

Dermatology Online Journal

Volume 16 Number 9
September 2010

[DOJ](#)

[Contents](#)

Solitary frontal ulcer: A syphilitic gumma

P Andrade, A Mariano, A Figueiredo

Dermatology Online Journal 16 (9): 5

Department of Dermatology and Venereology, Coimbra University Hospital, Coimbra, Portugal. pedro.andrade@portugalmail.com

Abstract

We report the case of a 30-year-old woman presenting with a single, deep, asymptomatic frontal ulcer that had developed in the previous two months without preceding trauma. Blood tests revealed reactive Rapid Plasma Reagin and *Treponema pallidum* hemagglutination assays. The diagnosis of syphilitic gumma was confirmed after histological analysis of the ulcer border. No other manifestations of late syphilis were detected. Ulcer healing was observed after treatment with benzathine penicillin and there was progressive reduction of follow-up serum RPR titers. The relevance of this case arises from its unusual presentation in a previously healthy immunocompetent individual.

Introduction

Syphilis is a worldwide sexually transmitted infectious disease, but the frequency has consistently declined in western European countries in the last decades. However, surveillance reports show a recent resurgence of the disease, which is well known for its clinical polymorphism and diagnostic difficulties.

We report the case of a young immunocompetent woman who presented with a solitary cutaneous frontal ulcer as the first and single manifestation of a previously unknown late syphilis.

Case report

A single 30-year-old woman was observed in our department with a deep, round, midline frontal ulcer with infiltrated erythematous borders, approximately 3 cm in width, which had progressively enlarged in the two preceding months in the absence of local trauma. The patient was asymptomatic and denied any relevant previous medical conditions or systemic medication. No significant abnormalities were detected after complete physical examination.

The patient had been an orphan since early childhood ó her mother had died of a non-specified lymphoproliferative disorder. She had been raised in an orphanage until becoming employed, at the age of 17, as a housekeeper. There was no history of travelling abroad. The patient related a single unprotected sexual intercourse with a promiscuous male in early adolescence, apparently followed by a nonspecific pruritic exanthem that spontaneously regressed. She denied any other sexual contacts since then.



Figure 1

Figure 1. Solitary midline frontal ulcer, approximately 3 cm in width

According to the clinical presentation, cutaneous lymphoma, cutaneous leishmaniasis, deep mycotic infection, or atypical mycobacteriosis were considered the most likely diseases in the differential diagnosis. Therefore, several blood analyses were performed: serum biochemistry (with angiotensin-converting enzyme ó SACE, lactate dehydrogenase and 2-microglobulin assays), blood cell count, serum protein electrophoresis, and immunofixation. All revealed normal results. The chest X-ray was normal and no reaction was observed after a tuberculin intradermal test. Interestingly, a high serum Rapid Plasma Reagin (RPR) titer was detected (1/32) and confirmed by a positive *Treponema pallidum* hemagglutination assay (TPHA), which was reactive for dilutions over 1/1280.

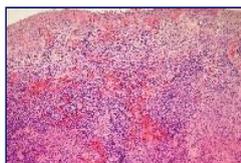


Figure 2

Figure 2. Histopathologic examination of the ulcer border showing a dense granulomatous dermal infiltrate (H&E, x200)

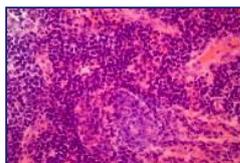


Figure 3

Figure 3. Histopathologic examination of the ulcer border showing a detail of the dermal infiltrate, with numerous plasma cells (H&E, x400)

A skin biopsy was performed on the ulcer border. Hematoxylin and eosin staining revealed a dense granulomatous dermal infiltrate with numerous plasma cells, in association with focal areas of necrosis, endotheliitis, and some multinucleated cells. Cultural examination of the skin fragment did not reveal any bacterial or fungal growth. Levadi and Warthin-Starry tissue silver stains were also negative for spirochetes.

Gynecologic, otorhinolaryngologic, and anorectal examinations were performed and reported as normal.

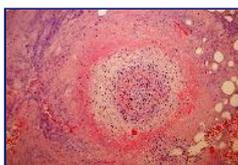


Figure 4

Figure 4. Histopathologic examination of the ulcer border showing endotheliitis with obliteration of a large vessel in the lower dermis (H&E, x200)

The diagnosis of cutaneous gumma in the context of late syphilis was therefore established. Serologic tests for other sexually transmitted diseases (HBV, HCV, and HIV infections) were negative. Neurosyphilis was excluded by cerebrospinal fluid sample analysis, revealing normal biochemistry and white cell count parameters, as well as non-reactive Venereal Disease Research Laboratory and Fluorescent Treponemal Antibody Absorbed tests. No cardio-aortic involvement was detected on electrocardiography or echocardiography. A cranial X-ray confirmed the absence of local bone changes.

The patient was treated with three weekly doses of intramuscular benzathine penicillin (2,400,000 U). No adverse effects were observed following the treatment. Complete ulcer healing with development of an atrophic scar was achieved in approximately one month after treatment. The patient has continued regular serologic tests since then. On the sixth and twelfth month serum RPR titers were, respectively, 1/16 and 1/8. No recurrence of skin lesions was observed after a one-year follow-up.



Figure 5

Figure 5. Frontal atrophic scar one month after treatment with benzathine penicillin

Discussion

Syphilis is a systemic infectious disease of worldwide distribution, but the frequency in European countries has been increasing in recent years [1, 2, 3, 4], disrupting the general trend observed since World War II. Changes in sexual behavior, immigration flows, and HIV infection have been implicated as the major factors contributing to the resurgence of the disease [1, 2, 3, 4].

This case exhibits a particular form of late syphilis in a young immunocompetent female patient, presenting as a single asymptomatic cutaneous gumma. There was no detectable visceral involvement of treponemal infection. Its relevance arises from its unusual presentation in a previously healthy individual and it clinically mimicked other dermatoses, as described in previous cases [5, 6, 7]. Because it is a rare condition, a high level of suspicion is required for the correct diagnosis of cutaneous tertiary syphilis.

References

1. Coelho R, Anes M, Fernandes C, Medeiros S, Rodrigues A, Santos R. Syphilis surveillance in Portugal, 2000-2005. *Eur J Dermatol*. 2009 May-Jun; 19(3): 275-6. [[PubMed](#)]
2. Couturier E, Michel A, Janier M, Dupin N, Semaille C. Syphilis surveillance in France, 2000-2003. *Euro Surveill*. 2004 Dec; 9(12): 8-10. [[PubMed](#)]
3. Marcus U, Bremer V, Hamouda O. Syphilis surveillance and trends of the syphilis epidemic in Germany since the mid-90s. *Euro Surveill*. 2004 Dec; 9(12): 11-4. [[PubMed](#)]
4. Velicko I, Arneborn M, Blaxhult A. Syphilis epidemiology in Sweden: re-emergence since 2000 primarily due to spread among men who have sex with men. *Euro Surveill*. 2008 Dec; 13(50): pii 19063. [[PubMed](#)]
5. Chung G, Kantor GR, Whipple S. Tertiary syphilis of the face. *J Am Acad Dermatol*. 1991 May; 24(5 Pt 2): 832-5. [[PubMed](#)]
6. Erfurt C, Lueftl M, Simon M Jr, Schuler G, Schultz ES. Late syphilis mimicking a pseudolymphoma of the skin. *Eur J Dermatol*. 2006 Jul-Aug; 16(4): 431-4. [[PubMed](#)]
7. Wu S J, Nguyen E Q, Nielsen T A, Pellegrini A E. Nodular tertiary syphilis mimicking granuloma annulare. *J Am Acad Dermatol*. 2000 Feb; 42 (2 Pt 2): 378-380. [[PubMed](#)]

© 2010 Dermatology Online Journal