# Ketoconazole as a Therapeutic Modality in Subcorneal Pustular Dermatosis

*Sir,*

Subcorneal pustular dermatosis (SPD), first described by Sneddon and Wilkinson in 1956 (1), is characterised by 1) superficial flaccid pustules occurring singly or in groups forming annular or gyrate patterns with spreading serpiginous edges, located in the groins, axillae, submammary areas and the flexures of the limbs, 2) subcorneal location of the bulla filled with neutrophils and occasional eosinophils but no acantholysis or spongiosis, 3) negative immunofluorescent studies, and 4) sterile cultures. A majority of the patients respond to dapsone, while corticosteroids are less effective. Some workers have, however, reported treatment failures with dapsone in more than 50% of the patients (1, 2). We report a patient who failed to respond to dapsone and oral corticosteroids but experienced complete remissions on three occasions with ketoconazole. Ketoconazole has not been used earlier in SPD. A 30-year-old housewife had been having asymptomatic superficial grouped pustules in annular patterns with mild background erythema on the neck, trunk and extremities for the last 3 years. The lesions would appear in crops, which used to dry up in 5–7 days. The severity of the disease was greater in the summer months, with no complete remission at any time. There were no systemic or constitutional symptoms. Cutaneous examination revealed multiple grouped annular flaccid pustular lesions of 2 mm to 4 mm in size, located on the neck, upper chest, back, abdomen, inframammary areas and flexure surface of the upper and the lower extremities. There were no mucosal lesions and the systemic examination was normal. Histopathological examination of a lesion revealed a subcorneal bulla filled with neutrophils. There were no acantholytic cells or eosinophils in the bulla. The dermis was unremarkable. Immunofluorescence could not be performed because of non-availability of the services at that time, and culture was not attempted. A diagnosis of SPD was made and the patient was given 100 mg dapsone twice a day with 3 mg betamethasone on alternate days. After 2 weeks of therapy there was no improvement and new lesions continued to appear. At that stage 200 mg ketoconazole per day orally was started and oral corticosteroids were withdrawn. Within 3 days the lesions started subsiding and in 2 weeks all the lesions had subsided completely. The dose of dapsone was reduced to 100 mg per day but ketoconazole was continued in the same dose. After another 4 weeks, while the patient was in remission, ketoconazole was stopped but dapsone was continued. After 2 months the patient had another relapse of the same disease, while she was still receiving 100 mg dapsone per day. She was again given 200 mg ketoconazole per day and the dapsone was stopped. This time also the lesions disappeared completely within 2 weeks. Ketoconazole was continued for 6 weeks, when the patient conceived and the drugs had to be withdrawn. She remained in remission till 2 weeks postpartum when she again had a severe relapse. This time she was treated with 200 mg ketoconazole alone for 3 months and she has now been in remission for about 1 year.

Ketoconazole is primarily used for dermatophytes, *Candida* and *Pityrosporum ovale*. The drug acts by inhibiting the cytochrome P-450 enzyme lanosterol 14-demethylase, which is required for conversion of lanosterol to ergosterol (3). It has also been reported to block testosterone synthesis (4), and the sex hormones have been found to influence the function of T-lymphocytes (5), which in turn can cause a variety of immunological effects. We do not know the mechanism of action of ketoconazole in our patient, but complete remissions on three occasions coinciding with the institution of ketoconazole therapy suggest that the remissions could be attributed to ketoconazole.

## REFERENCES


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