

CUTANEOUS FOCAL MUCINOSIS

Vijay Gandhi, Devraj Dogra, R K Pandhi

A 26-year-old male presented with asymptomatic, flesh coloured nodules on right elbow, forehead and right retroauricular region. A skin biopsy from the nodule stained with hematoxylin and eosin and special stain (mucicarmine) showed focal deposition of mucin in the dermis.

Key Words : Mucin, Mucinosis

Introduction

Mucins are jelly like acid mucopolysaccharides (acid MPS) present in the ground substance in the dermis.¹ Two types of acid MPS are described-sulfated (dermatan sulphate, heparan sulphate, chondroitin sulphate) and the non sulfated (hyaluronic acid).² These stain with special stains like toluidine blue, alcian blue and mucicarmine stains.² Mucinosis is a group of diseases characterised by widespread or focal deposition of mucin in the skin. These occur in a variety of diseases, some affecting the skin only, others related to systemic disease.³ Cutaneous focal mucinosis is one variant characterised by focal deposition of mucin in the skin.

Case Report

A 26-year-old male presented with appearance of a nodule over the right elbow. The lesion was asymptomatic and had slowly enlarged over the last 3 months. He gave no history of constitutional symptoms or systemic complaints. Examination revealed a well built individual with a normal general physical examination and systemic examination. Cutaneous examination revealed presence of 3 discrete nodules on the right elbow, forehead and right retroauricular region. The

nodules were of variable size (1 x2 cm to 2 x 2.5 cm), flesh coloured, firm in consistency and mobile over the underlying tissue. No tenderness or increase in temperature was present over the nodules. Examination of oral and genital mucosa revealed no abnormality. A diagnosis of cutaneous focal mucinosis was made.

The routine investigations including a haemogram, serum electrolytes, liver function tests, renal function tests and urine examination revealed no abnormality. X-ray of chest was also normal. A biopsy of the nodule from right elbow stained with hematoxylin and eosin showed a focal basophilic deposit in the dermis with presence of fibroblasts. Special staining with mucicarmine confirmed the deposit in the dermis to be mucin (acid MPS) (Fig.1).

Discussion

Cutaneous focal mucinosis is a rare entity characterised by asymptomatic flesh coloured papule or nodule occurring commonly on face, trunk or extremities. The cause has been suggested as dysfunction of fibroblasts in a localised area of the skin which behave as mucoblasts and secrete excessive mucin.⁴ Histology shows a localised collection of mucin in the dermis with an increased number of fibroblasts.^{4,5} The patient being reported fits classically with the clinical and histological description of this rare entity.

From the Department of Dermatology and Venereology, All India Institute of Medical Sciences, New Delhi-110029, India.

Address correspondence to : Dr R K Pandhi

References

1. Black MM. Mucinoses. In: Champion RH, Burton JL, Ebling FJG, editors. Textbook of dermatology. Oxford : Blackwell, 1992: 2325-33.
2. Lever WF, Schaumburg-Lever G. In: Histopathology of the skin. Philadelphia: J B Lippincott, 1990: 681.
3. Reed RJ, Clark WH, Mitim MC. The cutaneous mucinoses. Hum Pathol 1973; 4: 201-5.
4. Nishiura S, Mihara M, Shimao S, et al. Cutaneous focal mucinosis. Br J Dermatol 1989; 121: 511-5.
5. Johnson WC, Helwig EB. Cutaneous focal mucinosis: a clinicopathological and histochemical study. Arch Dermatol 1966; 93: 13-20.



Fig. 1. Skin biopsy (mucicarmine) showing a focal deposit of mucin in the dermis.
