

Pharmacodynamics assessment of a new occlusive, ready to use, self-adhesive BMV formulation: vasoconstrictive, anti-inflammatory and anti-psoriatic activity

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Occlusion is widely employed to enhance the efficacy of corticosteroids in the treatment of psoriasis. Although the therapeutic mechanism of occlusive dressings is not completely understood, occlusion seems to restore and correct the defective barrier in psoriasis plaques, and to normalize the epidermal calcium gradients in hyperproliferative conditions.

Plastic film dressings are usually employed for occlusion, but their use is impaired by unsightly appearance, poor adhesion, allergic sensitisation, maceration of tissue, induction of malodorous microbial overgrowth, and need for daily maintenance. Thus, waterproof, cosmetically acceptable, and adhering tapes are preferred for treatment of chronic psoriasis and other corticosteroids-responsive dermatitis.

A medicated plaster containing betamethasone valerate (BMV) 0.1% (Betesil[®], IBSA), was investigated for its anti-inflammatory and antipsoriatic activities, in a battery of tests including a blanching assay, a nickel sulphate-induced contact dermatitis and a psoriasis plaque test. Single, round sections of Betesil[®] were compared with placebo plaster and occluded (Finn-Chambers) BMV creams. Cutaneous colorimetry, ecography and PASI score were used for medications assessment, when appropriate. Betesil[®] showed comparable anti-inflammatory and antipsoriasis potencies to occluded BMV creams, in single application or short-term treatment. Placebo plaster was also moderately effective, thus confirming the value of occlusion to enhance the antipsoriatic activity of corticosteroids. Betesil[®] is therefore a valuable alternative to the treatment of psoriasis because of the benefits that can be achieved by occlusive medication.

