International Journal of Research in Dermatology
Manjula S et al. Int J Res Dermatol. 2026 Jan;12(1):54-59
http://www.ijord.com

DOI: https://dx.doi.org/10.18203/issn.2455-4529.IntJResDermatol20254122

Original Research Article

Clinical perspectives and treatment preferences for sertaconazole in the management of cutaneous fungal infections

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Received: 05 November 2025
Revised: 15 December 2025
Accepted: 18 December 2025

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ABSTRACT

Background: Despite several clinical studies regarding the effectiveness of sertaconazole in various cutaneous fungal infections, there is a dearth of studies among clinicians. So, this study aims to assess clinician preferences and perceived efficacy of sertaconazole in the management of fungal infections across multiple dermatological indications.
Methods: This cross-sectional study enrolled 599 dermatologists, and data were collected using a structured 23-item questionnaire regarding clinical characteristics, diagnostic approaches, treatment preferences, and perceived efficacy for topical antifungals, with a specific focus on sertaconazole usage. Descriptive statistics were employed for data analysis.
Results: Out of 599 dermatologists, the majority (52.85%) preferred sertaconazole as the topical azole of choice for tinea pedis, while nearly 61% preferred it for tinea corporis. Clinical efficacy was rated as "very good" by approximately 42% of respondents, and 51% attributed sertaconazole's superiority to its dual fungistatic and fungicidal activity. Occasional use was reported in pityriasis versicolor (72.56%) and seborrheic dermatitis (68.09%). About 62% of clinicians cited good efficacy as the key advantage, while 39% highlighted a combination of efficacy, tolerability, and sustained effect. The cream formulation was preferred by about 87% of participants.
Conclusions: Sertaconazole is strongly preferred by clinicians for managing fungal infections in dermatology, particularly tinea pedis and tinea corporis, owing to its dual fungistatic and fungicidal activity, high perceived efficacy, and tolerability. Its expanding use in pityriasis versicolor and seborrheic dermatitis indicates growing recognition of its broader therapeutic potential.

Keywords: Sertaconazole, Fungal infections, Dermatophytosis, Tinea pedis, Tinea corporis, Topical antifungals

INTRODUCTION

Fungal infections of the skin, hair, and nails are among the most common diseases globally, affecting an estimated 20 to 25% of the world's population, or up to two billion individuals.[1] Superficial fungal infections account for the majority of these cases, with dermatophyte infections being most common, while mucosal *Candida* infections affect tens of millions, and serious systemic fungal infections impact nearly 150 million individuals.[2]

According to a recent Global Burden of Disease (GBD) analysis (1990 to 2021), fungal skin diseases affected approximately 1.73 billion individuals globally in 2021. The study reported higher age-standardized incidence, prevalence, and disability adjusted life year (DALY) rates among men than women, with disease burden rising with

age. Regions with low and middle sociodemographic indices, particularly in Asia, experienced the highest impact, and the burden is increasing, especially in lower-income regions.[3] In India, the prevalence of chronic, recurrent, and difficult-to-treat dermatophytosis has risen sharply in recent years, amounting to an ongoing epidemic that extends across the Indian subcontinent.[4]

These infections significantly impair quality of life and impose a considerable financial strain on patients. In severe cases, fungal infections can be life-threatening, with mortality rates estimated to be comparable to those associated with tuberculosis.[2,5,6] The rising incidence of superficial fungal infections, together with the growing rates of antifungal resistance, poses a major global health concern and a significant economic burden. In recent years, dermatophytes, the primary pathogens responsible for these infections, have increasingly demonstrated resistance to antifungal agents. This emerging resistance has been particularly noted in common species such as *Trichophyton rubrum* and *Trichophyton mentagrophytes.*[7]

Sertaconazole nitrate is a broad-spectrum imidazole antifungal agent with additional antibacterial, antiinflammatory, and antipruritic properties. As a newer topical azole, it acts by inhibiting ergosterol synthesis, an essential component of the fungal cell membrane, thereby disrupting fungal growth and replication. At higher concentrations, sertaconazole also binds to nonsterol lipids in the fungal cell wall, increasing permeability and causing mycelial lysis. Thus, depending on its concentration, sertaconazole exhibits both fungistatic and fungicidal activity.[8,9]

Although there are several studies on the safety and efficacy of sertaconazole in dermatology, there is a dearth of studies among dermatologists in clinical settings. This study aims to elucidate perceptions of efficacy, formulation preferences, and the range of dermatological conditions for which sertaconazole is indicated.

METHODS

A cross-sectional study was carried out among dermatologists involved in the management of a wide range of dermatological conditions in the major Indian cities from June 2024 to December 2024. The study was conducted after getting approval from Bangalore Ethics, an Independent Ethics Committee, which was recognized by the Indian Regulatory Authority, the Drug Controller General of India.

An invitation was sent to leading dermatologists in managing a wide range of dermatological conditions in the month of March 2024 for participation in this Indian survey. About 599 clinicians from major cities of all Indian states, representing the geographical distribution, shared their willingness to participate and provide necessary data.

The questionnaire booklet titled the SERENE study was sent to the clinicians who were interested in participating in the survey. The study questionnaire comprised 23 questions that assessed clinical characteristics, diagnostic approaches, treatment preferences, and perceived efficacy for topical antifungals, with a specific focus on sertaconazole usage. Reliability, as determined by a split-half test (coefficient alpha), was adequate but should be improved in future versions of the questionnaire. A study of criterion validity was undertaken to test the questionnaire and to develop methods of testing the validity of measures of Physicians' Perspectives. However, the extraneous variables in this include the clinician's experience, usage of the newer drugs, etc. The two criteria used were the doctors' perspectives from the clinical practice and the assessment of an external assessor and statistician. Clinicians had the option to skip questions as desired and were instructed to complete the survey independently, without peer consultation. Before participating in the survey, all respondents provided written informed consent.

Statistical analysis

The data were analyzed using descriptive statistics. Categorical variables were presented as percentages to provide a clear understanding of their distribution. The frequency of occurrence and the corresponding percentage were used to represent the distribution of each variable. To visualize the distribution of the categorical variables, pie and bar charts were created using Microsoft Excel 2013 (version 2409, build 16.0.18025.20030).

RESULTS

The survey included 599 dermatologists. Around 32% of respondents reported seeing 21–30 cases of fungal skin infections per week in their clinical practice. More than half of the clinicians (52.24%) identified tinea cruris as the most common type of fungal skin infection in their clinical experience. Approximately 56% observed fungal skin infections, most commonly among patients aged 31–45 years. A substantial proportion of clinicians (68.7%) agreed that recurrent fungal skin infection could indicate undiagnosed diabetes. Nearly 47% observed 11–20 relapse cases of fungal skin infections per month in their practice. Around 42% of experts indicated that 10–20% of their patients with cutaneous fungal infections experienced relapse. The vast majority of clinicians (84.96%) relied on clinical history and examination as the primary method for diagnosing fungal skin infections.

Nearly 48% of participants favored individual one-to-one sessions as the most effective approach for educating patients on preventing fungal skin infections. A large proportion of clinicians (70.53%) indicated that itching is the most frequent symptom reported by patients with dermatophytosis. Approximately 84% opted for a combination of topical and systemic antifungals as their preferred treatment for tinea unguium. Nearly 49%

preferred topical antifungals for patients with localized tinea corporis. Around 51% recommended a six-week duration of topical antifungal monotherapy for dermatophytosis.

Table 1: Distribution of responses to preferred topical azole for the treatment of tinea pedis (n=492).

Topical azole	Response rate (%)
Clotrimazole	22 (4.47)
Miconazole	19 (3.86)
Luliconazole	188 (38.21)
Sertaconazole	260 (52.85)
All of the above	3 (0.61)

Table 2: Distribution of responses to preferred topical agents for the treatment of tinea corporis (n=492).

Topical agents	Response rate (%)
Sertaconazole	300 (60.98)
Terbinafine	47 (9.55)
Amorolfine	112 (22.76)
Clotrimazole	17 (3.46)
Luliconazole - eberconazole, miconazole, ketoconazole	16 (3.25)

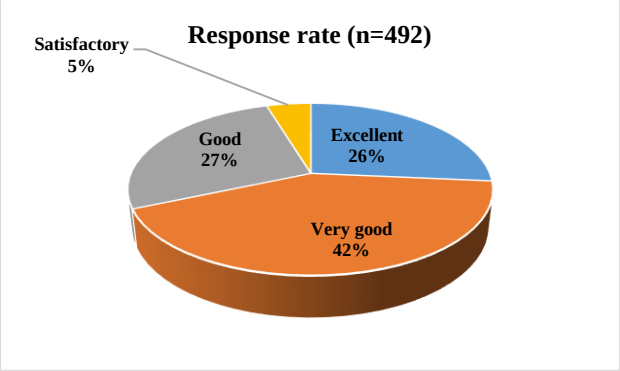

Figure 1: Distribution of responses on clinicians' rating of sertaconazole efficacy in fungal skin infections.

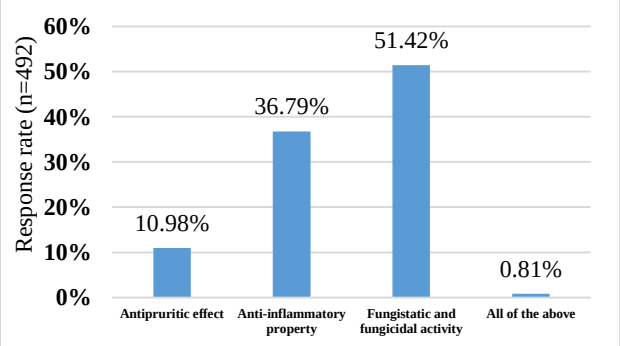

Figure 2: Distribution of responses on clinicians' perceived reason for superiority of sertaconazole over other topical antifungals.

Nearly 53% favored sertaconazole as the preferred topical azole for treating tinea pedis (Table 1). Around 61% of experts preferred sertaconazole as the topical agent of choice for managing tinea corporis (Table 2). Approximately 42% rated the clinical efficacy of sertaconazole as "very good" in the management of fungal skin infections (Figure 1). According to 51% of participants, the combined fungistatic and fungicidal activity is the key reason for the superiority of sertaconazole over other topical antifungals (Figure 2).

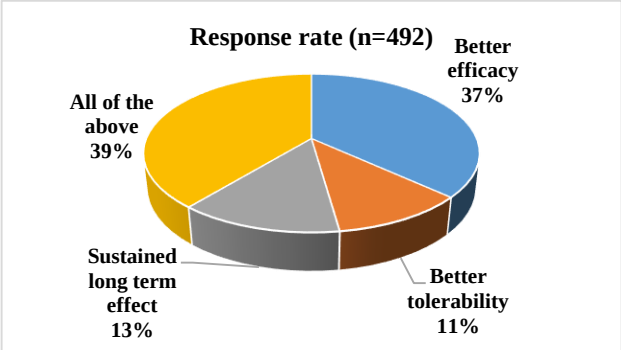

Figure 3: Distribution of responses to clinicians' opinions on the advantages of sertaconazole.

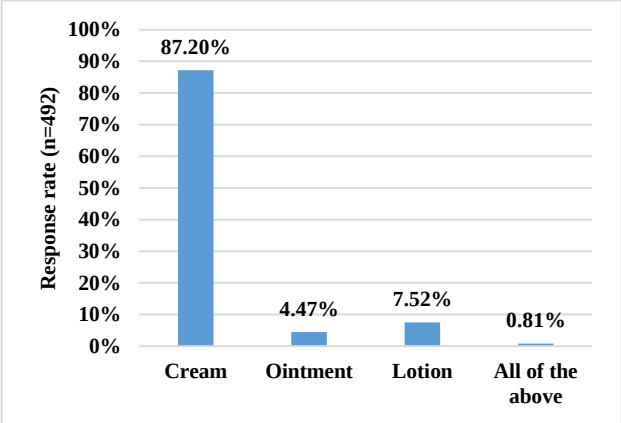

Figure 4: Distribution of responses to the preferred form of sertaconazole used in clinical practice.

The majority of clinicians (72.56%) indicated that they sometimes use sertaconazole cream for pityriasis versicolor, while 68% reported occasional use in seborrheic dermatitis (Table 3). Most clinicians (62.4%) considered good efficacy to be the key advantage in recommending sertaconazole in their clinical practice (Table 4). Around 39% indicated that factors such as better efficacy, tolerability, and a sustained long-term effect are the main advantages of sertaconazole (Figure 3). The majority of experts (87.2%) preferred the cream formulation of sertaconazole in their clinical practice (Figure 4). Around 68% recommended a six-week course of sertaconazole therapy for managing tinea cruris. More than half of the participants (55.49%) observed dryness as the most common side effect associated with sertaconazole cream use.

Table 3: Distribution of responses on clinician preference for sertaconazole cream in pityriasis versicolor and seborrheic dermatitis (n=492).

Response	Response rate (%)	
	Pityriasis versicolor	Seborrheic dermatitis
Yes	59 (11.99)	54 (10.98)
No	68 (13.82)	96 (19.51)
Sometimes	357 (72.56)	335 (68.09)
Never	8 (1.63)	7 (1.42)

Table 4: Distribution of responses to clinicians' perceived advantage of recommending sertaconazole (n=492).

Advantages of sertaconazole	Response rate (%)
No relapse	20 (4.07)
Good efficacy	307 (62.4)
Better patient compliance	82 (16.67)
All of the above	83 (16.87)

DISCUSSION

The study findings reveal a strong endorsement of sertaconazole across multiple dermatological indications, with clinicians consistently recognizing its therapeutic advantages over other topical antifungals. A notable preference was observed for sertaconazole as the topical azole of choice for tinea pedis and tinea corporis, aligning with evidence from clinical studies. In a multicenter randomized study by Borelli et al., involving patients with tinea corporis, tinea pedis interdigitalis, and cutaneous candidiasis, treatment with 2% sertaconazole for 28 days resulted in pathogen eradication and marked reduction in clinical symptoms in over 90% of patients, with no adverse events reported. These findings established 2% sertaconazole as a highly effective and well-tolerated therapy for fungal skin infections.[10] In another randomized controlled trial by Borelli et al, patients with tinea pedis interdigitalis showed significant improvement after 4 weeks of treatment with 2% sertaconazole nitrate cream, with resolution of erythema in 63.7% of participants, desquamation in 33%, and itching in 91.2%. Adverse events were infrequent (8.7%) and none were serious, further confirming its safety and efficacy.[11] Similarly, in a clinical trial by Choudhary et al, treatment with 2% sertaconazole nitrate cream in patients with localized tinea corporis and tinea cruris achieved a 100% complete cure within three weeks, with excellent tolerability and no reported adverse effects.[8]

The present study revealed that clinicians are using sertaconazole for conditions beyond typical dermatophytoses. Most participants reported occasional use in pityriasis versicolor and seborrheic dermatitis. This relatively high "sometimes" usage pattern reflects cautious but growing confidence in the drug's broader antifungal spectrum. In a randomized trial, 2% sertaconazole cream achieved clinical and mycological cure rates of 82.3% and 86.3%, respectively, in pityriasis versicolor, outperforming clotrimazole.[12] In a comparative trial with 1% clotrimazole cream, sertaconazole produced a significantly greater reduction in disease severity and higher patient satisfaction, with 90% of patients reporting good outcomes after four weeks and no relapses during follow-up.[13] Another study comparing 2% sertaconazole with 1% hydrocortisone cream similarly demonstrated superior patient satisfaction (85.1% vs. 76.9%) and sustained remission after treatment.[14] These findings underscore the efficacy, safety, and excellent tolerability of 2% sertaconazole cream, supporting its role as a valuable topical option for managing seborrheic dermatitis.

Another notable finding of the present study is that 42% of clinicians rated the clinical efficacy of sertaconazole as "very good" in managing fungal skin infections, and a majority (51.42%) attributed its superiority to the combination of fungistatic and fungicidal activity. This dual mechanism of action distinguishes sertaconazole from many other topical azoles that are primarily fungistatic. In a study by Carrillo-Muñoz et al, data from 150 clinical isolates of the dermatophytes *T. rubrum*, *T. mentagrophytes*, and *E. floccosum*, the main causative agents of tinea pedis, showed that sertaconazole exhibits both fungicidal and fungistatic properties, demonstrating stronger activity against *T. rubrum* and *E. floccosum* than against *T. mentagrophytes*.[15]

In this study, 62% of clinicians identified good efficacy as the principal advantage for recommending sertaconazole. Additionally, 39% of clinicians cited a combination of factors such as superior efficacy, enhanced tolerability, and sustained long-term effects as the main reasons for their preference. This multifactorial endorsement highlights sertaconazole's comprehensive therapeutic profile, addressing several clinical priorities simultaneously, including effectiveness, patient comfort, and sustained remission.[8,9,16-19] Unlike conventional topical azoles such as clotrimazole, miconazole, and ketoconazole, which are predominantly fungistatic and often require twice-daily application, sertaconazole 2% cream achieves fungicidal concentrations within the stratum corneum. This unique property is attributed to the presence of a lipophilic benzothiophene ring within its molecular structure, which facilitates enhanced dermal penetration and prolonged retention in the epidermal layers. This allows for a convenient once-daily application, improving treatment compliance and patient satisfaction.[20]

The preference for the cream formulation (87.2%) likely reflects both practical and therapeutic considerations. A meta-analysis by Georgescu et al, demonstrated the superior efficacy of sertaconazole 2% cream in the management of seborrheic dermatitis. The study reported notable symptom improvement, a favorable safety profile, and greater patient satisfaction compared to other

topical agents such as hydrocortisone and ketoconazole creams. Additionally, sertaconazole use was associated with a lower relapse rate.[21]

This survey of 599 dermatologists from multiple areas across India provides valuable insights into clinician preferences and the use of sertaconazole in dermatological practice. The structured one-on-one interview approach enabled the collection of comprehensive data on diagnostic strategies, treatment choices, efficacy perceptions, and clinical decision-making patterns, offering a practical reflection of current antifungal use in routine care. The consistency of these findings with published clinical evidence further supports the reliability and external validity of the reported preferences. However, certain limitations of the survey must be acknowledged. The cross-sectional and self-reported design impairs the assessment of longitudinal or outcome-based trends and introduces the possibility of recall bias. The purposive sampling method may limit generalizability to all dermatology practices.

CONCLUSION

This study underscores clinicians' preference for sertaconazole as an effective, well-tolerated, and versatile topical antifungal. Its consistent use for tinea pedis and tinea corporis is supported by robust clinical evidence demonstrating high cure rates and low relapse. The combined fungistatic and fungicidal activity, along with anti-inflammatory effects, reinforces its superiority over conventional azoles. Increasing use in conditions such as pityriasis versicolor and seborrheic dermatitis further reflects growing recognition of its broader therapeutic potential. The predominant choice of the cream formulation highlights its favorable efficacy, safety, and patient satisfaction profile, establishing sertaconazole as a preferred topical therapy for fungal infections in dermatology.

ACKNOWLEDGEMENTS

Authors would like to thank all the dermatologists who participated in this study.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Manjula S, Krishna KM. Clinical perspectives and treatment preferences for sertaconazole in the management of cutaneous fungal infections. Int J Res Dermatol 2026;12:54-9.