

## **Draft 2010 European IUSTI/WHO guideline on donovanosis**

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### **Introduction**

The causative organism is *Calymmatobacterium granulomatis*. However, based on evidence of phylogenetic similarity with *Klebsiella sp*, a proposal has been put forward that the organism be reclassified as *K.granulomatis comb nov* though this is debated [1,2]. The organism is a Gram negative facultative aerobe.

The condition has been known under many terminologies other than donovanosis including granuloma inguinale and granuloma venereum. The prevalence of donovanosis has decreased markedly in recent times and the condition can now almost be classified as a sporadic disease. Cases are still reported from Papua New Guinea, South Africa, India, Brazil and Australia although the condition has virtually been eliminated in the latter [3].

### **Diagnosis**

#### Clinical

Papules develop into ulcers that gradually increase in size. Four types of lesions are described [4].

- 1) Ulcerogranulomatous- the most common type with beefy red ulcers that bleed to the touch.
- 2) Hypertrophic- usually with a raised irregular edge,
- 3) Necrotic- offensive smelling ulcer causing tissue destruction,
- 4) Sclerotic or cicatricial with fibrous or scar tissue

The genitals are affected in 90% of cases and the inguinal region in 10%. Cervical lesions are rare but may mimic carcinoma. Extragenital lesions occur in 6% of cases. Lymph gland enlargement is uncommon. Disseminated donovanosis is rare but secondary spread to liver and bone may occur. As a cause of genital ulceration that bleeds readily, the risk of associated HIV infection is increased and HIV testing and counselling should be considered for all cases [5].

### **Laboratory**

Direct microscopy: This is the quickest and most reliable method. A rapid Giemsa method can be used to stain tissue smears that should be prepared by rolling a swab firmly across lesions and rolling this swab evenly across a glass slide to deposit ulcer material [6]. Characteristically there are large mononuclear cells with intracytoplasmic cysts filled with deeply stained Gram negative Donovan bodies. Other stains used include Giemsa, Leishman and Wright's. Previous use of antibiotics makes the definitive diagnosis of donovanosis difficult [7].

Histologic examination for Donovan bodies is best done using Giemsa or Silver stains. The characteristic picture shows chronic inflammation with infiltration of plasma cells and polymorphonuclear leucocytes.

Culture: This has only been accomplished in two laboratories in recent times and is not available routinely [8, 9].

PCR: PCR methods have been used including a colorimetric detection method [10, 11]. A genital ulcer disease multiplex PCR test has been developed using an in-house nucleic acid amplification technique that uses *C. granulomatis* primers [12].

Serology: Serologic tests have been developed but are not reliable

If no diagnostic tools are immediately available, a dry swab should be taken and refrigerated while arrangements for PCR testing are made.

## **Treatment**

Azithromycin 1 g weekly or 500mg daily (B1b) [13]. Recommended as first-line therapy.

Co-trimoxazole 160/800mg bd (BIIb) [14]

Doxycycline 100mg bd, (C IV) [15] (Trials have not been done but older tetracyclines have been shown to be effective)

Erythromycin 500mg 4 times daily. Recommended in pregnancy (C IV) [16]

Gentamicin 1 MG/Kg every 8 hours can also be used as an adjunct if lesions are slow to respond (CIII) [17]

Children with donovanosis should receive a short course of azithromycin 20mg/kg (C IV). Children born to mothers with donovanosis should receive prophylaxis with a 3-day course of azithromycin 20/kg once daily(C IV) [18].

Duration of treatment should be until complete healing is achieved

## Partners

Donovanosis is uncommon in partners of index cases but sexual contacts should still be checked for possible lesions by clinical examination

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**Search Strategy**

Medline search using the terms donovanosis and granuloma inguinale

Cochrane library search

Review of STI guidelines published by the US Centres for Disease Control and UK National Guidelines ([www.bashh.org](http://www.bashh.org))

**Declaration of interest**

**LEVELS OF EVIDENCE AND GRADING OF RECOMMENDATIONS**

Levels of evidence

Ia: Evidence obtained from meta-analysis of randomized controlled trials (RCTs);

Ib: Evidence obtained from at least one RCT;

IIa: Evidence obtained from at least one well-designed study without randomization;

IIb: Evidence obtained from at least one other type of well-designed quasi-experimental study;

III: Evidence obtained from well-designed non-experimental descriptive studies, such as comparative studies, correlation studies and case-control studies;

IV: Evidence obtained from expert committee reports or opinions and/or clinical experience of respected authorities.

Grading of recommendations

A (Evidence levels Ia, Ib): Requires at least one RCT as part of the body of literature of overall good quality and consistency addressing the specific recommendation.

B (Evidence levels IIa, IIb, III): Requires availability of well-conducted clinical studies but no RCTs on the topic of recommendation.

C (Evidence IV): Requires evidence from expert committee reports or opinions and/or clinical experience of respected authorities. Indicates absence of directly applicable studies of good quality.