

## Letter to the Editor

# A drug utilization study to evaluate the prescribing pattern of clotrimazole dusting powder in dermatophytosis

Sir,

The drug utilization studies are essential tools for the monitoring various healthcare system.<sup>1</sup> According to the world health organization (WHO), a drug utilization study is "the marketing, distribution, prescription, and drug usage in a society, leading to medical, social, and economic consequences".<sup>2</sup>

Clotrimazole, a broad-spectrum antifungal agent from the imidazole class, is widely used in India for the treatment of superficial fungal infections, particularly tinea corporis, tinea cruris, and candidal intertrigo. The dusting powder formulation is preferred for its ability to keep the affected area dry, prevent maceration, and reduce friction; factors critical in humid climates like India.<sup>3</sup>

Despite its widespread use, inappropriate application practices, self-medication, and irrational combination with corticosteroids have raised concerns regarding resistance, recurrence, and adverse effects and also over-the-counter availability and lack of patient counselling has often led to misuse, under-dosing, or premature discontinuation.<sup>4</sup> With this background we planned to evaluate prescribing pattern of clotrimazole dusting powder in dermatophytosis patients across dermatology clinics in India.

The objective of this study was not just to understand the prescribing pattern of clotrimazole dusting powder but also to analyse other aspects like frequency and reasons for prescription. After obtaining independent ethics committee approval, we analyzed the data of only those patients who were prescribed clotrimazole dusting powder in dermatophytosis. Patients with missing demographic details, incomplete clinical information, or insufficient treatment documentation were excluded from the analysis. Statistical analyses were performed using R software (version 4.0 or later). Data extracted from patient medical records were pooled and analyzed using standard descriptive statistical methods. Categorical variables were summarized using frequency and percentage. Percentages were generally calculated using the total number of subjects (N) presented in the column headers. For variables related to co-prescribed treatments, a conditional denominator was applied.

A total of 8223 out-patients across 470 dermatology clinics were enrolled, of which 8079 patients included for final analysis as per inclusion and exclusion criteria.

Majority of the patients were in the age group of 31-45 years (49.24%) with 62.5% of male predominance. Most patients reported recent disease onset, with 79.3% having symptoms for one year or less.

Clotrimazole dusting powder was primarily prescribed for tinea cruris (53.8%) and tinea corporis (45.9%), with majority of the patients prescribed as once a day (51.4%). A high proportion (90.2%) of patients received combination therapy, primarily involving co-prescription of additional antifungal medications. Among topical co-prescriptions, luliconazole cream (47.7%) and clotrimazole cream (32.6%) were the most frequently prescribed. Systemic antifungal co-prescriptions were predominant (94.8%), with super-bioavailable (SB) itraconazole 130 mg daily being the most common prescribed dose (48.7%). The main reasons for prescribing the powder were sweat control (72.3%), itch and discomfort reduction (69.7%), and limiting infection spread (52.8%). Other prescribing rationales were large body surface area involvement (34.5%) and aiding in the healing process (22.2%). This data indicates that clotrimazole dusting powder is predominantly used as an adjunctive therapy in combined antifungal regimens.

To the best of our knowledge, this study represents the first drug utilisation study on clotrimazole dusting powder in the management of dermatophytosis at a larger population. As of now, there are only 4 publications on effectiveness of clotrimazole dusting powder either as monotherapy or adjunctive treatment but sample size in these studies was small.<sup>5-8</sup> This large-scale drug utilization study highlights that clotrimazole dusting powder is predominantly prescribed as an adjunctive therapy for dermatophytosis, particularly tinea cruris and tinea corporis, across dermatology clinics in India. Its primary role is to provide symptomatic relief, control sweat, and prevent infection spread, especially in humid climates. The findings reveal frequent co-prescription with topical and systemic antifungals, indicating its integration into combination regimens rather than monotherapy. Given the widespread use and potential for misuse, these insights underscore the need for rational prescribing practices and patient counselling to optimize therapeutic outcomes and minimize resistance or recurrence. Limitations include its retrospective design, reliance on routine clinical records with possible misclassified data. Hence, prospective longitudinal studies are warranted.

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