Pyrogallol in the Tumour Stage of Mycosis fungoides: A Case Report

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The case history of a patient with mycosis fungoides (tumour stage) is reported. As ultimum refugium pyrogallol 5 % in petrolatum proved to be remarkably effective. (Received January 30, 1986.)

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CASE REPORT

The patient was a 60-year-old woman, who at the age of 53 experienced erythematous-squamous skin lesions on the face, neck, presternal region and lower arm. After 4 years the clinical and histological picture had developed to a classical mycosis fungoides. One year later tumours were seen on her face. Physical examination, laboratory investigations, X-ray of thorax, CT scan of the abdomen, sternum aspirate and crista biopsy did not reveal any sign of systemic involvement.

Topical application of nitrogen mustard had been partially effective. However, contact sensitization complicated this therapy. PUVA and PUVA + Etretinate had no effect at all. Radiotherapy (electron beam and orthovoltage X-ray) resulted in remissions of short duration (a few weeks). Cumulative dosages on the forehead had reached 5400 Rad.

Therefore we tried an alternative therapy; pyrogallol 5 % in petrolatum was applied daily on the tumours. The clinically uninvolved skin surrounding the lesions was protected by zinc paste. The effectiveness of this treatment is shown in Fig. 1. The tumours resolved via crust formation. After 2 months of therapy only a residual erythema and some hyperpigmentation remained. Therapy was discontinued and up to the time of writing this communication (5 months of observation) the treated areas remained clinically clear.

DISCUSSION

Pyrogallol has been used with success in the treatment of psoriasis (1). As far as we know this is the first report of a beneficial effect of this substance in mycosis fungoides. In this respect it is of interest that many other therapies are effective in both mycosis fungoides and psoriasis. Topical corticosteroids, tar, PUVA, radiotherapy and nitrogen mustard are well known therapies for both diseases. Methotrexate and retinoids, classical therapies for psoriasis, are also effective in mycosis fungoides (2-4).

The working mechanism of pyrogallol is not clear. It is a potent reducing agent. An inhibitory effect of pyrogallol on catechol-O-methyltransferase has been described (5). Theoretically this biochemical effect could account for the effectiveness in psoriasis and mycosis fungoides, both diseases being characterized by a hyperproliferative cell system (epidermal hyperproliferation and T-cell proliferation respectively). Hyperproliferative
Fig. 1 (a). Tumours on the forehead before treatment with pyrogallol.

Fig. 1 (b). The same area after 2 months therapy.
cell systems can be inhibited in vitro by increased intracellular cyclic AMP levels (6). The inhibition of catechol-O-methyltransferase by pyrogallol results in an accumulation of catecholamines in the treated areas. Such an accumulation will increase the intracellular cyclic AMP levels via stimulation of adenylcyclase (7).

It seems worth while to investigate the effectivity of this drug in a series of patients with mycosis fungoides. An extra therapeutic modality for stubborn cases would be of great practical value.

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REFERENCES