

RUSSEL BODIES IN NEW WORLD CUTANEOUS LEISHMANIASIS

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Le lesioni cutanee della leishmaniosi del Nuovo Mondo presentano una bassa concentrazione di parassiti e frequentemente gli amastigoti sono completamente assenti. In tali casi il Patologo deve servirsi di altri parametri morfologici per determinare l'esatta causa della lesione.

Ci sembra pertanto utile segnalare altri aspetti morfologici emersi da una indagine istologica da noi condotta su 43 lesioni cutanee di leishmaniosi provenienti dal Nicaragua.

Le biopsie vengono colorate con le colorazioni routinarie istologiche e con le tecniche di immunoperossidasi per l'evidenziamento delle immunoglobuline.

Il dato più significativo emerso sono plasmacellule con corpi di Russel (32,5% dei casi) simili alle cellule morulari di Mott della tripanosomiasi e alle analoghe cellule del rinoscleroma.

Tale significativo reperto ci appare come un possibile criterio aggiuntivo per la diagnosi istologica della leishmaniosi.

Key words: *New World cutaneous leishmaniasis - Russel bodies - Mott's morular cells.*

INTRODUCTION

The lesions of cutaneous leishmaniasis in the New World have a very low parasite load (4) and frequently the amastigotes are completely absent (3).

When there are no clearly identifiable parasites, the pathologist cannot determine the nature of the lesions with certainty.

In such cases the appearance of the dermal infiltrate, classifiable according to *Ridley* (5-6), does not seem sufficient for an unquestionable diagnosis.

Therefore it seems useful to search for any morphological aspect which may improve diagnostic accuracy, especially in those cases where no appreciable amastigotes appear.

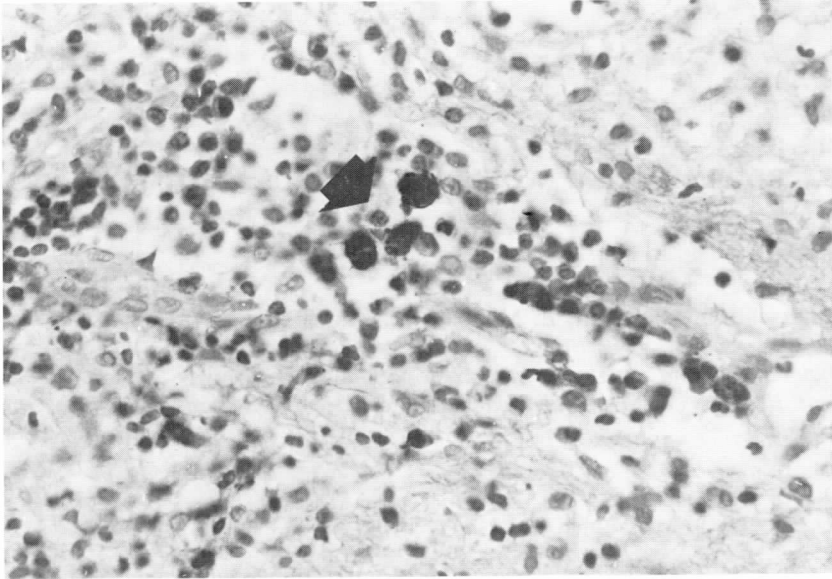


Fig. 1 — Dermal infiltrate with some plasmacells containing Russel bodies, stained by immunoperoxidase PAP technique for detection of IgM. (250x).

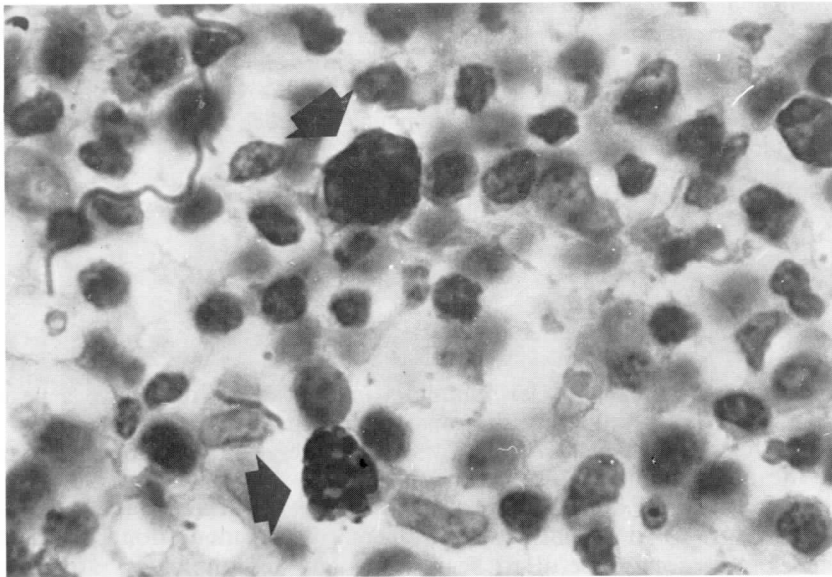


Fig. 2 — Morular feature of plasmacells containing Russel bodies (PAP technique for detection of IgM; 630x).

MATERIAL AND METHODS

Biopsies of skin lesions are taken from 43 Nicaraguan patients suffering from untreated cutaneous leishmaniasis.

The specimens, taken from the active edge of the lesions, were formalin-fixed and paraffin-embedded.

The sections are stained with hematoxylin-eosin, Giemsa, PAS and by immunoperoxidase techniques, according to Sternberger (7), for detection of immunoglobulins.

RESULTS

The amastigotes, best seen with the Giemsa stain, were very scanty and frequently absent.

In 14 cases (32,5%), PAS stain showed the presence of plasmacells containing multiple large Russel bodies.

Immunohistochemical techniques showed that in 13 of these cases the Russel bodies were IgM-positive while in only one case the Russel bodies were IgG-positive.

DISCUSSION

The finding of plasmacells containing Russel bodies in a high percentage (32,5%) of the considered cases of cutaneous leishmaniasis seems rather interesting.

These plasmacells are similar to Mott's morular cells of trypanosomiasis (1) and to the analogous plasmacells of rhinoscleroma (2).

The pathologic meaning of such prevailing IgM-positive Russel bodies and their possible correlations with clinical and serological data are a matter for further investigation.

Nevertheless, in our opinion, the presence of plasmacells containing Russel bodies could be considered as an adjunctive criterion for the histologic diagnosis of cutaneous leishmaniasis of New World.

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SUMMARY

The lesions of New World cutaneous leishmaniasis have a low parasite load and frequently amastigotes are completely absent.

In such cases the pathologist has to use other morphological parameters to establish diagnosis.

We therefore looked for any other morphological features we could find in 43 untreated cutaneous leishmaniasis lesions from Nicaragua. The biopsies were stained with hematoxylin-eosin, Giemsa, PAS and by Immunoperoxidase techniques for the detection of immunoglobulins.

The most important finding were plasmacells with a high percentage (32,5%) of Russel bodies similar to Mott's morular cells of trypanosomiasis and to the analogous cells of rhinoscleroma.

Such a significative result could be considered as an additional criterion in the diagnosis of New World cutaneous leishmaniasis.