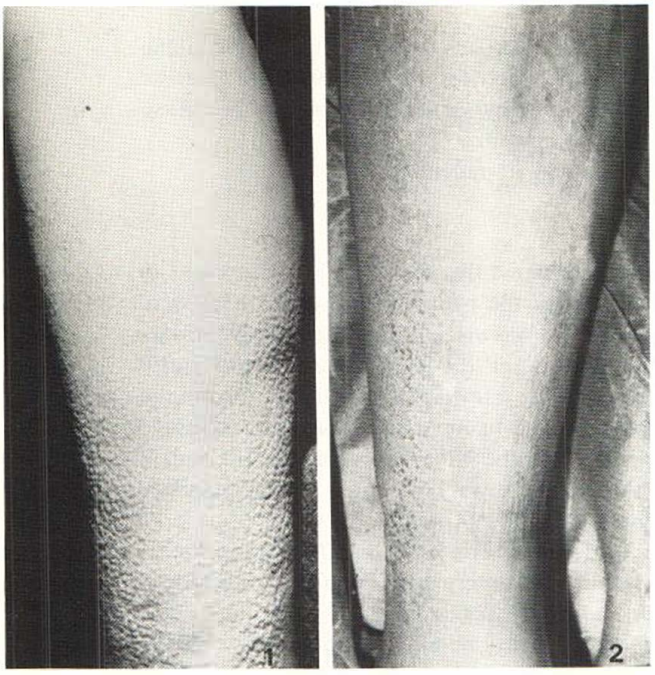
Lichen amyloidosus: A New Therapeutic Approach

G. MONFRECOLA, R. IANDOLI, G. BRUNO and D. MARTELLOTTA

Department of Dermatology, II Faculty of Medicine, University of Naples, Naples, Italy

Monfrecola G, Iandoli R, Bruno G, Martellotta D. Lichen amyloidosus: a new therapeutic approach. Acta Derm Venereol (Stockh) 1985; 65: 453–455.

The result of topical treatment by dimethyl sulphoxide (DMSO) in a patient with lichen amyloidosus is reported. Itching improved within five days of therapy. Remarkable flattening of the papules was obtained within two weeks. The clinical result was confirmed by



Figs. 1–2.

histological examination which revealed partially disappearance of amyloid deposits. *Key words: Amyloidosis; DMSO; Topical treatment.* (Received October 11, 1984.)

G. Monfrecola, Department of Dermatology, II Faculty of Medicine, University of Naples, via Pansini 5, 80131-Naples, Italy.

Lichen amyloidosus (LA) is an unusual disease characterized by deposition of amyloid in circumscribed skin areas. Topical treatment with corticosteroids slightly reduces the epidermal changes and pruritus, but does not modify the amyloid deposits in the upper dermis. A new therapeutic approach to LA is here suggested.

CASE REPORT

A 74-year-old man with a two years' history of severe itching on the lower legs. Eight months before our observation he developed on the same areas many brown papules which persisted despite topical application of corticosteroids. At the admission he presented on the extensory aspects of the lower legs several hemispherical yellow-brown discrete papules (2–3 mm in diameter) slightly scaling (Fig. 1). The lesions were intensely pruritic. Histological findings (hematoxylin-eosin) showed focal deposits of amyloid within dermal papillae. Treatment consisted of topical application of dimethylsulphoxide (DMSO), 4 ml on each leg, once daily for two weeks. Itching improved within five days of therapy. Remarkable flattening of the papules was observed at the end of the trial period (Fig. 2). To remove residual scales a salicylic acid ointment was then applied twice daily for one week. No other treatment was given. The clinical results were confirmed by histological examination which revealed partial disappearance of amyloid deposits in the papillary dermis. No relapse three months after the treatment period was observed.

DISCUSSION

DMSO is a solvent, practically without odor or colour, used as paint and varnish remover, antifreeze, etc. Proposed in medicine as analgesic and antiinflammatory topical agent,

DMSO is a penetrant carrier to enhance percutaneous absorption of topically applied drugs (1). Amyloid deposits partially disappeared in mice with casein-induced amyloidosis under influence of DMSO with coincident appearance of amyloid-like material in the urine (2). In 11 patients with amyloid nephropathy amyloid-like fibrillar substance was found in the urine after a single parenteral dose of DMSO (3).

In 1979 Van Rijswijk et al. (4) treated two patients with severe renal amyloidosis by DMSO 15 g/day in three doses by mouth for more than one year, with remarkable improvement of glomerular filtration-rate, effective renal plasma flow and creatinine clearance. The authors did not confirm the appearance of amyloid-like material in the urine. Nevertheless they found a fall in serum levels of C reactive protein (related to amyloid P component) and SAA (a serum factor, immunochemically related to protein AA, the major protein component of secondary amyloid). Therefore they suggested that DMSO could reduce the amyloid fibril formation. These reports on renal amyloidosis and the favourable effect on pruritus of topically applied DMSO in macular amyloidosis (5) prompted us to try it in LA. For the most part, management of LA is symptomatic. Topical steroids under occlusive dressing are helpful especially to reduce itching but often they fail, as in our case, to produce any clinical improvement. The remarkable improvement of clinical manifestation and histological picture noted in our patient indicates that topically-applied DMSO has a therapeutic potential in LA.

REFERENCES

1. Kligman AM. Review of the clinical use and pharmacology of dimethyl sulphoxide. JAMA 1965; 193:923–8.
2. Kedar (Keizman) I, Greenvald M, Ravid M. Treatment of experimental murine amyloidosis with dimethyl sulphoxide. Eur J Clin Invest 1977; 7:149–50.
3. Ravid M, Kedar (Keizman) I, Sohar E. Effect of a single dose of dimethyl sulphoxide on renal amyloidosis. Lancet 1977; 1:730-1.
4. Van Rijswijk MH, Donker JM, Ruinen L. Dimethylsulphoxide in amyloidosis. Lancet 1979; 1: 207–08.
5. Bonnetblanc MJ, Catanzano G, Roux J. Dimethyl sulphoxide and macular amyloidosis. Acta Derm Venereol (Stockh) 1980; 60:91.