



FRICITION MELANOSIS: IS IT REALLY A MACULAR AMYLOIDOSIS;

C. Kouskoulis, Pr. Christoforidis, G. Chaidemenos,
G. Karakatsanis, E. Kapetis

State Hospital for Dermatological and Venereal Diseases, Thessaloniki, Greece.
Dermatological Department of Dimokritos'University of Thrace, Greece

Abstract

The term «Friction melanosis» (FM) was coined to an unusual dermatosis provoked by long-term use of nylon brushes and towels, and presenting with skin hypermelanosis over bony prominences of the trunk and extremities. We here in report the first Greek case of FM and try to help in the elucidation of the terminology and classification of the disease.

Key words: Friction melanosis, skin hypermelanosis, amyloidosis.

Case report

A 30 - year old white man, born in Soviet Union and of Greek descent, was referred to our Department because of two irregular, mildly a interminttently pruritic, macular,

hyperpigments plaques, that had been present on the left scapula and the lower right side of his back for the last 18 montsh (fig. 1). The patient had a 10-year history of rubbing himself with a rough-nylon towel, held diagonally over the back while taking his bath.

A skin biopsy of involved skin revealed increased melanin contents of the basal and suprabasal cell layers, scattered melanophages in the upper dermis and small globular amorphous eosinophilic substance, compatible with amyloid, in the papillary dermis (fig. 2). Congo red staining showed apple - green birefringence under polarised light. The general condition of the patient was not affected and laboratory data remained with in normal limits.

The patient was instructed to stop the habit of rubbing himself and the contition gradually improved during the ensuing 5 months.

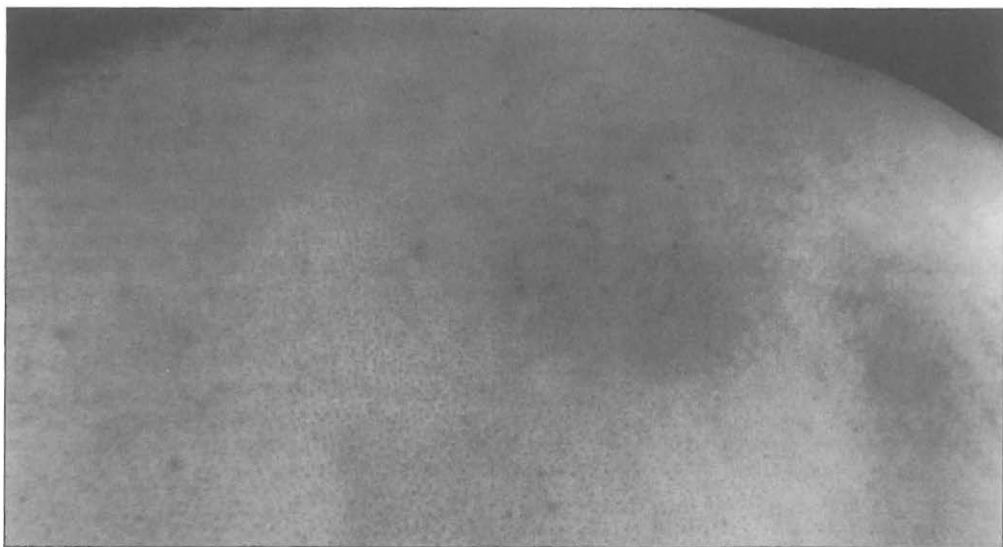


Fig. 1: Hyperpigmented plaque on the scapula.



Fig. 2: Light microscope features of friction melanosis. (Hematoxylin-Eosin x 400).

Discussion

The special stains and/or ultrastructural examinations when made, amyloid deposits can be found in the papillary dermis of almost all investigated cases. This is the reason that many authors use the term Amyloidosis «Friction Amyloidosis (1,2) Nylon brush Macular Amyloidosis (3)» for this peculiar dermatosis.

For some time after its initial description in 1983, Friction Melanosis had been considered a dermatosis distinct from Macular Amyloidosis. This concept was favoured by the asymmetry of the lesions, the essential absence of pruritus and the inability to detect amyloid in many cases of the disease (4).

However, the use of special stains (Congo red, Dylon, Thioflavin T) and electron microscopy disclosed amyloid deposits in the vast majority of FM cases (2,3). In addition, a recent report of a patient suffering from FM and Lichen Amyloidosis seemed to support the concept that the hyperpigmentation provoked by long-term use of rough-nylon towels was a Macular Amyloidosis (5), statement that had been cited in earlier reports (3).

Nevertheless, there should be born in one's mind that the term Macular Amyloidosis implies a primary pathogenesis and this does

not happen in FM. This entity is secondary to vigorous and continuous friction of the epidermis when made on susceptible individuals (3). Contrarily to Macular Amyloidosis, the condition improves when the stimulus is stopped (1-3) and occasionally amyloid deposits can not be found, even after a thorough histochemical and electron microscopic evaluation (3).

So, it is suggested FM to be classified in secondary skin-limited cutaneous Amyloidoses and retain its name, the same way Riehl's Melanosis and PUVA-induced hyperpigmentation do, in spite of the fact that they occasionally display amyloid deposits (1,6).

References

1. Hidano A, Mizuguchi M, Higaki Y: Melanose de friction. *Ann Dermatol Venereol* 1984; 111:1063-71.
2. Wong Ch-K, Lin Ch-S: Friction Amyloidosis. *Int J Dermatol* 1988; 27:302-307.
3. Hashimoto K, Ito K, Kumakiri M, Headington J: Nylon Brush Macular Amyloidosis. *Arch Dermatol* 1987; 123:633-7.
4. Breathnach SM. Amyloid and Amyloidosis. *J Am Acad Dermatol* 1988; 18:1-16.
5. Iwasaki K, Mihara M, Nishiura S, Shimao S. Biphase Amyloidosis Arising from Friction Melanosis. *J Dermatol* 1991; 18:86-91.
6. Hashimoto K, Kumakiri M. Colloid-amyloid bodies in PUVA-treated human psoriatic patients. *J Invest Dermatol* 1979; 72:70-80.