

Donovanosis in a Tunisian man: Atypical presentation and dermoscopic findings

Sir,

Donovanosis is a sexually transmitted infection, caused by the gram-negative bacteria *Calymmatobacterium granulomatis*.¹ The geographical distribution is particular; it is endemic in the tropical and subtropical countries.²

A 22-year-old Tunisian man, working in the tourism area, consulted our dermatology department of Fattouma Bourguiba Hospital for two nodular and arciform lesions on the scrotum present since three months. He had no past medical history. He confirmed having multiple unprotected bisexual relations with multiple partners of different origins, mainly belonging to European and North African descents. He denied the presence of any genital lesion in his partners. The dermatological examination revealed two budding, erythematous, nodular lesions of firm consistency with ulceration of size 1 cm x 2 cm, in the latero-posterior aspect and lower zone of the right scrotum [Figures 1a and b], which were tender and bled when touched [Figures 1a and b], which were tender and bleed when touched. Besides these lesions, there were other asymptomatic skin-coloured to hypopigmented annular and arciform plaques [Figure 1c]. There were no other muco-cutaneous lesions. General examination showed left inguinal lymphadenopathy of approximately 1 cm diameter, but no pseudobuboes. Dermoscopy was performed using Dermlite DL4 with polarized mode. The nodular lesions revealed polymorphous vessels, separated by white linear area and multiple white shiny structures arranged as a four-leaf clover, also called rosettes [Figure 2a]. Arciform lesions showed multiple yellowish-white scales, structureless areas and a few tiny rosettes [Figure 2b]. All these serologies have been done and are negative: human immune deficiency virus, hepatitis B virus, hepatitis C virus, herpes simplex virus types 1 and 2, syphilis (*Treponema pallidum* hemagglutination, VDRL) and chlamydia (IgG, IgM). Smear test was not done. Skin biopsies of both the types of lesions revealed the presence of Donovan bodies in the cytoplasm of the macrophages [Figure 2c]. Hence the diagnosis of donovanosis was made. The patient was treated with doxycycline 200 mg and

ofloxacin 400 mg per day in divided doses. The clinical course was favorable, with complete disappearance of the lesions without scars [Figure 3] and healing of lymphadenopathy after 21 days of treatment.

The causative agent of donovanosis was identified by Major Charles Donovan, who also described donovan bodies.² It was endemic in India, Australia, Papua New Guinea, South Africa and, to a lesser extent, Guyana, the Caribbean and Brazil before 2011. However, since 2011, the number of new cases has considerably decreased and only some unusual presentations have been described.² We were unable to find any previous reports of cases in North

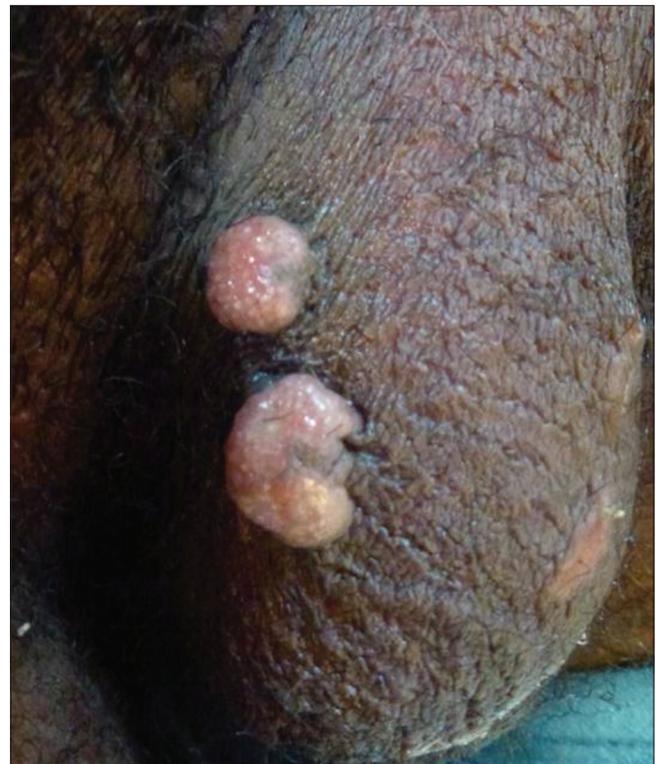


Figure 1a: Ulcero-budding lesions as “spray head” (erythema surmounted by a small whitish elevation) of size 1-2 cm

How to cite this article: Saad S, Youssef M, Idoudi S, Hadhri R, Soua Y, Toumi A, *et al.* Donovanosis in a Tunisian man: Atypical presentation and dermoscopic findings. *Indian J Dermatol Venereol Leprol* 2021;87:393-5.

Received: January, 2020 Accepted: June, 2020 Published: April, 2021

DOI: 10.25259/IJDVL_43_20 PMID: *****

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Figure 1b: A high magnification on the “spray head” aspect



Figure 1c: Annular and arciform plaques on the entire scrotum



Figure 2a: Exophytic lesions: Polymorphous vessels (linear, hairpin, glomerular) separated by white linear area and multiples white shiny structures arranged as a four-leaf clover: Rosettes

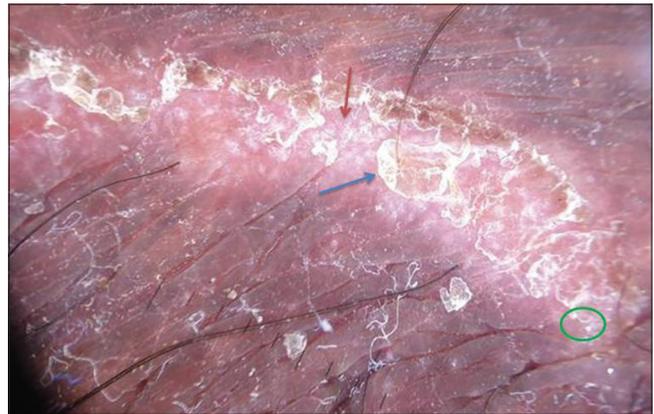


Figure 2b: Dermoscopy of arciform plaques: multiple yellow-white scales, structureless areas and a few tiny rosettes

Africa. Ours is the first documented case of donovanosis from this region. The main risk factors in our patient were his work and his sexual behavior. As he worked in the tourism field, it allowed him to have contact and multiple bisexual relations with partners of different countries. The patient had no idea about the countries his partners might have visited, which does not exclude the possibility of their visit to the endemic areas. But our patient denied the presence of any muco-cutaneous lesion in his partners. There are four types of clinical presentation of donovanosis: ulcerogranulomatous, hypertrophic, necrotic, and sclerotic or cicatricial forms.³ The clinical presentation of our patient shows two peculiarities:

the co-existence of two different types of lesions – nodular ulcero-granulomatous and arciform lesions and the presence of lymphadenopathy. Our case describes for the first time the dermoscopic features of donovanosis. We herein try to explain and correlate the dermoscopic features described in our case with the histological findings of the different types of lesions of our patient.⁴ The structureless areas could be explained by the increase of fibrous tissue characteristic of the hypertrophic and arciform forms of donovanosis.³ Many rosette structures of different sizes were also noted. These are also seen in other diseases like, actinically damaged skin, molluscum contagiosum, squamous cell carcinoma and several others. Their histological correlation have been

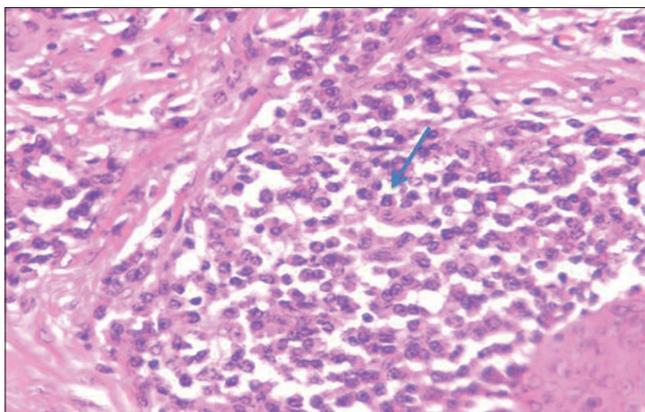


Figure 2c: Identification of Donovan bodies (blue arrow) in the cytoplasm of macrophages, in the form of small rods (Giemsa stain, $\times 400$)

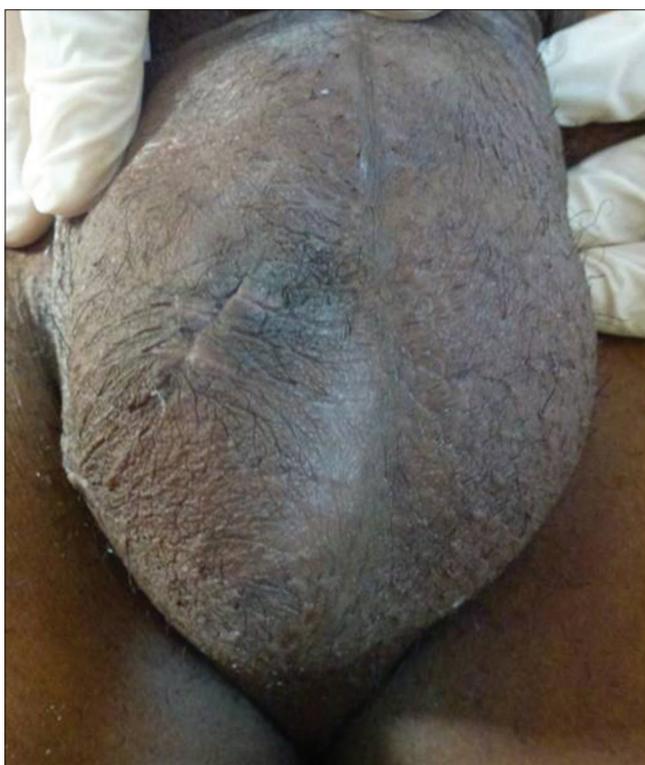


Figure 3: Evolution after 18 days of treatment, only remain the scar of the biopsy

treated by Haspeslagh *et al.* who suggested that tiny rosettes less than 0.2 mm might be explained by a concentric horny material in follicular and eccrine ducts at the infundibular level, while the larger ones more than 0.3 mm are related to a perifollicular concentric fibrosis.⁵ Certainly, other reports are essential to define clearly the dermoscopic aspects of donovanosis. The diagnosis of donovanosis was confirmed by the histopathological study that showed donovan body.

The first-line treatment of donovanosis is azithromycin 1g weekly or 500 mg daily for three weeks.² Our patient could not afford this treatment, so alternatively we had prescribed him doxycycline 200mg per day, as it was reported effective in donovanosis.⁶ We also added ofloxacin to broaden the spectrum. The course was characterized by complete remission of the after 21 days with no scars.

We report this case to increase awareness among physicians about this disease and its existence outside endemic areas.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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