

INTRODUCTION

Pyoderma faciale is an inflammatory condition that classically affects the mid-facial region in women in their 20s and 30s. While it has a unique presentation, it may be confused with other granulomatous, infectious and inflammatory conditions that affect the face in this population. Making the distinction is important in order to promptly initiate appropriate therapy. We review some of the conditions that should be considered in the differential, and discuss how to make the distinction between these entities.

CASE:

A 24 year-old female presents to clinic concerned about a rash on her face that started one month prior to the visit. The rash began on her right cheek, right paranasal area, and chin as erythematous papules and pustules which coalesced in some areas to form erythematous plaques. It rapidly progressed to involve both cheeks and her chin. Upon further questioning she admitted to malaise and subjective fevers. She had no prior treatment for this condition. Her past medical history was remarkable for hypothyroidism for which she was taking Synthroid 50 mcg daily. Her past surgical, social, and family histories were not remarkable. A discussion about initiating treatment with isotretinoin was held with the patient but she initially declined, so she was given a prednisone taper and started on doxycycline. Upon completion of the steroid taper her rash flared again and she agreed to initiate isotretinoin treatment at her one month follow up visit. She given a second prednisone taper and started on isotretinoin 10 mg daily, which was increased to 20 mg at her next visit since her inflammatory papules and pustules were responding well, and her only concern was dryness of the face and lips. However when she returned one month later she complained about headaches, blurry vision, and swelling of the eyes. Isotretinoin was stopped. She was started on Azithromycin 250 mg daily and was referred to ophthalmology to rule out papilledema due to pseudotumor cerebri. Once this was ruled out, she restarted isotretinoin, to which she responded well.

CLINICAL PHOTOGRAPHS:



DISCUSSION:

The first line treatment for pyoderma faciale is isotretinoin. This drug is an effective medication in the treatment of many dermatologic conditions including nodulocystic acne, recalcitrant inflammatory acne, pyoderma faciale, acne fulminans, and gram negative folliculitis. It is a compound chemically related to vitamin A and serves many functions including normalization of keratinization, causing atrophy of sebaceous glands and reducing sebum production, inhibits collagenase, and downregulates proliferative keratins. The goal cumulative dose when using isotretinoin is 120-150 mg/kg.

While being an effective treatment, the side effect profile of isotretinoin is extensive. The most common side effects of isotretinoin therapy observed are xerosis, xerophthalmia, and xerostomia. Most of the time side effects are tolerable, but in severe cases they may be managed by decreasing the dosage of isotretinoin. Pseudotumor cerebri has been described as a side effect of isotretinoin use, and it is important to note that concurrent use of isotretinoin and tetracyclines increases the risk of this complication. Mood changes including depression, suicidal ideation, or other psychiatric conditions have been reported in the literature. Studies looking at spontaneous changes in psychiatric conditions have been inconclusive. Interestingly, in a study evaluating therapy in patients with pyoderma faciale, a multi-drug treatment approach including oral antibiotics, incision and drainage, ultraviolet B, and intralesional steroids led to remission at the one-year follow up in 23 of 25 patients. (2) Based on this study, a multi-drug approach may be prudent in patients resistant to treatment with isotretinoin alone, or patients who are unable to tolerate the side effects.

A special consideration for pyoderma faciale is the pregnant patient. The mainstay of therapy for pyoderma faciale, corticoids and isotretinoin, are contraindicated in the pregnant patient. Isotretinoin is an absolute contraindication, as it has been associated with multiple congenital abnormalities, including craniofacial, cardiovascular, thymic, and central nervous system congenital malformations. Systemic steroids are a relative contraindication when benefits of use outweigh risks, but has been associated with intrauterine growth retardation, maternal diabetes mellitus, and hypertension. Multiple antibiotics generally used for this condition are also contraindicated in pregnancy, including tetracycline, anti-androgenic contraceptives, and dapsone, with documented congenital defects with use. A safe and effective alternative found through various case studies of pregnant patients with pyoderma faciale is the use of macrolides. Azithromycin is generally the best tolerated antibiotics, without risk of congenital malformations of miscarriage.

One case report describes rosacea fulminans with ocular involvement. Slit exam was consistent with keratitis and conjunctivitis, with multiple corneal opacities with secondary vascularization and thinning. Treatment involved daily prednisolone 30 mg, isotretinoin 30 mg, and topical metronidazole ointment for the facial symptoms, and ophthalmic levofloxacin and fluorometholone drops for the ocular symptoms. Symptoms became to improve a month out, and corneal opacities resolves over a 6 month period. (7)

DISCUSSION:

Lupus miliaris disseminatus faciei is a granulomatous entity that can appear similar to pyoderma faciale (9). It presents as asymptomatic, discrete, red-brown, dome shaped papules that erupt bilaterally on the central area of the face, particularly in the periorbital area. (10) Histopathology is characterized by epithelioid granulomas (11), as opposed to the histopathology of pyoderma faciale which shows an inflammatory process. Unlike pyoderma faciale, clinical history does not include flushing, and there is a lack of persistent erythema or telangiectasia. Studies show that early initiation of therapy has been shown to clear the condition without any scarring (12). Topical tacrolimus and dapsone are effective treatments. However dapsone in combination with low dose prednisone are appropriate alternatives.

Granulomatous perifollicular dermatitis is another granulomatous condition that may resemble pyoderma faciale both in morphology and distribution. It is characterized by pink to flesh-colored papules that erupt in the perioral and periorcular regions, with a few cases reporting lesions outside of the facial area, including extremity, trunk, and a few reported cases on the labia majora (13). Histology reveals a dense granulomatous infiltrate with surrounding prominent lymphocytes (14). While pyoderma faciale typically affects middle-aged women, granulomatous perifollicular dermatitis is most commonly found to affect prepubertal black children particularly those with a Caribbean or African descent, occasionally affecting Caucasians as well (15). Topical steroids are heralded as either the cause of this condition or a major exacerbating factor. Therapy involves systemic antibiotics such as metronidazole in young patients or tetracycline in patients over 8 years of age.

Acne conglobata is an inflammatory condition that also resembles pyoderma faciale. The clinical morphology includes numerous comedones and large abscesses with interconnecting sinuses, cysts, and inflammatory nodules generally affecting young males around 16 years of age. Lesions appear on the face, back, buttocks, chest, anterior neck, and shoulders. Therapy with Isotretinoin is recommended early on to reduce the risk of scarring. Additional treatments include oral antibiotics, intralesional and systemic steroids. Other therapeutic options include CO2 laser for sinus tracts, and fractional laser for scars (16). The subpopulation affected, the presence of comedones, and the distribution of the lesions allows the clinician to differentiate between these two diseases.

Tinea faciei may in some cases be difficult to distinguish clinically from pyoderma faciale. Tinea generally affects healthy children, although when found adults may suggest immunocompromise. The causative organisms are dermatophytes of the Trichophyton, Microsporum, and Epidermophyton genera (17). Tinea faciei may lack the typical annular rings found in other fungal infections of the skin, and this can make the diagnosis difficult. A simple KOH prep can be performed in the office to look for dermatophytes in order to differentiate between the two conditions. Treatment of choice are topical antifungal drugs such as azoles (17). It is an important diagnosis to consider because misdiagnosing this condition and treating with steroids will exacerbate tinea faciei.

CONCLUSION

Pyoderma faciale is an inflammatory condition that affects middle-aged women, and presents as inflammatory papules and fluctuant nodules involving the central face, superimposed on background erythema. The clinical picture may vary, however, and one must consider other entities both inflammatory and infectious that may resemble this condition. Prompt diagnosis and early initiation of appropriate may minimize scarring and other adverse sequelae.

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