Topical fluticasone propionate: a review of its pharmacological properties and therapeutic use in the treatment of dermatological disorders.

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Abstract

Fluticasone propionate is a fluoromethyl androstane 17beta-carboxiothioate that is classified for dermatological use as a moderate potency corticosteroid. It is available in 0.05% cream and 0.005% ointment formulations for the treatment of patients with inflammatory dermatoses responsive to corticosteroids. Although it demonstrates greater activity than other corticosteroids of similar potency in vasoconstrictor assays in humans, fluticasone propionate demonstrates low potential to cause significant systemic effects such as suppression of the hypothalamopituitary-adrenal (HPA) axis. This is because it has a high affinity for the glucocorticoid receptor and high lipophilicity, and the small amount of drug that is absorbed is rapidly metabolised to the inactive carboxylic acid derivative in the liver (i.e. it has low systemic bioavailability). In clinical trials, the efficacy of fluticasone propionate cream at 4 weeks did not differ significantly from that of hydrocortisone butyrate 0.1% cream in patients with moderate to severe atopic dermatitis and betamethasone valerate 0.1% cream in patients with moderate to severe psoriasis. Likewise, after 4 weeks, the ointment form of fluticasone propionate had similar efficacy to betamethasone dipropionate 0.05% in patients with psoriasis or atopic dermatitis, although the latter agent may have a faster onset of activity in patients with atopic dermatitis. Fluticasone propionate ointment was generally more effective than hydrocortisone butyrate ointment in patients with psoriasis. A sustained response was usually observed after about 1 week's application of fluticasone propionate, and although once and twice daily administration had similar efficacy, a twice daily regimen may have a slightly faster onset of effect. In trials which included both adults and children, the only adverse events reported were local cutaneous reactions (most frequently, pruritus). Thus, fluticasone propionate, with its low potential for systemic toxicity and possible advantage of once daily administration, is a useful addition to the topical corticosteroids available for the treatment of psoriasis and atopic dermatitis