Malignant syphilis: a clinical form of syphilis to consider

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Introduction and Objectives

Malignant syphilis is an uncommon nodular-ulcerative form of secondary syphilis that was first described in 1859. It has been considered extremely rare since the beginning of the antibiotic era. However, in the last two decades there has been a resurgence of this unusual form of syphilis, mainly attributed to HIV co-infection in young and middle-aged men. Our objective was to review all diagnosed cases of malignant syphilis at our centre in the last five years and define its clinical and laboratory characteristics.

Results

Of the 332 patients diagnosed with syphilis 4 had MS (1.2%). All patients (4/4) were men who have sex with men, HIV+ (between 26 and 54 years-old), and had positive treponemal and non-treponemal tests.

3/4 were not receiving treatment for HIV at the time of diagnosis of syphilis, with the infection being unknown in one of them.

4/4 presented multiple ulcerated nodules, palmoplantar involvement and 3/4 had affectation of the scalp.

One patient presented with neurosyphilis. CD4+ cell counts were 171/mm³, 250/mm³, 697/mm³ and 790/mm³.

The two patients with a lower CD4+ count and prozone phenomenon in the serology developed a Jarisch-Herxheimer reaction when starting the antibiotic treatment.

3/4 were treated with three weekly intramuscular doses of 2.4 million units of benzathine penicillin G. Intravenous penicillin G was administered intravenously during 15 days to the patient with neurosyphilis.

Complete clinical response was observed in all patients one month after therapy.

Materials and Methods

A review of medical records from all patients diagnosed of syphilis in a tertiary referral hospital from January 2012 to December 2016 was done. Patients diagnosed as malignant or nodular-ulcerative syphilis were recruited. A retrospective review of medical records, clinical photographs, histological findings, laboratory analysis, treatments, and outcomes was carried out.

Table I. Patients’ characteristics

Case number	Sex	Age	Mucocutaneous manifestations	Systemic symptoms	HIV	Viral charge HIV (copies/ml)	TCD4+ (cells/mm ³)	Histological findings	VDRL	Treatment	Outcome
Case 1	M (MSM)	39	Ulcerated and necrotic nodules Involvement of palms and soles Scalp lesions	Fever (>38°C)	+	24,950	171	Lichenoid dermatitis Treponemal IHC (+)	1/128 Prozone phenomenon	Intramuscular penicillin G benzathine 2,400,000 units (x3)	Jarisch-Herxheimer reaction. Complete clinical response
Case 2	M (MSM)	36	Ulcerated and necrotic nodules Involvement of palms and soles Scalp and nail lesions Condiloma lata	Fever (>38°C) Syphilitic uveitis Neurosyphilis	+	1,350,000	250	Spongiotic dermatitis Treponemal IHC (+)	1/250 Prozone phenomenon	Intravenous aqueous crystalline penicillin G 24,000,000 units daily for 15 days	Jarisch-Herxheimer reaction. Complete clinical response
Case 3	M (MSM)	54	Ulcerated and necrotic nodules Involvement of palms and soles	Fever (>38°C)	+	71,300	697	Lichenoid dermatitis Treponemal IHC (-)	1/512	Intramuscular penicillin G benzathine 2,400,000 units (x3)	Complete clinical response
Case 4	M (MSM)	26	Ulcerated and necrotic nodules Involvement of palms and soles Scalp lesions	Fever	+	<37	790	Areas of abscessification Treponemal IHC (-)	1/256	Intramuscular penicillin G benzathine 2,400,000 units (x1)	Complete clinical response

Abbreviations: M, male; MSM, men sex with men; IHC, immunohistochemistry

Conclusions

The increasing incidence of syphilis among HIV+ patients has lead to the resurgence of malignant syphilis. This form of syphilis is almost always associated with HIV co-infection. However, it seems that severe immunosuppression is not a mandatory requirement for its occurrence.

Neurosyphilis, a prozone phenomenon, and a Jarisch-Herxheimer reaction are frequently associated findings. Real incidence of malignant syphilis among HIV-positive patients and its possible complications are still unknown.

References

- Cid PM, Cudós ES, Zamora Vargas FX, Merino MJB, Pinto PH. Pathologically confirmed malignant syphilis using immunohistochemical staining: report of 3 cases and review of the literature. Sex Transm Dis. 2014;41(2):94–7.
- Witkowski JA, Parish LC. The great imitator: malignant syphilis with hepatitis. Clin Dermatol. 2002;20(2):156–63.
- Kumar B, Muralidhar S. Malignant syphilis: a review. AIDS Patient Care STDS. 1998;12(12):921–5.
- Don PC, Rubinstein R, Christie S. Malignant syphilis (lues maligna) and concurrent infection with HIV. Int J Dermatol. 1995;34(6):403–7.