

Exacerbation of rosacea due to the indiscriminate use of a topical medication containing betamethasone, gentamicin, and clotrimazole: A case report

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Case Report

Dermatology



Background

Rosacea is a chronic inflammatory dermatosis characterized by erythema, papules, pustules, and telangiectasia in the central facial region, without comedones. Its etiology is unknown, although alterations in vascular structure, connective tissue, and immune response to microorganisms such as *Demodex folliculorum* or *Helicobacter pylori* have been implicated as key pathogenic mechanisms. Therapeutic options do not target the underlying pathogenic mechanisms and are not curative due to the ongoing uncertainty surrounding the exact pathophysiology. Treatment is based on the use of topical or systemic antibiotics, anti-inflammatory agents, and retinoids.

Keywords: Rosacea, skin disorders.

Rosacea is a chronic skin condition that primarily affects the facial region, including the nose, cheeks, chin, and forehead. Although its exact origin and pathophysiology are not fully understood, several factors, such as vascular reactivity disorders and immune response to microorganisms like *Demodex folliculorum* or *Helicobacter pylori*, are believed to play a role in its development. Rosacea is characterized by persistent redness of the skin and the appearance of acne-like flare-ups. In more severe cases, a hypertrophic form called rhinophyma, characterized by excessive thickening of the nose, can occur. Additionally, rosacea can be accompanied by ocular problems, manifesting as a combination of blepharconjunctivitis, iritis, scleritis, and keratitis, causing itching, foreign body sensation, and redness.

Clinical classification of rosacea

1. Erythematotelangiectatic Rosacea: characterized by persistent facial redness, dilated blood vessels (telangiectasias), and occasionally facial swelling.
2. Papulopustular Rosacea: characterized by the presence of papules (raised skin lesions) and pustules (small pus-filled bumps) on the face.
3. Phymatous Rosacea: characterized by thickening of the skin, especially on the nose (rhinophyma), although it can also affect other areas of the face.

4. Ocular Rosacea: involves the eyes and manifests with symptoms such as burning, dryness, irritation, redness, and a sensation of grittiness in the eyes.

The diagnosis of rosacea is generally made through clinical evaluation and patient history. Treatment depends on the severity of symptoms and may include topical therapy with medications such as metronidazole or ivermectin, the use of oral antibiotics, and in some cases, isotretinoin. For cases of rhinophyma, surgical rhinoplasty is considered the most effective treatment.

Case report

A 34-year-old male with a history of untreated rosacea since adolescence presented with recurrent episodes of central facial erythema and the appearance of papulopustular lesions that worsen after sun exposure. There were no other significant personal medical history. He reported the onset of his current symptoms two weeks ago after self-medication with an unregulated cosmetic product containing a combination of betamethasone, gentamicin, and clotrimazole applied topically on the face and neck, daily and three times a day for the past two months. On examination, dermatosis was localized in the central facial region and anterior neck, characterized by erythema, papules, and telangiectasia. Vital signs were within normal parameters, and there were no abnormalities in the laboratory tests.

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Figure 1. Upper. Erythematotelangiectatic Rosacea: Flushing, erythema, and telangiectasias are predominant. Lower. Erythematotelangiectatic Rosacea.

Conclusion

Currently, in Mexico, there is a risk warning on the official website of the Federal Commission for the Protection against Sanitary Risks (COFEPRIS) regarding the indiscriminate use of a topical medication containing a combination of betamethasone, gentamicin, and clotrimazole. This medication is commonly used in the Mexican population due to its easy accessibility, low cost, and lack of knowledge about the adverse effects it can cause, both locally and systemically, including

iatrogenic Cushing's syndrome. Under no circumstances is the use of this medication indicated for the treatment of rosacea in any of its clinical presentations.

Conflicts of interests

There are no conflicts of interest.

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