A red rash on the face

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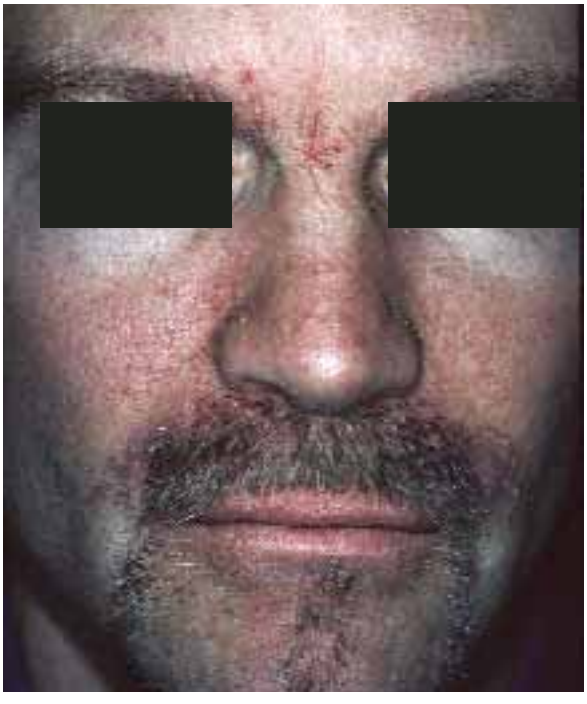
A 28-year-old man came to the office with a rash on his face. He reported he has had this rash on and off for 3 years. The rash sometimes itches around his moustache, and it gets worse with stress—he has been under increasing stress for the past 2 months. He is in good health and does not have any other symptoms, and he denies any risk factors for human immunodeficiency virus (HIV).

Physical examination reveals erythema and scale across his eyebrows, cheeks, and near his moustache. On close inspection, the scale is visible under his moustache and eyebrows as well.

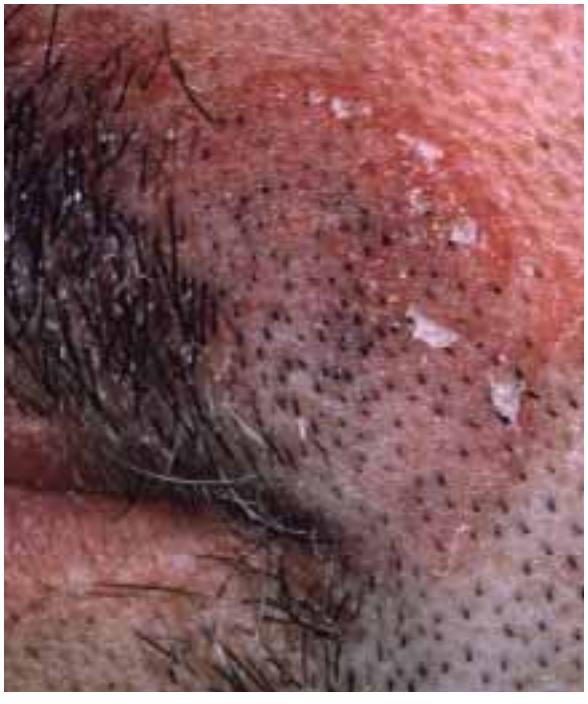
- **WHAT IS THE DIAGNOSIS?**
- **WHAT ARE THE MANAGEMENT OPTIONS?**

FIGURE 1 **Erythema on the face**



This patient has a red, itchy rash across his eyebrows, cheeks, and near his moustache.

FIGURE 2 **Close-up of erythema**



The rash around the patient's mustache.

DIAGNOSIS

This young man has seborrhea (seborrheic dermatitis), a superficial inflammatory dermatitis. It is a common condition characterized by patches of erythema and scaling, usually on the scalp (ie, dandruff), eyebrows, nasolabial creases, forehead, cheeks, around the nose, behind the ears, and under facial hair. Seborrhea can also occur over the sternum and in the axillae, submammary folds, umbilicus, groin, and gluteal creases. These areas are regions with a greater number of pilosebaceous units, which produce sebum.

Seborrhea is thought to be caused by an inflammatory hypersensitivity to epidermal, bacterial, or yeast antigens. Persons with seborrhea have a profusion of *Pityrosporum* yeast on the skin. This yeast can be a normal part of skin flora; seborrhea is an inflammatory reaction to its presence. Seborrhea is characterized by remissions and exacerbations. The most common precipitating factors are stress, immuno suppression, and cold weather. The treatment of seborrhea should be directed at the inflammation and the *Pityrosporum.*

Epidemiology

Seborrhea is most commonly seen in patients aged 20 and 50 years, and mostly in males. The prevalence of seborrhea is approximately 3% to 5% in young adults who are HIV-negative. The prevalence of seborrhea is as high as 36% in HIV-positive persons, although the vast majority of persons with seborrhea have a normal immune system. No lab tests are required to make the diagnosis.

TREATMENT: ANTIFUNGALS AND TOPICAL STEROIDS

Treat seborrhea with a 2-pronged plan: antifungal agents for the yeast and topical corticosteroids for the inflammation. The antifungals can also be used to prevent exacerbations; steroids should only be applied to active areas of inflammation.

Fortunately, seborrhea on the face responds well to low-potency topical corticosteroids, such as 1% hydrocortisone cream or lotion. Still, corticosteroids should not be used on the face for prolonged periods to avoid skin atrophy and other side effects. The lotion is better for hair-covered areas as it is less messy to apply than a cream.

Antifungal shampoos

Over-the-counter dandruff shampoos have been the mainstay of therapy for seborrhea of the scalp. These products often contain selenium (ie, Selsun Blue) or zinc (ie, Head and Shoulders), both of which are toxic to *Pityrosporum.* Often patients have both seborrhea on the scalp and the face, and using these shampoos can cut down the amount of *Pityrosporum* on both. Instruct patients with facial hair to lather their beards and moustache with shampoo as well.

Both ketoconazole (Nizoral) 2% shampoo and selenium sulfide 2.5% shampoo are effective in the treatment of moderate to severe dandruff (level of evidence [LOE]: **1b**).[1] Ketoconazole 2% shampoo is highly effective not only for clearing seborrheic dermatitis on the scalp but also for preventing relapse when used prophylactically once weekly (LOE: **1b**).[2] Ketoconazole has become available in a 1% over-the-counter dandruff shampoo, but the 2% shampoo still requires a prescription.

Treating severe cases

When seborrhea of the scalp becomes more severe, add a higher-potency steroid solution or lotion to the treatment until the exacerbation is under control. Ketoconazole cream is also a good treatment for seborrheic dermatitis in areas other than the scalp. Other antifungal creams such as miconazole can be used to treat seborrhea of the face.

One trial demonstrated the effectiveness of topical 1% metronidazole gel in seborrheic dermatitis (LOE: **1b**). At the 8-week follow-up, 14 patients in the metronidazole group showed a marked to complete improvement compared with 2 in the placebo group ($P<.001$; number needed to

treat=2).[3] This is not an approved indication for metronidazole gel, but it may be considered when other topical medications fail. In a randomized controlled trial using crossover design, treatment with a low-dose homeopathic preparation provided significant improvement in seborrheic dermatitis and dandruff after 10 weeks of dosing (LOE: **2b**).[4]

Most seborrheic dermatitis is fully treatable with topical agents. When topical medications are not providing adequate results, oral antifungal agents may be considered. In 1 study, oral terbinafine was found to be effective in the treatment of moderate to severe seborrheic dermatitis. Clinical improvement following 4 weeks treatment with terbinafine was maintained 8 weeks after completing treatment (LOE: **1b**).[5]

CONCLUSION OF VISIT

The patient was given a prescription for 1% hydrocortisone lotion and 2% ketoconazole cream, both to be applied twice daily to the affected areas. He also planned to investigate the homeopathy option for the future. It was explained to the patient that these treatments may not be curative, and seborrhea may come back when he is under stress.

REFERENCES

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THE JOURNAL OF FAMILY PRACTICE

Evidence-based medicine terms

THE JOURNAL OF FAMILY PRACTICE uses a simplified rating system derived from the Oxford Centre for Evidence-based Medicine. More detailed definitions may be found at its website: http://www.cebm.net/levels_of_evidence.asp.

Level of Evidence characterizes the validity of a study while making no specific practice recommendation

- **1a** Systematic review of randomized controlled trials
- **1b** Individual randomized controlled trial with narrow confidence interval
- **1c** All or none—all patients died before therapy was available, but now some survive; or, some patients died before therapy was available, but now all survive
- **2a** Systematic review of cohort studies
- **2b** Individual cohort study, or low-quality randomized controlled trial
- **2c** "Outcomes" research
- **3a** Systematic review of case-control studies
- **3b** Individual case-control study
- **4** Case series, or poor quality cohort or case-control studies
- **5** Expert opinion

Strength of Recommendation translates a given level of evidence into a practice recommendation

- **A** Includes 1a–c levels of evidence
- **B** Includes levels 2a–c and 3a, b
- **C** Includes levels 4 and 5

Strength-of-recommendation ratings do not always reflect a direct one-to-one correspondence with levels of evidence, as depicted above, but may take into account such variables as intervention cost, ease of use, and impact of the disease in the population.