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Case Report

Oral Manifestations of Impetigo in a 7-years Child: Case Report

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Abstract:

Impetigo is a contagious bacterial infection, usually affecting schoolchildren. The most common manifestations are divided into non-bullous impetigo, and bullous impetigo. It is characterized by ulcerated lesions covered with yellowish crusts, most often affecting the skin of the face, such as around the nose and mouth. Mucocutaneous involvement is rare. Treatment consists of topical and systemic antibiotics and local care of the lesion. However, spontaneous remission of the lesions may occur. The purpose of this article is to present a clinical case of a 7-years-old child with intraoral lesions and submandibular lymphadenopathy, diagnosed by the general practitioner as non bullous impetigo. We chose to wait one week for spontaneous remission of the lesions, since the patient already had ulcers on the oral mucosa.

Keywords: *Impetigo; Oral mucosal lesions; Pediatrics; Oral pathology; Oral diagnosis.*

Introduction

Impetigo is a superficial, highly contagious skin infection that has *Streptococcus pyogenes* and *Staphylococcus aureus* as its etiologic agents. It usually affects previously damaged areas of skin, such as eczema, abrasions, or insect bites. Secondarily, it affects debilitated patients with systemic diseases that affect the immune system, such as type 2 diabetes mellitus, lymphomas, HIV infection, and dialysis patients. Children living in hot and humid environments with poor sanitary conditions may also be affected[1-4].

The two main types of impetigo are bullous and non-bullous. Both have a higher incidence in children. Honey-colored crusts on the face, trunk, and extremities are characteristic. Facial lesions usually occur around the nose and mouth. There is also impetigo herpetiformis, a rare type of the disease that manifests as a specific generalized pustular dermatosis during pregnancy, which can be fatal for both mother and baby[1,4,5]. Impetigo herpetiformis is clinically characterized by extensive erythematous pustular plaques. It has clinical, histological, and pathogenetic similarities to psoriasis[5].

The purpose of this article is to present a clinical case of a 7-years-old child with intraoral lesions and submandibular lymphadenopathy, diagnosed by the general practitioner as non bullous impetigo.

Case Report

A Caucasian male patient, 7 years-old, came to the dental clinic with a complaint of intraoral lesions.

Clinically, several ulcerated lesions were observed on the labial (Figure 1) and jugal (Figure 2) mucosa. The lesions were characterized by single ulcers, whitish in appearance, measuring 3 to 5 mm each. On tooth 41, an ulcerated lesion was observed on the keratinized gingiva, progressing to the alveolar mucosa (Figure 3).

In occlusal view (Figure 4), an ulcerated lesion was observed on the keratinized gingiva in the region of tooth 42, not yet erupted. Poor oral hygiene and accumulation of dental biofilm were observed, resulting from the painful symptoms caused by the ulcers.

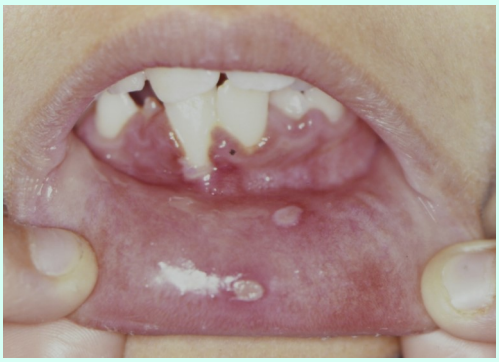

Figure 1: *Ulcerated lesions observed on the labial mucosa.*

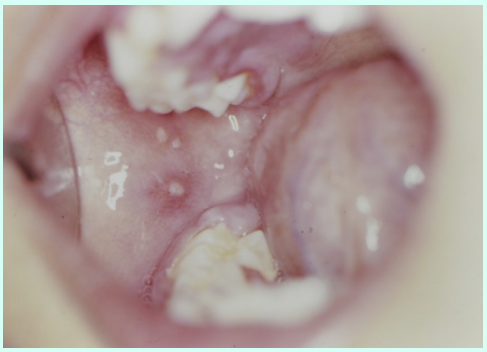

Figure 2: *Ulcerated lesions on the jugal mucosa.*

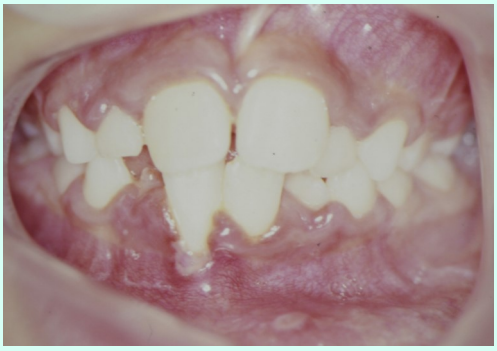

Figure 3: *Ulcerated lesion observed on the keratinized gingiva of the tooth 41, progressing to the alveolar mucosa.*

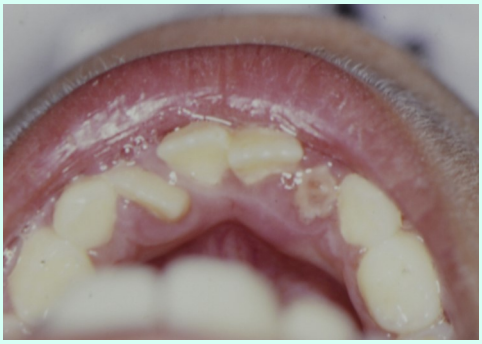

Figure 4: *Ulcerated lesion on the keratinized gingiva in the region of tooth 42, not yet erupted (occlusal view).*

In the extraoral evaluation, submandibular lymphadenopathy was observed, particularly on the right side of the patient (Figure 5). Fever was also reported for 3 days preceding the onset of the ulcers.

The mother of the patient reported a previous consultation with a general practitioner, with a clinical diagnosis of non bullous impetigo. With this diagnosis, it was decided to wait one week for remission and total involution of the intraoral lesions, since they presented in a second stage, with the rupture of the vesicles and presented as ulcers.

The mother and patient received orientation regarding oral hygiene habits and care, with the purpose of avoiding contamination of other family and school members.

After 15 days, remission and involution of intraoral lesions, as well as submandibular lymphadenopathy were reported. No fever or any other symptoms were reported. The mother of the patient was oriented about the possibility of recurrence of the lesion and the need to return for dental and/or medical consultation in these cases. Orientations were also given regarding personal and oral hygiene habits.

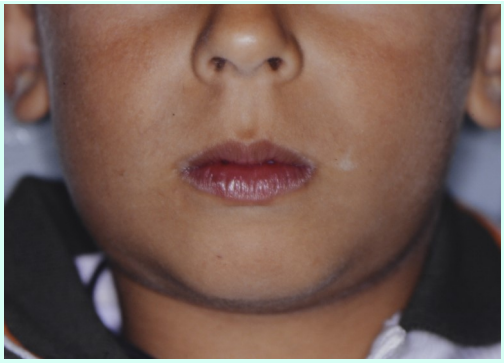

Figure 5: *Submandibular lymphadenopathy on the right side of the patient.*

Discussion

Non bullous impetigo, also known as impetigo *contagiosa*, is the most common type. In patients with facial involvement, the pathogenic bacteria lodge in the nasal mucosa and colonize previously injured areas of the skin, such as scratches or abrasions. It is clinically characterized by erythematous macules or papules that develop into vesicles. After rupturing, ulcers remain, sometimes itchy or painful, covered by a thick amber crust. Scratching the lesions may promote the spread of infection. Although it is most often seen in children, adults can also be affected frequently, from close, direct contact with infected children. It is easy to spread, especially in crowded, warm, and humid places. A highly associated condition is atopic dermatitis, a chronic inflammatory skin disease, which usually manifests itself in the first year of life and may aggravate the bacterial infection[1,3,4].

Bullous impetigo is caused only by *Staphylococcus aureus*. It most often affects newborns and infants. It is characterized by large, flaccid blisters, initially filled with light-colored fluid that becomes purulent, and when they break open they develop a thin brownish crust. It usually affects the trunk, face, and extremities. Mucous and systemic involvement is uncommon. Associated fever, diarrhea, and malaise may be presented by infants with extensive lesions. Culture in the exudate of the lesions and a positive result for *Staphylococcus aureus* may not yet be determinant for confirmation of the diagnosis, and may be interpreted as a contaminant. Pemphigus vulgaris makes up the differential diagnosis. This is characterized by a rare, autoimmune, chronic bullous disease, which in more than 60% of cases involves oral, nasal, and conjunctival mucosae[1,2,4].

The diagnosis of impetigo is usually clinical, based mainly on the appearance of the skin lesions. However, due to the wide possibility of differential diagnosis, one should pay attention to the time and chance of lesion involution, eliminating other clinical possibilities. Pemphigus vulgaris, herpes simplex, cheilitis angularis, sporotrichosis, and psoriasis should be considered in the differential diagnosis. The possibility of unexpected evolution of the lesions should be considered for clinical re-evaluation and possible biopsy, with histopathological evaluation[1,2,4-7].

The main therapeutic modality for impetigo is pharmacological, through systemic and local administration of antibiotics. Antibiotics can promote a reduction in the duration of the clinical picture, as well as reducing the risk of infection. Topical antibiotics such as mupirocin or bacithromycin (2 to 3 times daily for 7 to 10 days) can be employed, avoiding gastrointestinal and other systemic adverse reactions in children with non bullous impetigo. Before application, non-traumatic removal of crusted lesions with gauze moistened with antibacterial soap and water is recommended for better drug utilization and reduced risk of secondary infection[1,4,8]. For more exacerbated bullous lesions, oral systemic antibiotic treatment is required for 7 to 10 days. The indicated antibiotics are those that are effective against *Streptococcus pyogenes* and penicillin-resistant *Staphylococcus aureus*. Cephalexin, sulfamethoxazole-trimethoprim, dicloxacillin, flucloxacillin, and amoxicillin-clavulanic acid are therapeutic options. Systemic administration of antibiotics associated with the application of 1% hydrocortisone has shown satisfactory results and significant improvement with no recurrence of infection. For patients allergic to penicillin, clindamycin is used[1,3,4,7,8].

However, spontaneous remission of the lesions is possible in two to three weeks[4], as we did. In the present case, the evaluation occurred already in the ulcerative phase of the lesions, after the hatching and rupture of the vesicles. We also chose to wait because of the diagnostic uncertainty of the referring general practitioner. This was satisfactory. If the clinical picture worsened, pharmacological intervention would be performed.

Patients and parentes/guardians should be oriented regarding hygiene habits, because this is a highly contagious disease. Personal objects should not be shared. Lesions should not be manipulated, and hands should always be clean to prevent the spread of the disease[4].

The prognosis is favorable. The lesions tend to regress after 24 to 48 hours from the beginning of treatment. However, in extensive cases of skin lesions, and poor hygiene habits and conditions, the prognosis may worsen. Usually the lesions disappear within 1 to 2 weeks without sequelae. Recurrence is frequent in children[4]. Without proper treatment, impetigo can extend and result in sequelae such as bacteremia, cellulitis, and rheumatic fever. Severe complications such as acute glomerulonephritis are rare, but can occur in long-lasting cases. The highest incidence rates of the disease and complications have been described in tropical countries with few resources[1,3,4].

Conclusions

Impetigo is an infectious mucocutaneous disease, infrequent in the dental clinic. It is usually related to poor oral hygiene habits. Given the similarity of clinical characteristics with other serious diseases, careful evaluation is necessary to avoid misdiagnosis. The initiation of appropriate treatment should be done as early as possible to optimize the results. However, spontaneous remission of the lesions is possible, avoiding pharmacological treatment.

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