

Eruptive Sebaceous Hyperplasia: A Rare Consequence of Systemic Corticosteroids

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ABSTRACT

Background: Eruptive sebaceous hyperplasia is a rare and poorly understood consequence of immunosuppression, most commonly with cyclosporine, following organ transplantation. To date, there have been no reports documenting eruptive sebaceous hyperplasia associated with the utilization of immunosuppression outside of this clinical scenario.

Observation: A 43-year-old Caucasian male with a significant history for Crohn's disease presented with the sudden appearance of multiple asymptomatic growths now present for several weeks. They were first noted two weeks following the initiation of a slow prednisone taper prescribed for a recent exacerbation of Crohn's disease. Skin examination revealed multiple 1-3mm, soft, skin colored to yellowish, dome-shaped, umbilicated papules on the forehead and the bilateral lateral/malar cheeks, clinically suggestive and confirmed histologically as sebaceous hyperplasia.

Conclusion: To our knowledge, this is the first reported case of eruptive sebaceous hyperplasia secondary to the use of prednisone in a patient with Crohn's disease. This case brings awareness to the unique side effect of prednisone induced sebaceous hyperplasia, and demonstrates the importance of educating patients with Crohn's disease of this potential side effect when prescribing this medication.

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CASE PRESENTATION

A 46-year-old Caucasian male with Crohn's disease presented with a sudden eruption of asymptomatic growths on his face two weeks after the initiation of a protracted course of prednisone, with a starting dose of 40 mg/day. His past medical history was significant for acne, facial verruca plana, asteatotic eczema, psoriasis and Crohn's disease. His other medications at the time of onset included cholestyramine and mercaptopurine, both of which were long standing therapies.

Physical examination revealed multiple 1-3mm, soft, skin colored to yellowish, dome-shaped, umbilicated papules, diffusely affecting the forehead and bilateral lateral/malar cheeks (Figures 1 and 2). Dermatoscopic exam of an individual papule revealed a collection of small yellowish globules surrounded by groups of orderly winding, scarcely branching vessels which did not cross the midline. A shave biopsy was performed to confirm, which demonstrated a dome-shaped lesion with a central dilated infundibulum attached to multiple lobules of sebaceous glands (Figure 3), supporting a diagnosis of eruptive sebaceous hyperplasia most likely secondary to his recent prednisone course.

DISCUSSION

Sebaceous hyperplasia is a common benign proliferation of sebaceous glands that affects middle to older aged adults. This condition presents as multiple yellow papules with central umbilication, typically on the forehead and central facial areas. Histopathology commonly demonstrates an increased number of enlarged sebaceous gland lobules that originate from the infundibular region of the hair follicule[1]. Reductions in androgen levels associated with increasing age is thought to be the main trigger for sebaceous hyperplasia development. As levels of androgens decrease, so does the sebocyte turnover rate. This slower turnover leads to accumulation of sebocytes within the gland, resulting in glandular hyperplasia.[1] Additional contributing factors that promote sebaceous hyperplasia include increased ultraviolet exposure, insulin, thyroid stimulating hormone and hydrocortisone levels.[1]

The role of immune status in the pathogenesis of this condition is unclear as there have been several reports of sebaceous hyperplasia occurring in the context of immunotherapy after an organ transplant. The common factor among these cases seems to be the use of cyclosporine.[2] Cyclosporine-induced sebaceous hyperplasia is well documented and reportedly occurs in up to 30% of renal transplant patients who receive immunosuppression with cyclosporine.[3] Interestingly, this association does not seem to correlate with the timing of cyclosporine initiation as sebaceous hyperplasia has been shown to arise both during therapy as well as some time after completion of treatment. In a report by Engel et al., a patient experienced sebaceous hyperplasia a decade after his renal transplantation and initiation of cyclosporine.[4]

FIGURE 1. Skin examination revealed sebaceous hyperplasia over the forehead.

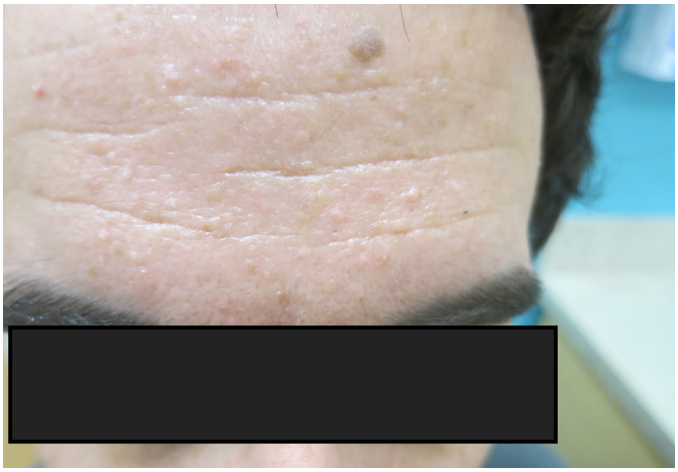


FIGURE 2. Skin examination revealed sebaceous hyperplasia over bilateral lateral/malar cheeks.

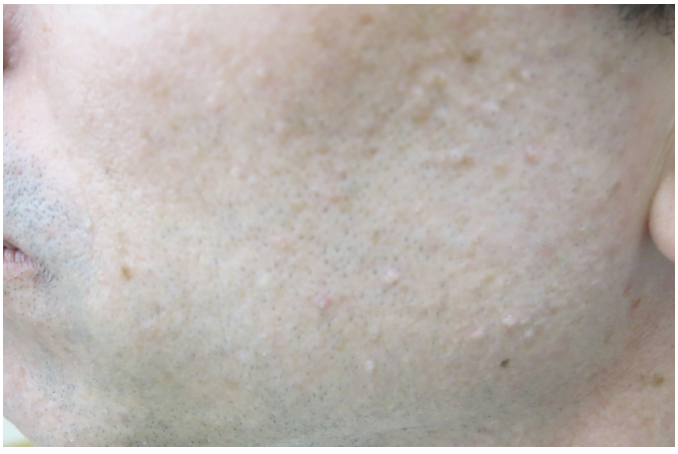
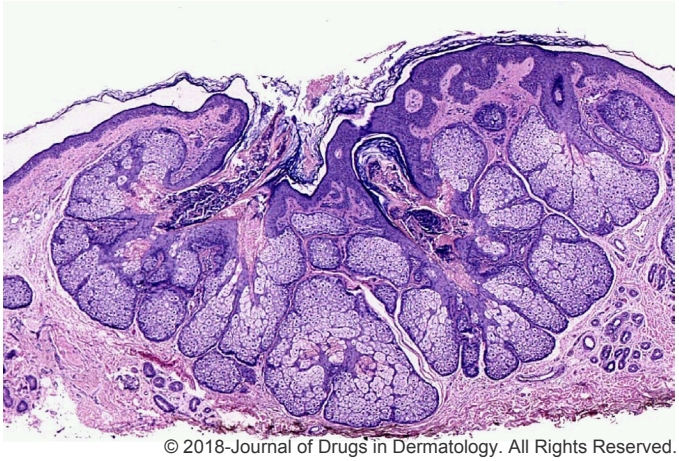


FIGURE 3. Biopsy demonstrating a high number of enlarged sebaceous gland lobules that originate from the infundibular region of the hair follicle.



Although there is a wealth of literature linking cyclosporine use to development of sebaceous hyperplasia, there are few cases involving immunosuppressive medications other than cyclosporine. There is one case of a 39-year-old patient who gradually developed sebaceous hyperplasia following a living donor renal transplant and immunosuppression with prednisone and azathioprine.[5] Similarly, there is one report of a 29-year-old male who exhibited eruptive sebaceous hyperplasia while on tacrolimus, mycophenolate mofetil, and prednisone shortly after receiving his second living donor renal transplant.[3]

Conventional glucocorticoids like prednisone are commonly used to treat active inflammatory conditions like Crohn's disease. Prednisone is characterized as lipophilic in chemical composition, similar to that of cyclosporine. As a result, this drug has a tendency to deposit in glandular areas where hydrophobic substances, such as oil, are secreted. It's possible that the sebaceous gland may serve as a site for prednisone deposition, leading to the enlargement of sebaceous glands.[2,6] Additionally, long-term prednisone therapy suppresses hormones secreted by the adrenal glands, leading to reduced levels of circulating androgens in the body. Therefore, we hypothesize that prednisone's depositional tendency and localized decrease of circulating androgens leads to an increase in size of sebaceous glands thus resulting in the development of sebaceous hyperplasia as seen in this case.

In regard to treatment, cryosurgery, curettage, shave excision and topical trichloroacetic acid have all been effective modalities for sebaceous hyperplasia. However, these treatment modalities often come with the risk of skin discoloration and scar formation.[1] There are several cases of oral isotretinoin completely resolving sebaceous hyperplasia. This vitamin A derivative decreases the size of sebaceous glands by suppressing proliferation of basal sebocytes.[1] Isotretinoin successfully induced responses when dosed 10-20mg/day for several months. However, a high relapse rate was noted in patients who were not maintained on therapy.[1,7] The most recent studies on the treatment options for sebaceous hyperplasia include the use of 1720-nm diode laser treatment, however larger prospective studies are required to confidently endorse this treatment option.[1]

To our knowledge, this is the first reported case of eruptive sebaceous hyperplasia in a Crohn's patient treated with prednisone monotherapy. Similar presentations have been reported, but only in organ transplant patients on immunosuppressants. It is important for clinicians to educate patients on this rare but potential side effect when starting a prednisone course, as the disfiguring nature of this benign condition can be alarming to some patients, and treatment options are limited.

DISCLOSURES

The authors have no conflicts of interest to declare.

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