

Angular Cheilitis

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Overview

Angular cheilitis is a term used to describe an inflammatory process at the labial commissures with characterized bilateral lesions of lips and oral mucosa. The word origin comes from Greek "angular " - meaning a corner, "cheil" stands for lips, and the suffix -itis is the inflammation. Angular cheilitis is a chronic condition of simultaneous dryness and saliva-induced maceration of the tissue due to constant lip licking. As early as 1855, Dr. Lemaistre (Lemaistre, 1855) described angular cheilitis in French as "perlèche" - meaning to lick one's lips.

Etiology

The etiology of angular cheilitis is multifactorial, based on the person's local and systemic factors. There is a strong correlation between angular cheilitis and changes to the orofacial structures. Loss of vertical dimension due to the normal aging process, edentulism, malocclusion, and tooth wear results in a decreased distance between the maxilla and the mandible. Saliva will begin to pool in the prominent fissures at the corners of the mouth, causing tissue maceration.

Iatrogenic factors such as orthodontic treatment and ill-fitted dentures can serve as local irritants to the tissue and produce active lesions.

Vitamin B deficiency, malnutrition, and iron deficiency have been linked to angular cheilitis for a long time. Even though vitamin B deficiency can induce cutaneous lesions, in the present world, vitamin B deficiency is rare and is associated with malabsorption of Inflammatory Bowel Disease or intrinsic factor deficiency.

Microorganisms isolated from the active lesions are *Candida albicans*, *Staphylococcus aureus*, and β -hemolytic streptococci are the infectious causes of angular cheilitis.

Clinical presentation

Distinctive features of the clinical presentation of angular cheilitis are painful, red, dry patches and fissures at the corners of the mouth. Due to saliva pooling in the fissures, the lesions become macerated. Adjacent lip tissue can be normal or dry and chapped. The fissures are frequently bilateral and symmetrical, although the unilateral presentation is noted depending on the etiologic factors of angular cheilitis. On the following examination accompanying oral candidiasis often is present. In the case of longstanding lesions, suppuration or bleeding can occur.

Demographics

Angular cheilitis can occur at any age, but it is common among children because they frequently lick their lips and suck their thumb, and in the elderly population, especially denture wearers. Angular cheilitis shows the equal distribution between gender and race.

Biopsy/Histology/Radiographs

A biopsy and radiographs are not indicated for diagnosing angular cheilitis. Histologically, the microbial examination reveals Gram-positive cocci in cluster and chain, which are *Staphylococcus aureus* species, and Gram-positive budding yeast cells with sometimes hyphae formation, which are *Candida albicans*.

Differential diagnosis

Angular cheilitis can be mistaken for conditions such as another subtype of cheilitis, dermatitis, impetigo, herpes simplex, erosive lichen planus, and secondary syphilis papules comprising labial commissures.

Treatment

Candida albicans is a widely accepted etiology of angular cheilitis, so the present treatment is based on administering systemic or topical antifungal agents in conjunction with steroids to reduce inflammation. Topical antifungal agents of choice are Nystatin 100,000 units/mL, Ketoconazole 2%, Clotrimazole 1%, Miconazole 2% with/without hydrocortisone 1%, and Iodoquinol 1% with hydrocortisone 1%. Systemic antifungals

are available in the form of Nystatin 5 mL of 100,000 units/mL suspension, Clotrimazole 1 troche, as well as Fluconazole, Itraconazole, Posaconazole tablets.

If the etiology of angular cheilitis is of bacterial origin, the medications of choice are antibiotics such as Mupirocin 2% ointment, and Fusidic acid 2% cream with or without hydrocortisone 1%.

Ill-fitting dentures and orthodontic treatment that contribute to irritation and pooling of the saliva in the corners of the mouth should be corrected if it is possible. In the other cases, nutritional counseling, treatment of parafunctional habits, and behavior modification therapy are advised.

Prognosis

Angular cheilitis will normally resolve by itself, depending on the stage of the progression. In the case of antifungal and steroid treatment, angular cheilitis will subside within the first few days following the beginning of the treatment and usually resolve in 2 weeks. The chance of recurrence is high if other etiologic factors are not managed.

Professional Relevance

Angular cheilitis is not a dangerous or life-threatening condition. Nevertheless, a dental hygienist must recognize and identify angular cheilitis in order to plan the daily treatment accordingly without causing a patient any discomfort or pain. Since the manifestations of this condition are inflammation and cracks at the corners of a mouth, the patient can be sensitive to specific placements of the instruments or unable to fully open the mouth. During the treatment, a dental professional should be careful with the instrument around the corners of the mouth even if there are no visible fissures because the skin can be prone to break and bleed easily. Additionally, a dental hygienist should refer a patient to a dentist who can prescribe antifungals and steroids.

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