HISTOPATHOLOGY AND IMMUNOHISTOCHEMICAL ASPECTS IN MYCOSIS FUNGOIDES

D. HORSIA [1], Z. POPOVICI[2]

[1,2],,Lucian Blaga" Uiversity of Sibiu

Keywords: *Mycosis fungoides, seropositivity, cytomegalovirus*

Abstract: *Mycosis fungoides is a cutaneous peripheral T-cell lymphoma, with the production of patch, plaque and tumor. It is also a long-standing entity, is described almost two centuries ago, in 1806 by French dermatologist Alibert[1]. In the past, mycosis fungoides was considered an incurable disease, which inevitably leads to the death of the patient. However, familial predisposition to disease has been reported in some situations. Association with exposure to certain allergens in the long term, exposure to certain environmental agents and association with various chronic skin diseases were raised. More recently, seropositivity for cytomegalovirus was observed with an unusually high frequency in patients with mycosis fungoides, suggesting the role of this virus in the pathogenesis of the disease.*

Cuvinte cheie: *Mycosis fungoides, seropozitivitatea, cytomegalovirus*

Rezumat: *Mycosis fungoides este un limfom cutanat periferic cu celule T, cu producerea de pete, placi cutanate si tumori. Este de asemenea o entitate de lunga durata, fiind descrisa cu aproape două secole în urmă, in 1806 de catre dermatologul francez Alibert(1). In trecut, mycosis fungoides era considerata o boala incurabila, care ducea inevitabil la decesul pacientului. Etiologia bolii ramane necunoscuta. Totusi, predispozitia familiala a bolii a fost raportata in cateva situatii. Asocierea cu expunerea pe termen lung la anumiti alergeni, expunerea la anumiti agenti din mediu si asocierea cu diferite boli cronice ale pielii au fost invocate. Mai recent, seropozitivitatea pentru citomegalovirus a fost observata cu o frecventa neobisnuit de mare la pacientii cu mycosis fungoides, sugerand rolul acestui virus in patogeneza bolii..*

SCINETIFIC ARTICLE OF BIBLIOGRAPHIC SYNTHESIS

Mycosis fungoides can be divided, ***histopathologically,*** in three stages: patch, plaque and tumor stage, depending on the time of patient presentation in the clinic. In the stage of **skin patch**, histological studies for this classic stage include the presence of an infiltrate, in the band, of variable intensity with small and medium lymphocytes, located along the basal layer of the epidermis and their penetration in the epidermis (epidermotropism).

Epidermotrope lymphocytes from the epidermis, can also be clearly recognized as having a halo, that surrounds prominent nuclei. A useful diagnostic indicates epidermotrope lymphocytes with nuclei somewhat larger than the rest of the cell, in superficial dermis (2).

Pautrier's microabcesses defined as cerebriforme cell aggregates in the epidermis, are more frequent in plaque stage cutaneous, being present in less than 10% of cases in the state of skin patch. Dermal infiltrates include eosinophils and rare plasma cells.

The transition from stage skin **patch** at the **plaque**, we note the presence of abundant infiltrates with atypical lymphocytes with epidermotrope prominent and clear halo, which forms a dense band along the basal layer of epidermis (Smoller[3]).

Their nuclei are more intensely colored and have cerebriform aspect. The skin can highlight a focal parakeratosis, easy sponginess, atrophy and hyperplasia psoriasiform (Lefeber[4]). Mitosis is present in the dermis. Eosinophils and plasma cells are more characteristic in this phase.

Tumor stage is characterized by a dense infiltrate, with large lymphocytes, with prominent nuclei, with multiple nucleoli, which infiltrate the dermis (5,6). These cells are devoid of cerebriform nucleus and are monomorphic.

Immunophenotype plays an important role in the diagnosis. The typical phenotype is CD2+, CD3+, TCRβ+, CD4+, CD5+, CD8-. Rare cases may be positive for CD 8 or TCRδ. CD7 antigen, expression of more than 85% of the circulating T lymphocytes, may be absent.

However, this feature may be of limited value in terms of diagnosis, since the lack of CD 7 can be observed in cutaneous lymphoid lesions with benign character. HECA antigen (***high endothelial cell antigen***) is expressed in most cases. Cytotoxic granules associated proteins are not well expressed in stages of skin patches or plaques but, may be present in a certain proportion, in advanced lesions.

BIBLIOGRAPHY

1. Alibert, J.L.M. Description des Maladies de la Peau Observées à l'Hôpital St. Louis. Barrois L'aire et Fils, Paris, 1806, p. 413.
2. Ackerman, A.B. and Flaxman, B.A. Granulomatous mycosis fungoides. Br. J. Dermatol. 82, 397, 1970
3. Smoller, B.R. et al. Reassessment of histologic parameters in the diagnosis of mycosis fungiodes. Am. J. Surg. Pathol. 19, 1423, 1995.
4. Lefeber, W.P. et al. Attempts to enhance light microscopic diagnosis of cutaneous Tcell lymphoma (mycosis fungoides). Arch. Dermatol. 117, 408, 1981.
5. Olerud, J.E. et al. Cutaneous T-cell lymphoma: evaluation of pretreatment skin biopsy specimens by a panel of pathologists. Arch. Dermatol. 128, 501, 1992.
6. Shapiro, P.E. and Pinto, F.J. The histologic spectrum of mycosis fungoides. Sezary syndrome (cutaneous T-cell lymphoma). A review of 222 biopsies, including newly

[1]Corresponding Author: Dragos Horsia, 2-4,B-dul Coposu street, Sibiu, 550169, România, e-mail: dragos_horsia@yahoo.com; tel: +40 728909154
Article received on 07.04.2011 and accepted for publication on 23.08.2011
ACTA MEDICA TRANSILVANICA December 2011; 2(4)236-237

described patterns and the earliest pathologic changes. Am. J. Surg. Path. 18, 645,1994.