

## Letter to the Editor

# Indian dermatological experts' opinion on clotrimazole dusting powder in superficial fungal infection

Sir,

Dermatophytosis is among the most common skin infections in India and continues to pose a major therapeutic challenge because of increasing chronicity, recurrence, and partial treatment response. Recent years have witnessed significant epidemiological and mycological changes, including the emergence of multidrug-resistant *T. mentagrophytes*/*T. interdigitale* complex. In addition to pathogen-related factors, excessive sweating, humidity, occlusion, and skin maceration contribute substantially to persistence and relapse by creating an environment favourable for fungal growth.<sup>1</sup>

Current Indian recommendations favour topical azoles as first-line treatment for localized dermatophytosis because of their broad-spectrum antifungal efficacy and additional anti-inflammatory properties.<sup>1</sup> Clotrimazole remains one of the most established imidazole antifungals for dermatophytosis, candidiasis, and tinea versicolor. It acts by inhibiting ergosterol synthesis, thereby disrupting fungal cell membrane integrity and inhibiting fungal growth.<sup>2</sup>

Clotrimazole is available in various topical formulations including creams and dusting powders. Powder formulations offer unique advantages in moisture-prone areas due to their hygroscopic and friction-reducing properties. Despite widespread use of Clotrimazole dusting powder (CDP) in India, its exact positioning as adjunctive, maintenance, preventive, or monotherapy remains inconsistently defined. Therefore, an expert opinion was developed to provide practical guidance regarding the appropriate use of CDP in Superficial fungal infections (SFI).

This opinion was developed through digital advisory board meetings involving 60 dermatologists across India, each with over 15 years of clinical experience and familiarity with CDP use. Discussions focused on current evidence, real-world prescribing practices, and the role of CDP in SFI management. Key topics included adjunctive therapy, monotherapy, maintenance therapy, and seasonal use. Relevant literature was reviewed using PubMed and Google scholar, and recommendations were finalized through iterative expert review.

## ROLE AS ADJUNCTIVE THERAPY

CDP is primarily positioned as an adjunctive therapy in dermatophytosis involving intertriginous areas, occluded skin, or excessive sweating. Antifungal powders help maintain dryness because of their absorbent properties and may reduce sweating-related discomfort, friction, and malodor.<sup>3</sup>

Clinical studies have shown improved cure rates when clotrimazole powder is combined with clotrimazole cream in intertriginous fungal infections.<sup>4</sup> Indian real-world observations also suggest better patient comfort and symptom relief when powder is incorporated into treatment regimens.<sup>5</sup> The expert panel recommended that CDP should be used alongside standard topical or systemic antifungal therapy rather than as a replacement. In routine practice, powder may be applied during the day while antifungal cream is used at night (Figure 1).

## ROLE AS MONOTHERAPY

Powder formulations are convenient for moist and friction-prone areas because they are non-sticky and improve patient acceptability. Studies comparing clotrimazole powder with cream in tinea cruris and tinea pedis demonstrated comparable clinical efficacy, with additional benefits in sweat reduction and moisture control.<sup>6</sup>

However, given the current complexity of dermatophytosis in India, including recurrent and partially treated infections, the panel did not recommend routine use of CDP alone. Although monotherapy may be useful in selected localized cases, particularly tinea pedis and tinea cruris, adjunctive use remains the preferred strategy.

## MAINTENANCE THERAPY AND PREVENTION OF RECURRENCE

Recurrence is a major concern in dermatophytosis management. Even after clinical resolution, persistent moisture and continued exposure to risk factors may facilitate fungal recolonization. Powder formulations are particularly useful during maintenance therapy because they help maintain dryness in previously affected areas,

reduce fungal recolonization, and improve adherence due to ease of application.

Available evidence suggests that continued use of antifungal powders in high-risk areas such as groin, feet,

and skin folds may help reduce recurrence.<sup>4</sup> The expert panel recommended that CDP may be used once or twice daily for 3-6 months following completion of active antifungal treatment, especially in patients with recurrent or chronic dermatophytosis.

## RECOMMENDATIONS FOR USE OF CLOTRIMAZOLE DUSTING POWDER IN DERMATOPHYTOSIS

Clotrimazole dusting powder is an antifungal adjuvant that helps reduce moisture and fungal load in appropriate clinical settings.

### 1 ADJUNCTIVE THERAPY

Clotrimazole dusting powder can be used as an adjunct in dermatophytosis affecting skin folds, occluded areas, or in patients with excessive sweating, along with standard topical or systemic antifungals.

In such cases, it may be applied during the day and the cream at night.

### INDICATIONS

Skin folds (groin, axilla, submammary, interdigital)

Occluded areas (under breasts, waist, buttocks, between toes)

Patients with excessive sweating

### HOW TO USE

**DAY**

Clotrimazole dusting powder

**NIGHT**

Clotrimazole cream

+

### 2 MONOTHERAPY

Use of clotrimazole dusting powder as monotherapy is **not recommended** in the management of dermatophytosis considering its complexity.

#### REASON

- Dermatophytosis involves deeper layers and hair structures.
- Powder alone may not achieve adequate fungicidal activity.
- Combination with topical or systemic antifungals ensures better clinical and mycological outcomes.

### 3 MAINTENANCE THERAPY

After completing antifungal treatment, clotrimazole dusting powder can be used once or twice daily for **3–6 months** as maintenance, especially in recurrent or chronic dermatophytosis.

**DURATION**

3–6 MONTHS

**FREQUENCY**

1–2× DAILY

Helps prevent recurrence and maintain remission

### 4 SEASONAL VARIATION

Clotrimazole dusting powder may be routinely used during **summer and monsoon**, especially in those with previous dermatophytosis or frequent exposure to heat and moisture.

**SUMMER**

- Heat
- Sweating
- Friction

**MONSOON**

- Humidity
- Moisture
- Maceration

Prophylactic use during high-risk seasons helps reduce recurrence and improves long-term outcomes.

#### Important points

- For external use only.
- Avoid use on broken skin or mucous membranes.
- Keep the affected area clean and dry before application.
- Not a substitute for appropriate antifungal therapy.

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Figure 1: Recommendations for clotrimazole dusting powder in dermatophytosis.

## SEASONAL USE

Dermatophytosis demonstrates clear seasonal variation in India, with increased prevalence during summer and monsoon months due to high temperature, humidity, sweating, and skin maceration. These factors compromise the skin barrier and promote fungal proliferation.<sup>7</sup> Because of its drying and antifungal properties, CDP is particularly valuable during high-risk seasons both for active disease management and prevention in predisposed individuals. The panel recommended routine incorporation of CDP during summer and monsoon months, especially in individuals with prior dermatophytosis or occupational exposure to heat and moisture. To conclude, clotrimazole dusting powder represents an important adjunctive and maintenance option in the management of superficial fungal infections. Beyond its antifungal activity, its ability to reduce moisture and friction addresses important contributors to recurrence and persistence of dermatophytosis. Its role is particularly relevant in tropical climates, intertriginous areas, recurrent disease, and high-risk populations. Based on current evidence and expert opinion, CDP should be integrated into individualized dermatophytosis management strategies rather than routinely used as monotherapy.

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**Cite this article as:** Shenoy M, Ganjoo A, Godse K, Ghate S, Vadrevu R, Mishra P, et al. Indian dermatological experts' opinion on clotrimazole dusting powder in superficial fungal infection. *Int J Res Dermatol* 2026;12:xxx-xx.