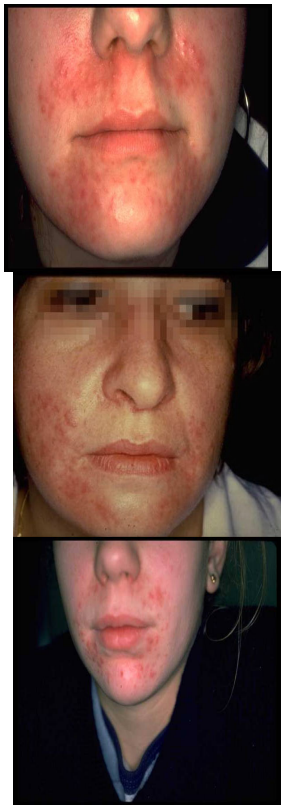

Perioral Dermatitis

Perioral dermatitis is characterized by small discrete papules and pustules in a periorificial distribution, predominantly around the mouth. Although initially described as an eruption in young women 15 to 25 years of age, perioral dermatitis is now recognized to occur occasionally in children as well. A subset of perioral dermatitis shows granulomas when lesional skin is

examined histologically. Several names have been used to describe this granulomatous form of perioral dermatitis, including granulomatous perioral dermatitis, facial Afro-Caribbean childhood eruption, and granulomatous periorificial dermatitis.

HISTORICAL ASPECTS

EPIDEMIOLOGY

Unlike adult perioral dermatitis, which affects predominantly women, pediatric perioral dermatitis is seen equally in boys and girls and among those of different races. The granulomatous form of perioral dermatitis has been reported mostly in children of prepubertal age.An increased prevalence in African American children has been reported, but more recent reviews do not support this finding.

ETIOLOGY AND PATHOGENESIS

The relationship of perioral dermatitis to the misuse of potent topical corticosteroids (fluorinated or non-fluorinated) has been well established.[11] Patients often reveal a history of an acute steroid-responsive eruption around the mouth, nose, and/or eyes that worsens when the topical corticosteroid is discontinued. Dependency

on the use of the topical corticosteroid may develop as the patient repeatedly treats the recurrent eruption. In other cases, the condition may worsen with the application of topical corticosteroids, especially in the granulomatous variant of periorificial dermatitis, which usually occurs in prepubertal children.[1] Perioral dermatitis is not always linked to topical corticosteroids, however. Convincing evidence as to the exact cause of perioral dermatitis in these other cases has not been reported. Of note, the disease is predominant in young women, yet no link to hormonal causes has been found. The initial reports of photosensitivity by Frumess and Lewis were not further substantiated, nor were theories of microbiologic causes such as infection with Candida, fusiform bacteria, or Demodex folliculorum. Nevertheless, perioral dermatitis has been described in immunocompromised children, particularly those with leukemia, who have responded to treatment with permethrin. [13] Cases of allergenic contact with fluorides in toothpaste and dentifrices have also been reported; however, use of

these agents after clearing of the perioral dermatitis without further eruption has also been described. Patch testing in a small series of patients led to few positive results, and these were not considered relevant.

PERIORAL DERMATITIS AT A GLANCE

- · Inflammatory skin disorder of young women and children
- · Small papules, vesicles, and pustules in perioral, periorbital, and perinasal distribution
- · Treatment: Stop topical corticosteroid use; initiate 2- to 3-month course of systemic antibiotics (tetracycline family or erythromycin), topical metronidazole, and/or sulfur preparation

In the past, authors have considered the relationship of periorificial dermatitis to acne rosacea; however, the clinical features are distinct (see Differential Diagnosis). The histopathologic findings are variable. The pathology described in 26 patients showed spongiotic changes in the external root sheaths of the follicles without similarity to rosacea. However, granulomatous perioral dermatitis shows the histopathologic changes of follicular hyperkeratosis, edema and vasodilation of the papillary dermis, perivascular and parafollicular infiltrates of lymphocytes, histiocytes, and polymorphonuclear leukocytes with occasional epithelioid granulomas and giant cells, similar to the histopathologic changes in acne rosacea.[4,15]

CLINICAL FINDINGS

The primary lesions of perioral dermatitis are discrete and grouped erythematous papules, vesicles, and pustules . The lesions are often symmetric but may be unilateral and appear in the perioral, perinasal, and periorbital regions . A background of erythema and scale may occur. A distinct 5-mm clear zone at the vermilion edge is well described . The granulomatous variant of perioral dermatitis presents with small flesh-colored, erythematous, or yellow-brown papules, some with confluence, and shares the distribution of perioral dermatitis in adults. In addition, lesions have been reported to appear on the ears, scalp, trunk, labia majora, and extremities.

Rarely an associated burning sensation or itching is reported, and intolerance to moisturizers and other topical products is described. In a few cases of granulomatous perioral dermatitis an associated blepharitis or conjunctivitis has occurred.[10]

DIFFERENTIAL DIAGNOSIS

The differential diagnosis of perioral dermatitis in young adults includes acne rosacea, acne vulgaris, seborrheic dermatitis, allergic and irritant contact dermatitis, Gram-negative folliculitis, angular cheilitis, and lip-licking cheilitis. In children, the diagnosis of irritant contact dermatitis to saliva from the use of a pacifier, sucking of the thumb or fingers, and messy eating is common and should be considered as well. Infection with D. folliculorum can present like perioral dermatitis but with atypical pustules and symptoms of pruritus,[19] or as a perioral dermatitis-like eruption in the immunocompromised host.
[13]

Differential Diagnosis of Perioral Dermatitis

DISORDER

DISTINGUISHING CLINICAL FEATURES

NONGRANULOMATOUS PERIORAL DERMATITIS

Most Likely

□ Rosacea

Involves the nose, facial convexities; persistent erythema and telangiectasias

□ Seborrheic dermatitis

Accentuated at nasolabial folds; scale

□ Allergic contact dermatitis

Musical instruments, tartar-control toothpaste, latex gloves, dental appliances, and lipstick reported to be

□ Irritant contact dermatitis

Common in children (from saliva, foods)

□ Lip-licking cheilitis

Common in children; scale, well demarcated border

Consider

□ Acne vulgaris

Involves chest and back; comedones

□ Gram-negative folliculitis

Predominance of pustules

□ *Demodex folliculorum* infestation

Atypical pustules, pruritus; immunocompromised host

□ Acrodermatitis enteropathica

Infants with acral and/or diaper dermatitis

GRANULOMATOUS PERIORAL DERMATITIS

Most Likely

 Granulomatous rosacea

Flushing , telangiectasias, pustules, and edema; similar on histopathologic examination

Consider

 Familial juvenile systemic granulomatosis (Blau syndrome)

Synovial cysts, uveitis, granulomatous arthritis, camptodactyly, papular rash

- Fungal or mycobacterial infection

- Lupus miliaris disseminatus faciei

- Benign cephalic histiocytosis

Diffuse distribution on the face

- Sarcoidosis

Rare in children; reported cases may represent Blau syndrome

Granulomatous rosacea, sarcoidosis, lupus miliaris disseminatus faciei, fungal or mycobacterial infection, familial juvenile systemic granulomatosis (Blau syndrome), and benign cephalic histiocytosis should be considered in the differential diagnosis of granulomatous perioral dermatitis. Granulomatous perioral dermatitis lacks systemic symptoms. A thorough history and physical examination, review of symptoms, chest radiography, ophthalmologic examination, and histopathologic evaluation of skin biopsy specimen can differentiate these disorders when indicated.[10] Sarcoidosis in young children is rare and often accompanied by systemic signs and symptoms, particularly weight loss, fatigue, joint pains, lymphadenopathy, and uveitis. At least some of the reported cases of sarcoidosis in young children represent Blau syndrome with underlying mutations in CARD15/NOD2 .

Treatment for Perioral Dermatitis

TOPICAL

DOSE

SYSTEMIC

ADULT DOSE

First line

Metronidazole

Apply bid

Tetracycline

250-500 mg bid

Doxycycline

50-100 mg bid

Minocycline

50-100 mg bid

Second line

Erythromycin or clindamycin

Apply bid

Erythromycin

400 mg tid or

Sulfur preparations

Apply bid

30-50 mg/kg/day divided[a] tid

Azelaic acid

Apply bid

[a] Pediatric dose.

COMPLICATIONS

The majority of cases of perioral dermatitis and granulomatous perioral dermatitis resolve without sequelae or relapse. However, there are rare reports of scarring.

PROGNOSIS AND CLINICAL COURSE

Perioral dermatitis is usually a self-limited disorder that evolves during a few weeks and resolves over months or rarely years. If treated with topical corticosteroids alone, recurrent episodes on withdrawal of therapy or with continuing therapy are typical. With appropriate treatments the condition resolves with rare recurrences.

TREATMENT

If topical corticosteroids are being used, they should be discontinued. If fluorinated corticosteroids are being applied, initial substitution with a low-potency hydrocortisone cream may minimize a flare of the dermatitis. Patients should be educated about the link between application of topical corticosteroids and exacerbation of the dermatitis.

In most cases, treatment includes oral tetracycline, doxycycline, or minocycline, for a course of 8 to 10 weeks, including a taper over the last 2 to 4 weeks. Severe cases may respond better to minocycline or doxycycline or high-dose tetracycline therapy. In children under 8 years of age, nursing mothers, or tetracycline-allergic patients, oral erythromycin is recommended. Not uncommonly, patients require continued low-dose systemic antibiotic therapy for months or sometimes years to maintain control.

Topical antibiotic therapy, most commonly with topical metronidazole, should be initiated concurrently with the systemic antibiotic. For milder cases, initial application of topical metronidazole alone may suffice. Other options include topical clindamycin or erythromycin, topical sulfurbased preparations, and topical azelaic acid.Reports of successful use of topical calcineurin inhibitors exist; however, caution is advised given the occasional reports of granulomatous eruptions after the use of these preparations. Photodynamic therapy with topical 5-aminolevulinic acid has shown promise for treating perioral dermatitis as well.

PREVENTION

The only factor widely accepted to predispose to perioral dermatitis is the use of topical corticosteroid preparations, and avoidance of these products may prevent the eruption in some cases.