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NEWS, VIEWS, & REVIEWS

An Up-to-Date Approach to the Management of Seborrheic Dermatitis

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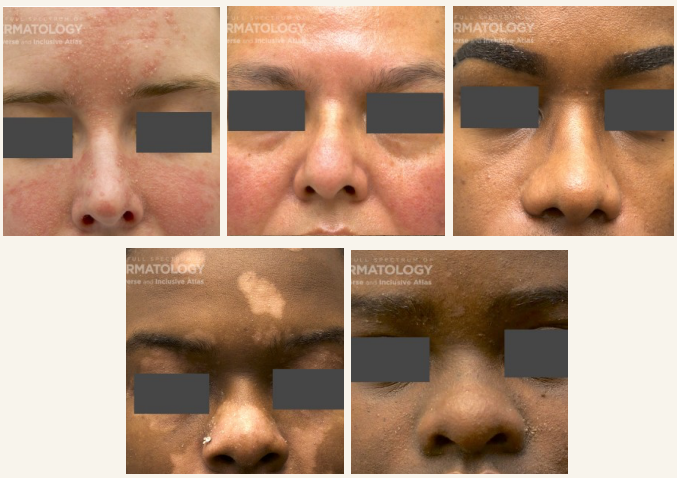
Introduction

Seborrheic dermatitis (SD) is a chronic, relapsing, inflammatory dermatosis with ambiguous pathophysiology of over-colonization of Malassezia combined with predisposing factors including sebocyte activity, impaired immunity with diminished T-cell responses and activation of complements, disruption of epidermal barrier integrity and skin microbiota, and environmental influences.[1,5]

SD has a worldwide prevalence of 5%; 42% of infants experience SD with increased scalp predilection,[1,6,7] and 1% to 3% of adolescents and adults develop SD involvement of the scalp (70.3%), face (87.7%), upper trunk (26.8%), and inguinal folds (5.2%). While the distribution favors areas heavily laden with sebocytes, SD can exhibit an array clinically from ill-defined pink/red to hypopigmented macules and/or arcuate or petaloid thin plaques with or without scale (see Figure 1).[2]

Figure 1. Seborrheic dermatitis of the face.[1,18]



Treatment of SD is variable depending on severity, ranging from topical to systemic agents, with most patients requiring a multimodal, ongoing, approach (see Table 1).[8-10] Herein we review evidence for the treatment of SD utilizing current literature.

Topical antifungals and anti-inflammatory agents are among the most conventional therapies for SD. For mild cases with scalp localization, over-the-counter (OTC) antifungal shampoos including selenium sulfide and 1% zinc pyrithione are often utilized first, even by the patient prior to seeking care, as their active ingredients – coal tar, salicylic acid, sulfur, and sulfacetamide – elicit an amalgamation of antipruritic, keratolytic, antimicrobial, and anti-inflammatory properties.

Inadequate improvement may indicate more moderate-to-severe flares, in which case 2% ketoconazole and 1% ciclopirox are used with topical corticosteroids (TCS), including 0.05% clobetasol and 0.1% fluocinolone.[1,3] It is herein these authors' opinion that these shampoos are best used for maintenance rather than as monotherapy for active flares. TCS can be applied twice daily for 3-week durations, while topical antifungals are used 2 to 3x weekly for maintenance. Similarly, for non-scalp SD, evidence supports intermittent use of weaker TCS (0.05% desonide and/or 1% hydrocortisone) twice daily for 5 to 7 days in combination with an imidazole.[9,11]

Topical calcineurin inhibitors (TCIs), including 1% pimecrolimus and 1% tacrolimus have also shown efficacy for SD.[12] Their selective mechanism inhibits calcineurin, preventing both T-lymphocyte signal transduction and transcription of inflammatory cytokines. Case reports indicate that pimecrolimus elicits marked clinical improvement and reduction of disease severity within 7 days and is equally as effective as TCS (eg, 1% hydrocortisone or 0.1% betamethasone) in controlling SD symptoms, however, with fewer relapses in post-treatment periods of 2 months.[12] Therapy with tacrolimus, as observed by clinical trials, achieved comparable results with twice daily applications for 4-week durations, and thereafter twice weekly for maintenance.[8,13]

More recently, 0.3% roflumilast foam, an investigational formulation of a highly potent and selective phosphodiesterase type 4 inhibitor, has demonstrated efficacy in current phase 3 trials for moderate-to-severe SD.[17] 80.1% of patients achieved Investigator's Global Assessment (IGA) success at week 8 compared with 59.2% of patients treated with vehicle (P<0.0001), with 50% of those patients achieving a score of 'clear'. Furthermore, significant improvements were observed with roflumilast on key secondary endpoints encompassing itch, scaling, and erythema. Roflumilast was well tolerated amidst all patients.[17]

Systemic treatment is considered for recalcitrant SD; customary care uses antifungal and anti-inflammatory properties of itraconazole, fluconazole, and terbinafine.[1,14] Case reports implicate success with itraconazole 200mg once daily for 7 days followed by varying lengths of pulse therapy for 2 to 11 months for moderate-to-severe SD; clinical improvement rates varied from 58.6% to 93.1%, with optimal responses attained within the first month.[14] Similarly, fluconazole pulse regimens of 200mg to 300mg once weekly for 4 weeks or 2 weeks, respectively, have

Table 1. Treating Seborrheic Dermatitis[1,7,14,15]

Therapy	Medication Formulation	Regimen	Reference
Topical Antifungals [Ketoconazole, Ciclopirox Olamine, Selenium Sulfide, Zinc Pyrithione]	***Topical*** [eg, shampoo/cream/gel/foam]	Scalp or skin: once daily x 2 weeks, then once weekly for maintenance	Borda et al[1]
Topical Corticosteroids [Clobetasol, Fluocinolone, Desonide, Hydracortisone]	***Topical*** [eg, solution/ointment/cream]	Scalp or skin: once daily x 7-10 days, then twice weekly for maintenance	Borda et al[1]
Topical Calcineurin Inhibitors [Pimecrolimus, Tacrolimus]	***Topical*** [eg, cream/ointment]	Skin: once to twice daily x 4 weeks	Borda et al[1]
Roflumilast	***Topical*** [eg, foam]	Scalp or skin: once daily x 8 weeks	Park et al[17]
Miscellaneous [Metronidazole, Sodium Sulfacetamide, Lithium Salts, etc.]	***Topical*** [eg, gel/foam]	Skin: twice daily x 4 weeks	Borda et al[1]
Itraconazole	***Oral***	200mg QD x 7 days, followed by once daily x 2 days per month for maintenance	Gupta et al[14]
Fluconazole	***Oral***	200mg once weekly x 4 weeks OR 300mg once weekly x 2 weeks	Gupta et al[14]
Terbinafine	***Oral***	250mg QD x 4 to 6 weeks	Gupta et al[14]
Low-Dose Isotretinoin	***Oral***	10-20mg/Q2Days	Gualtieri et al[15]

been effectively used, accounting for renal function. Patients experienced a mean decrease in Seborrheic Dermatitis Area Severity Index (SDASI) at week 6 for mild-to-moderate SD.[4,14]

Further study analyses demonstrated itraconazole exhibited the greatest anti-inflammatory elements, while terbinafine regimens of 250mg daily for 4 to 6 weeks proved to be more effective in resolving erythema and scales in severe SD when compared to fluconazole. In one clinical trial, terbinafine significantly reduced global clinical score; 82.8% of patients with severe SD experienced clinical improvement, although facial involvement showed minimal benefit.[14] Low-dose isotretinoin (10-20mg/q2day), while conservatively used, has some evidence as a therapeutic modality for moderate-to-severe SD. Treatment for 6 to 11 months reduced sebum production by 64% and resulted in significant decreases in SDASI and itching intensity.[15,16]

Every case of SD is distinct and patient input is critical for determining an individualized, often multimodal treatment regimen. Given that there are no US Food and Drug Agency (FDA) approved therapies for SD, recommendations are often based on personal experience and areas affected. Of importance, regardless of severity, it is imperative to highlight the chronicity of disease to patients to enhance likelihood for management strategy adherence, regardless of whether selenium sulfide, azole antifungals, TCS, or TCI are utilized. Systemic options are available, and low-dose isotretinoin in these authors' opinion, is most effective for more resistant cases. Ultimately, while numerous therapeutic modalities exist for SD, further research and clinical trials are necessary to supplement the existing evidence.

Disclosure

The authors declare no conflicts of interest.

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