). Sporadic imported cases in Europe. | Be ready to explain why lab suspicion must remain despite rarity. |
| Transmission | Sexual contact; facilitates HIV acquisition. | Male circumcision reduces risk. |
| Non-genital disease | Emerging cause of tropical cutaneous ulcers in children (South Pacific). | Distinguish from yaws in OSPE/OSCE cases. |

#### **3. Clinical Features**

* **Incubation:** 3-7 days (short).
* **Lesions:** tender erythematous papule → pustule → soft, painful ulcer with ragged undermined edge & purulent base.
* **Lymphadenitis:** unilateral, painful inguinal node in ~50 % → fluctuant bubo ± spontaneous rupture.
* **Complications:** chronic ulcers, scarring, sinus after bubo I&D.
* **No proven adverse pregnancy outcomes.**

#### **4. Differential Diagnosis**

* **HSV**, **syphilis**, **LGV**, **donovanosis**, **traumatic/behçet ulcers**.
* FRCPath tip: emphasise mixed infections; always test for HSV & *T. pallidum*.

#### **5. Diagnosis**

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| **Modality** | **Details** | **Strengths / Weaknesses** |
| **Clinical (probable)** | CDC criteria: painful ulcer + typical appearance ± inguinal LAD, negative syphilis serology/NAAT & HSV NAAT/culture. | Only for surveillance; low specificity. |
| **Microscopy** | Gram stain of ulcer base. | Low sensitivity → *not recommended*. |
| **Culture** | Selective enriched media (e.g. Mueller-Hinton chocolate + vancomycin); incubate 33 °C, 5 % CO₂, >3 days. Bedside inoculation best; transport at 4 °C in Amies/Stuart. | Definitive when +ve; sensitivity ≤75 %. Needed for AST. |
| **NAAT (preferred)** | In-house or multiplex PCR from ulcer swab; detects HSV & *T. pallidum* simultaneously. | Highest sensitivity; viable bacteria not required; few reference labs in Europe. |
| **Serology** | Unhelpful in acute disease. |  |

**Specimen technique (exam favourite):** vigorous swab of ulcer base after saline rinse place the swab in Amies or Stuart’s medium, keep at 4 °C, and transport rapidly.; collect pus from buboes by aspiration (lower yield),

#### **6. Management**

1. **Patient counselling**
   1. Abstain from sex until patient **and** partners complete therapy.
   2. Explain HIV transmission risk; offer full STI screen incl. HIV & syphilis repeat at 3 months.
2. **First-line antibiotics** (single-dose options)

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| **Drug** | **Dose** | **Notes** |
| **Azithromycin** | 1 g PO ×1 | Safe in pregnancy, children ≥️6 m. |
| **Ceftriaxone** | 250 mg IM ×1 | Give to children; option in pregnancy. |

1. **Second-line / alternatives – preferred in HIV+ due to multiday regimens**

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| **Drug** | **Dose** | **Restrictions** |
| Ciprofloxacin | 500 mg PO **BD ×3 days** | Contraindicated pregnancy, breastfeeding, <18 y. |
| Erythromycin | 500 mg PO **QID ×7 days** | Use if cipro contraindicated; preferred for HIV+ pts needing multi-day Rx. |

1. **Bubo management**
   1. Needle aspiration (may repeat) or I&D under cover of antibiotics; avoid sinus formation.
2. **Follow-up**
   1. Review 3–7 days: ulcers should improve within 1–2 wks.
   2. Consider treatment failure (resistance, reinfection, mis-diagnosis, immunodeficiency) if slow healing.
   3. Confirm partner notification (sexual contacts within preceding 10 days → exam & treatment regardless of symptoms).
   4. No test of cure

*H. ducreyi* acquired plasmid-mediated resistance to β-lactams, tetracyclines, sulfonamides, chloramphenicol & aminoglycosides (1970s onward).

• Intermediate resistance to **ciprofloxacin and erythromycin** has been reported globally > culture if fails

#### **7. Laboratory / Quality & Governance Points**

* **Auditable standards (≥95 %):**
  + All suspected chancroid cases undergo appropriate lab investigation (culture and/or NAAT).
  + Partner tracing for contacts within 10 days.
  + Offer / document HIV & syphilis testing ± other STIs.
  + Report cases to local/national surveillance systems.

#### **8. Exam-Level High-Yield Facts**

* *H. ducreyi* culture ≤75 % sensitive → NAAT gold standard.
* Single-dose azithro / ceftriaxone equal efficacy (Ib evidence).
* Incubation period **short** vs syphilis (**longer, ~21 days**).
* Buboes ≈50 %: aspiration preferred; incision may cause persistent sinus.
* Consider chancroid in **imported ulcers**, especially if HSV & syphilis negative.

#### **9. Rapid Mnemonics**

* **“DUC REI”** for therapy: **D**ucreyi → **U**lcer soft; **C**eftriaxone/**C**ipro, **R**egional nodes, **E**rythro/**A**zithro, **I**ncubation 3-7 days.
* **“FAST”** sample handling: **F**resh lesion base, **A**mies transport cold, **S**elective medium bedside, **T**hree-day CO₂ incubation.

These notes condense the guideline’s core messages into exam-focused points without losing essential detail. Good luck with your FRCPath preparation!