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COMPARATIVE REVIEW OF ORAL FLUCONAZOLE AND ITRACONAZOLE IN THE MANAGEMENT OF SEBORRHEIC DERMATITIS: EFFICACY, SAFETY, AND QUALITY OF LIFE OUTCOMES

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Abstract

Introduction

Seborrheic dermatitis (SD) is a long-lasting inflammatory skin condition characterized by redness, flaking, and itching, primarily impacting areas with a high density of sebaceous glands. The Malassezia species are regarded as significant factors in its development, making antifungal treatment a key element in management. Oral antifungal medications such as fluconazole and itraconazole are frequently utilized in cases that are moderate to severe or recurrent. This review was designed to evaluate and compare the effectiveness, safety, and quality-of-life outcomes linked to oral fluconazole and itraconazole pulse therapy in individuals with seborrheic dermatitis.

Materials and Methods

A detailed review of the current literature was conducted, using peer-reviewed articles, clinical trials, systematic reviews, and observational studies about the use of oral fluconazole and itraconazole in treating seborrheic dermatitis. The relevant studies were assessed with an emphasis on treatment effectiveness, recurrence rates, safety profiles, and quality-of-life outcomes measured with validated dermatological assessment tools like the Dermatology Life Quality Index (DLQI).

RESULT

Findings from the studies showed that both fluconazole and itraconazole significantly eased the symptoms of seborrheic dermatitis, including redness, flaking, and itching. Itraconazole pulse treatment consistently showed better long-term disease management, lower rates of recurrence, and greater improvements in quality-of-life assessments. Fluconazole appeared as a suitable and well-tolerated option, especially for patients who preferred easier dosing schedules or could not tolerate itraconazole. Both treatments had acceptable safety profiles, but itraconazole had a higher risk of drug interactions and liver toxicity, which required careful monitoring.

CONCLUSION

Both oral fluconazole and itraconazole work well for treating seborrheic dermatitis. However, research shows that itraconazole pulse therapy offers better long-term results and improves patients' quality of life, especially for those with severe or recurring cases. Fluconazole remains a good choice because of its tolerability and simple dosing. More comparative clinical studies are needed to create standardized treatment guidelines.

KEYWORDS: Seborrheic dermatitis, Fluconazole, Itraconazole, Pulse therapy, Oral antifungal therapy, Malassezia, Quality of life, DLQI, Efficacy, Safety.

Introduction

Seborrheic dermatitis (SD) is a common, chronic dermatosis that often involves sites rich in sebaceous glands, such as the scalp, face, and chest. Clinically, the disorder is characterised by erythema, scaling, and pruritus. While the definite etiology remains unknown, it has been hypothesized that a polyfactorial interaction between genetic, environmental, and microbiologic factors, i.e., Malassezia yeast proliferation, are involved. In the mildest cases, symptomatic treatment using the topical mode with antifungal shampoos and corticosteroids has been found effective. Alternatively, in cases of increased severity or if the topicals are of no use, the systemic antifungals fluconazole and itraconazole have been found effective alternatives.

Both fluconazole and itraconazole are effective at targeting Malassezia yeast, but they differ in how they work and how they're absorbed in the body. Fluconazole is easier to take because it has good absorption and a long-lasting effect, which makes it more convenient for patients to stick with the treatment. On the other hand, itraconazole has a broader antifungal action, which might make it more effective for some people, especially in severe cases. For doctors, the recommendation is to consider itraconazole pulse therapy for patients with more stubborn or recurring cases of SD.

This treatment can provide long-term relief and reduce the chance of symptoms coming back. Fluconazole is still a solid option for people who need less frequent doses or can't take itraconazole because of its side effects. Either way, you need to watch for drug interaction and altered liver function during use, especially in the long term. Finally, physicians must take into account **the quality of life (QoL)** effect of SD through the use of instruments such as the **Dermatology Life Quality Index (DLQI**) to further comprehend how the disease influences a patient's life on a day-to-day basis, rather than their skin. Treatment must be individualized to each patient to yield the best result.

Importance of antifungal treatment

Severe seborrheic dermatitis (SD) caused by Malassezia fungus has been effectively treated with oral antifungal drugs.[1] In 83.3% of the patients, itraconazole led to the disappearance of clinical symptoms and reduction in Malassezia spores[2] (J. Das et al., 2011; Adhikary et al., 2021). Ninety-three percent of the patients were negative for fungal tests, and 85% of the patients had a clinical cure following the application of fluconazole and topical clobetasol propionate[3] (Zisova, 2006). Itraconazole, terbinafine, fluconazole, ketoconazole, and pramiconazole are the most commonly used oral drugs for SD treatment, with different dosing regimens, as per a systematic review of the subject[4] (Gupta et al., 2014). Nevertheless, the quality of the evidence was generally low, and since endpoints were different, it was difficult to compare the treatments directly.

Justification for contrasting itraconazole and fluconazole

When considering the treatment of seborrheic dermatitis the key aspect is managing this chronic, relapsing condition that frequently is resistant to topical therapy[5]. The effectiveness of oral antifungal agents is of special interest [6]. It has been shown that itraconazole and fluconazole are effective against Malassezia species[7] (Meran and Saeed, 2018; Khondker et al., 2012; Borda et al., 2018). Both itraconazole and fluconazole target these fungi effectively)but they have different pharmacokinetic properties and may provide different rates of recovery or patient experience.

The principle of the itraconazole-oral fluconazole comparison, especially under pulse regimens, was reasoned based on the treatment outline suggested by the current data. Both medications have shown some efficiency in decreasing the severity of seborrheic dermatitis signs, such as erythema and scaling, but their intake regimens and safety profiles are variable. Khondker et al. suggested that fluconazole could be considered as a less expensive alternative, especially for those patients who are nonresponsive to topical products or have a large number of lesions (Khondker et al., 2013)[8] Significance of the study is the safety of fluconazole in pulse therapy, which makes it a practical choice for chronic management [6]. Itraconazole on another hand was positives for its anti-inflammatory properties, as well as achieving higher tissue concentrations, which substantiates its efficacy in persistent cases of SD[9] (Khondker et al., 2012; Ghodsi et al., 2015).

Efficiency studies between these two medications have few references in the literature; however, Alizadeh et al. point out the direction that systemic medications are more preferable to support the disease in remission and to prevent its recurrences[10] (Alizadeh et al., 2014). It is required to conduct specific trials comparing fluconazole and itraconazole to determine the most appropriate treatment pathway. For example, Ghodsi et al. have given relatively strong evidence of itraconazole to prevent the disease from relapse, which can be the best option for patients with chronic diseases related to seborrheic dermatitis[9] (Ghodsi et al., 2015).

In addition an original mechanism of action, itraconazole has unique ability mediate growth of Malassezia species[5] and modulate inflammatory pathways, which causes rapid symptomatic relief[2] (Meran Saeed, 2018; ., Adhikary et al., 2021). In contrast, fluconazole is primarily fungistatic, [8]which may require more prolonged therapy to be optimally effective in a population prone to recurrent flare-ups[11] (Khondker et al., 2013; ., Gupta et al., 2013).

Clinical practices are additionally influenced by individual patient responses, drug side effects, and cost-effectiveness considerations. As Meran and Saeed argued, the evaluation of both medications allows clinicians to tailor treatments according to patients` conditions, hence making an intervention both effective and economical[5] (Meran & Saeed, 2018).

Oral itraconazole and fluconazole pulse therapy needs to be compared as both are established for treating seborrheic dermatitis, though their mechanisms of action and adverse effect profile are different, and such differences may have an impact on the patient's quality of life. Future studies could understand the differences between these two medications better to be able to provide more effective treatment for such difficult patients.

Pulse therapy concept in dermatology

Pulse therapy with itraconazole and fluconazole: this therapeutic modality is a widely used approach to the treatment of a number of dermatological fungal infections, such as onychomycosis, caused by dermatophytes or Candida species, because of the substantial documented safety and efficacy of itraconazole, especially with the pulse regimen, thus making this drug, if not the only, than one of the most effective treatment options for this condition.

Itraconazole pulse therapy was found to be markedly effective for treating onychomycosis. Gupta et al. conducted a systematic review discussing the effectiveness of pulse itraconazole regimens, where itraconazole is given at 400 mg/day for 1 week monthly. This regimen has shown a high mycological cure rate, especially for dermatophyte infections. A study found that the mycological cure rate of pulse therapy was 88.2% for toenail infections[12] (Gupta et al., 2019). Similarly, a study by Zhang et al. found the safety and tolerance of high-dose itraconazole, thus supporting its use in pulse therapy.

In addition fluconazole pulse therapy, especially for Candida-related onychomycosis, is a credible alternative[13] (Ameen et al., 2014). The British Association of Dermatologists has made a recommendation of a pulse dose of fluconazole, or 300 mg of the drug once a week or daily doses that are effective (Ibid). In a comparative study, it was found that the effectiveness of fluconazole and itraconazole was similar to that of fluconazole[12], and it was concluded that both drugs are effective in the treatment of onychomycosis[11] (Gupta et al., 2019; Gupta & Paquet, 2013). This is especially important considering the well-known efficacy of fluconazole in the treatment of fungal infections.

Furthermore the mechanism of itraconazole i.e. inhibition of the synthesis of ergosterol in the fungi cell membranes, ensures a reliable impact of itraconazole on a broad range of fungal pathogens without all the toxicity that is typical for the antifungals of systemic application (Adelina, 2024). In patients with onychomycosis, it was demonstrated that with the pulse therapy regimen, that is, the administration of the drug every 2 months, the duration of treatment for the treatment of toenail infections is 3–4 months[14] (Adelina, 2024).

The choice between itraconazole and fluconazole can also depend on specific cases. Research reveals that itraconazole pulse therapy most often occurs as the best choice of therapy for toenail onychomycosis of the dermatophyte type because it is extremely effective and gets efficiently absorbed into the human system. On the other hand, where there

is a candidal infection, fluconazole could be an equally useful choice because it is effective against a broad range of fungal pathogens[15] (Widaty et al., 2019).

Of note, itraconazole not only works well in adults—it has been used successfully to cure tinea capitis, a fungal infection of the scalp, in children, and that it is equally effective in different age groups and infections[16] (Zhou et al., 2021).

In fact, the use of itraconazole and fluconazole pulse therapy has proven to be an incredibly effective method in the management of a very broad spectrum of fungal skin infections. But in reality, the real secret to successful outcome is personalized treatment. Every patient is unique, and the particular fungus responsible for the infection can play a gigantic role in the effectiveness of the treatment. Therefore, tailoring the therapeutic process to the individual and his or her infection is the secret to the best results.

Efficacy of Oral Antifungal Agents in Seborrheic Dermatitis

Clinical outcomes with fluconazole

Seborrheic dermatitis (SD) is a chronic inflammatory dermatosis that is commonly associated with overgrowth of Malassezia species. Systemic antifungal drugs such as fluconazole have been reported to be therapeutic in the treatment of SD[3] (Zisova et al., 2006).

A placebo-controlled trial by Cömert et al. (Comert et al.,2007) attempted —fluconazole 300 mg once a week for two weeks. While the fluconazole pulse therapy group showed a change in the Seborrheic Dermatitis Area Severity Index (SDASI) scores, it was not statistically different from the placebo group. The authors hypothesized that longer treatment duration or an alternative dosing regimen may be more successful. Overall, fluconazole would seem to be an effective therapy for SD but perhaps dose- and duration-dependent.[17]

Clinical outcomes with itraconazole

A study by Prasad et al. evaluated the efficacy of itraconazole pulse therapy in 30 patients with moderate to severe SD. Participants received 200 mg per day for 7 days, followed by 200 mg per day for 2 days in the following 2 months on the 90-day follow-up, 60% of the patients exhibited detectable improvement, 23.3% exhibited moderate improvement, and 16.6% exhibited no improvement. Erythema, scaling, and itching symptoms were significantly reduced [18][Prasad et al.,2010].

In another study, Gupta et al. administered 200 mg of itraconazole daily to SD patients for seven days. Ninety-one percent of participants gave a extensive response. According to the study's findings, short-course itraconazole pulse therapy may be a useful substitute for ongoing antifungal treatment for Seborrheic Dermatitis[19] [Gupta et al., 1997].

A longer pulse therapy regimen was also evaluated in a clinical trial. In this regimen, patients took 200 mg of itraconazole daily for the first week of the first month, and then 200 mg on the first two days of every consecutive month for 11 months. Three patients showed a slight improvement, and 19 out of 28 patients experienced complete remission after the 12-month evaluation[20] [Ortonne et al., 2017].

These results indicate that itraconazole pulse therapy is a safe and effective treatment modality for SD, with significant relief of symptoms and decrease in the rate of recurrence. Based on its good clinical outcome, itraconazole pulse therapy could be an alternative to prolonged antifungal therapy, especially for recurrent or severe SD.

Comparative studies of fluconazole and itraconazole

Itraconazole pulse therapy and fluconazole are effective treatments for seborrheic dermatitis (SD) but of unpredictable efficacy and recurrence.

A trial with fluconazole (300 mg per week for two weeks) demonstrated resolution of symptoms, but results were not notably different from placebo[17] [Comert A et al.,2007]. Another trial with fluconazole 50 mg/day for two weeks, in conjunction with a topical steroid, had 85% complete resolution[3] [Zisova et al.,2006]. Recurrence, however, was extremely high and required extended therapy[17] [Comert A et al.,2007].

Itraconazole pulse therapy, usually 200 mg/day for 7 days and thereafter with intermittent dosing, had better results. In one study, 91% of the patients had complete symptom remission [Gupta et al.,1997]. A prolonged treatment regimen (200 mg/day for 7 days, then 200 mg on the first two days of every month for 11 months) had persistent remission in the majority of the patients.[19]

Itraconazole is more effective for long-term control and reduces recurrence rates better than fluconazole. However, fluconazole remains a safer alternative for those intolerant to itraconazole's potential liver toxicity[3] [Zisova et al.,2006] [Gupta et al.,1997]. Further direct comparisons are needed to refine treatment protocols[19].

Safety and Tolerability Profiles

Adverse effects of fluconazole

Fluconazole is generally well-tolerated, but it may cause adverse effects especially with prolonged use. frequently observed adverse effects encompass nausea, headache, abdominal pain, and diarrhoea[21] [Rex JH et al.,1994]. Less frequently, it can lead to elevated liver enzymes and in rare cases, hepatotoxicity[22] [Lewis RE et al.,2004]. Fluconazole also has the potential for drug interactions due to its inhibition of cytochrome P450 enzymes, which can increase serum levels of certain medications[23] [Dismukes et al.,2000]. Allergic reactions, including rash and, rarely, Stevens-Johnson syndrome have been reported[24] [Darley CR et al.,1995]. Although fluconazole is safer than other systemic antifungals, liver function monitoring is recommended in long-term use.

Adverse effects of itraconazole

Itraconazole is generally well-tolerated, but it can cause gastrointestinal symptoms such as nausea, vomiting, and diarrhoea[22] [Lewis RE et al.,2004]. Headache, dizziness, and skin rash are also reported[25] [Wallace RJ et al.,1994]. Hepatotoxicity, including elevated liver enzymes and rare cases of liver failure, is a significant concern[26] [De Beule K et al.,2001]. Because of its strong inhibition of cytochrome P450 enzymes, itraconazole interacts with multiple

drugs, increasing the risk of toxicity[27] [Venkatakrishnan K et al.,2000]. Additionally, it has been linked to congestive heart failure due to its negative inotropic effects [Janssen PA et al.,1987]. Long-term use requires liver and cardiac monitoring.[28]

Comparative safety analysis

Fluconazole and itraconazole have similar side effects. Nausea and diarrhea are common with both drugs, but itraconazole's gastrointestinal effects are more severe[26] (De Beule & Van Gestel, 2001). Both drugs can cause hepatotoxicity. However, itraconazole may have a higher incidence[27] (Venkatakrishnan et al., 2000). Fluconazole inhibits cytochrome P450, increasing drug interactions. Itraconazole is a stronger inhibitor[23] (Dismukes, 2000). Unlike fluconazole, itraconazole is associated with congestive heart failure. It has negative inotropic effects (Janssen et al., 1987). As a result, itraconazole requires more monitoring in long-term therapy.[28]

Impact on Quality of Life

QoL assessment tools in dermatology

In dermatology, quality of life (QoL) measurement is important as it identifies the psychosocial impact of skin disease in patients. The tools applied to measure this allow for quantification of the impact of skin diseases on daily life, general well-being, and mental health. The Dermatology Life Quality Index (DLQI) is one of the most commonly used tools and a widely accepted measure that can be used across various dermatological conditions, such as psoriasis, atopic dermatitis, and hidradenitis suppurativa.

The Dermatology Life Quality Index (DLQI), formed in 1994, consists of ten questions that cover different aspects of life impacted by skin conditions, including symptoms and social relationships[29] (Otlewska-Szpotowicz et al., 2024). Various studies have confirmed the tool, proving its utility in detecting quality of life (QoL) decline related to skin conditions[30] (Vyas et al., 2024), and it is widely promoted in clinical practice and guidelines for the management of dermatological conditions[31] (Chernyshov et al., 2017). In particular, studies show its ability to detect changes in QoL after therapeutic intervention[32], which has critical importance in clinical trials[33] (Chernyshov et al., 2017; Lau et al., 2011).

Apart from DLQI, there are also condition-specific tools[34]. For instance, VitiQoL is specifically developed for vitiligo patients and measures some of the properties of the condition, thus making the measurement appropriate for these patients[35] (Pathak et al., 2023; Boza et al., 2015). Furthermore, Skindex-29 and its abbreviation, Skindex-16, are common for psoriasis and other psychosocially significant conditions and provide a versatile method.

In dermatology, measurement tools of QoL are crucial to know the complex interaction between the disease of the skin and the life of the patient on a day-to-day basis. Through the application of valid tools like the DLQI, among others, therapeutic plans can be enhanced, treatments can be optimized properly, and overall patient outcomes in various dermatological conditions can be enhanced.

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QoL improvements with fluconazole therapy

Research has also looked at the effectiveness of pulse therapy using fluconazole in improving the quality of life in patients of seborrheic dermatitis. The condition is normally distressing and psychosocially demanding, considering the visible nature of the lesions as well as associated symptoms like pruritus and desquamation. Empirical research shows that successful pharmacological intervention can lead to significant improvements in the health-related quality of life in the patients.

Fluconazole is an antifungal drug, and many studies have validated its effectiveness in the treatment of seborrheic dermatitis, particularly in immunocompromised patients and in cases of severe infection[36]. A comprehensive review of antifungal treatment reveals that fluconazole can significantly inhibit fungal colonization present in seborrheic dermatitis, thus lessening its severity and eventually enhancing quality of life indicators[37] (Brooks et al., 2017; Lubis et al., 2019).

Additionally, there are some quality of life (QoL) measuring instruments, such as the Dermatology Life Quality Index (DLQI), that enable clinicians to quantify the impact of seborrheic dermatitis on daily functioning and mental health. Fluconazole therapies have been reported to have statistically significant improvement in DLQI scores in patients. For example, patients who received fluconazole improved in their symptoms, leading to an improved quality of life as reflected by a reduced DLQI score[38] (Florence & Fuller, 2017). Additionally, research shows that as the physical symptoms of dermatitis reduce[39], psychosocial aspects such as self-esteem and social interaction are likely to improve, thus leading to a general improved sense of well-being[40] (Davis et al., 2017; Feyzi & Madmoli, 2019).

Also, since other treatments for seborrheic dermatitis have been made available, fluconazole provides a convenient regimen with lower frequency of administration compared to other topical antifungals[41]. This convenience factor would improve patient compliance and patient satisfaction rates, both of which are significant predictors of Health-Related Quality of Life (HRQoL) improvements[42] (Seyyedi et al., 2016; Hicks et al., 1992). Also, simplicity of treatment and lower need for administration synonymous with fluconazole therapy can foster a positive self-concept[43] and lower social stigma usually associated with patients of visible cutaneous disease[44] (Khajehei et al., 2010; Kennedy et al., 2006).

Fluconazole pulse therapy has been found to have a strong association with quality of life improvement in the case of patients afflicted with seborrheic dermatitis. Not only does the delivery of antifungal treatment help destroy physical symptoms, but it also helps improve the psychological and social aspects of the patient's life, thus adding to an overall improvement in health-related quality of life.[44]

QoL improvements with itraconazole therapy

Itraconazole pulse therapy has been identified as a therapeutic alternative for seborrheic dermatitis, a prevalent and chronic skin condition controlled primarily by Malassezia yeast growth. Even though the traditional treatment regimens primarily involve topical treatment and systemic antifungal drugs such as fluconazole, itraconazole offers a novel

alternative due to its intrinsic antifungal and anti-inflammatory activities. Consequently, this treatment may significantly improve the quality of life for patients afflicted by this condition.

Different research emphasize the need for attention for treatment in moderate to severe cases or for cases unresponsive to topical treatment of seborrheic dermatitis. Itraconazole has been found useful in reducing the fungi responsible in colonization of Malassezia species which are of great importance in the stricken area's pathology. One study mentions that oral itraconazole treatment led to marked decrease in the counts of Malassezia and improved clinical symptoms, thus bettering the patients' quality of life[6] (Khondker et al., 2012). Furthermore, due to lipophilic properties of itraconazole, therapeutic concentrations in the skin can be accomplished which may aid in controlling relapse after discontinuation of treatment (Khondker et al., 2012) (Văn et al., 2019).[45]

The inflammatory component of seborrheic dermatitis is crucial, as itraconazole not only targets fungal growth but also modulates inflammatory responses[6], as it also inhibits cytokine like interleukin-8 inflammation in developed inflammatory response[46] (Khondker et al., 2012) (Gaitanis et al., 2012). This may result in greater control over inflammation while providing relief from the main symptoms - inflammation of skin and mycosis - which ultimately improves life quality for patients[47] (Kapoor et al., 2023)

Usefulness of itraconazole pulse therapy is already well demonstrated by results of clinical trials. It is well known that patient during and after itraconazole pulse therapy stay a lot more carefree when reflecting on their well-being[45]. Some research showed that within a month after starting treatment with itraconazole, a substantial proportion of patients cleared their skin lesions, and side effects were rarely noted[2] (Văn et al., 2019; (Adhikary et al., 2021). The treatment administration signifies not just a response to treatment but also modification in the day-to-day function and general condition of the patient[2]. Therefore, it can be considered a first-line systemic treatment for the majority of complex cases[48] (Adhikary et al., 2021; Kulthanan et al., 2015).

Itraconazole pulse therapy is an important part of the management of seborrheic dermatitis because it is a valuable drug that directly targets the fungal and inflammatory components of the disease. The mode of this therapy is safe and effective, and can be an important part of the management of this common cutaneous condition.

Comparative QoL analysis

Comparative evaluation of the improvement in quality of life caused by fluconazole pulse therapy and itraconazole pulse therapy in the management of seborrheic dermatitis is important for evidence-based practice and optimal patient care[48]. Seborrheic dermatitis is a long- standing dermatosis that significantly affects the quality of life of patients, causing physical discomfort, cosmetic distress, and mental distress[47] (Kulthanan et al., 2015; Kapoor et al., 2023).

Fluconazole is a triazole antifungal drug classically employed for the management of the majority of fungal infections, including those caused by Malassezia species, which are seborrheic dermatitis pathogens[49] (Belda et al., 2023). Comparative assessment of its efficacy relative to itraconazole is still to be fully elucidated[2]. Itraconazole has been shown to reduce Malassezia levels and has anti-inflammatory effects, both of which are important in lessening the

features of seborrheic dermatitis[50] (Adhikary et al., 2021) (Abbas et al., 2016). A study assessment of the quality of life (QoL) of itraconazole-treated patients revealed significant improvements in the Dermatology Life Quality Index (DLQI), a validated measure to assess health-related QoL in dermatology patients (Abbas et al., 2016). The significant improvement in QoL following itraconazole compared to placebo treatment reflects a significant therapeutic effect in terms of relief of symptoms and overall quality gain.[50]

There is limited evidence on fluconazole's effect on QoL in seborrheic dermatitis. Though fluconazole significantly decreases fungal burden, its benefit over itraconazole in QoL could be counterbalanced. The pharmacokinetic profile of itraconazole provides for long skin residence and prolonged antifungal action, which could allow greater symptomatic relief. Itraconazole pulse therapy is less prone to recurrence and forms an integral part of long-term QoL maintenance in patients with chronic skin diseases such as seborrheic dermatitis.

Moreover, fluconazole therapy also usually calls for a higher frequency of dosing, which may serve as a disincentive to compliance and reduce quality of life. In contrast, the pulse therapy dosing regimen provided with itraconazole provides a more compliant and convenient regimen (Abbas et al., 2016), thus increasing patient satisfaction and overall quality of life[50].

Both itraconazole and fluconazole in general are effective against seborrheic dermatitis. However, itraconazole pulse therapy is of better quality-of-life improvement. This could be due to its anti-inflammatory action and pharmacokinetic profile that optimizes therapeutic effects without the need for daily dosing. These results are important to health care providers in the selection of antifungal medications to optimize patient care and satisfaction in patients with seborrheic dermatitis.

Discussion

Interpretation of findings

Oral antifungals like fluconazole and itraconazole have been successful in the treatment of seborrheic dermatitis (SD), yet their effectiveness and quality of life (QoL) impact vary. Fluconazole, as beneficial as it is in reducing fungal colonization, has high recurrence rates, which require prolonged treatment. It is usually well tolerated but liver function monitoring is advisable because of hepatotoxicity risk. The ease of administration of fluconazole, especially among immunocompromised individuals, can enhance QoL through less physical pruritus and flaking symptoms. Nevertheless, itraconazole has superior long-term SD control. Its pulse therapy regimen offers greater efficacy, longer symptom resolution, and reduced recurrence rates. It is the double action of itraconazole in inhibiting both fungal growth and inflammation that also increases QoL by reducing erythema, scaling, and pruritus as well as being more convenient with fewer doses. Although itraconazole is associated with greater hepatotoxicity and cardiovascular side effects, its efficacy and long-term advantages in SD treatment as an effective therapy make it a drug of choice for severe SD. It is generally safe but needs monitoring, particularly with long-term therapy. In general, itraconazole pulse therapy can provide greater advantages in SD treatment and patient QoL than fluconazole, although fluconazole is an acceptable alternative for patients who prefer less frequent dosing or have itraconazole contraindications.

Conclusion

Summary of key findings

Fluconazole is moderately effective in SD treatment, reducing fungal colonization, but has a high recurrence rate, necessitating long-term or repeated therapy. It is well tolerated, with rare liver toxicity, and may improve QoL by reducing itching and flaking symptoms. However, its potential to improve long-term QoL can be undermined by the need for repeated administration and recurrence.

Itraconazole is more effective than fluconazole for long-term management of SD. Its pulse therapy regimen (200 mg/day x 7 days, with intermittent dosing) offers long-term benefit, reduced recurrences, and more symptomatic improvement. It also affects both fungal growth and inflammation, further enhancing QoL. Despite higher risk of hepatotoxicity and cardiovascular events, its greater efficacy in controlling SD makes it a more desirable choice for severe or chronic SD.

Itraconazole pulse therapy is superior to fluconazole regarding long-term control of symptoms, recurrence, and QoL, based on a comparative study. Fluconazole can be used in less severe cases or when there is a contraindication to the use of itraconazole.

Implications for clinical practice

Itraconazole Consideration in Severe or Recurrent Seborrheic Dermatitis: Owing to its higher long-term efficacy and ability to reduce recurrence rates, pulse therapy with Itraconazole is suggested in patients with moderate to severe seborrheic dermatitis, particularly those who have persisted to be resistant to topical therapy or fluconazole. Its dual effectiveness against both fungal growth and inflammatory response renders it an extremely preferred option for obtaining enhanced relief from symptoms and overall quality of life.

Fluconazole in milder disease or in patients contraindicated for itraconazole: Fluconazole would be an appropriate agent for the treatment of mild to moderate SD, particularly in an immunocompromised patient or one with itraconazole intolerance due to its hepatotoxicity and cardiotoxicity. It also carries a less frequent dosing interval with fewer dosages, which can improve compliance.

Hepatic function monitoring and drug interaction monitoring are essential. Both fluconazole and itraconazole are hepatotoxicity risks; hence, regular monitoring of liver function is important, especially in patients to be treated for a long duration. The drug interactions, particularly with itraconazole, should be more cautiously monitored by the clinicians, as it is a more potent cytochrome P450 enzyme inhibitor.

Individualized treatment schedules should be a priority. As response to therapy and side effects are heterogeneous, treatment should be individualized for the patient. Severity of SD, risk of recurrence, co-morbidities (e.g., cardiovascular or liver disease), and patient preference (e.g., dosing convenience) should determine between fluconazole and itraconazole.

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