Crohn’s disease of the mouth: report of a case

ABSTRACT

**Aim** Crohn’s disease is a chronic, inflammatory process, probably immunologically mediated, that may affect any segment of the gastrointestinal tract from mouth to anus, usually in a discontinuous fashion. Oral manifestations are important clinical findings in Crohn’s disease.

**Case report** Description of a young male with oral manifestations of Crohn’s disease is detailed and the current literature is briefly reviewed. Past medical history and oral clinical examination of the patient were analysed. He was treated with systemic prednisone. The case reports a significant reduction of lesion after six months of treatment.

**Keywords:** Crohn’s disease; Retromolar corrugated lesion; Corticosteroids.

Introduction

In 1932, Crohn’s disease was discovered by Crohn, Ginzberg and Oppenhimer [Crohn et al., 1932]. Crohn’s disease is an inflammatory bowel disease, characterised by chronic inflammation extending through all layers of the intestinal wall. The initial macroscopic lesions in the bowel are small erosions and aphthous ulcers. Patients with Crohn’s disease present with abdominal pain, diarrhoea, anorexia, weight loss, fever and growth failure. The incidence of Crohn’s disease in the Western world is 2-6 cases per 100,000 individuals per year, while the prevalence varies between 20-60 per 100,000 [Glickman, 1998; Long and Cooper, 1997]. The prevalence rate of oral manifestations vary between 0.5-20 per cent with the male playing the predominant role [Pittock et al., 2001]. However, females have a higher prevalence of mouth sores [Gupta et al., 2007]. The disease is rare in developing countries. The onset of the disease varies between the ages 15 and 35 years. The aetiology is unknown but environmental factors, genetic susceptibility and immune response in the bowel wall [MacDonald et al., 2000; Ponsky et al., 2007] seems to be the main causes of the disease.

Oral lesions of Crohn’s disease in the absence of gastrointestinal lesions were first described in 1972 [Varley, 1972], followed by other important observations of a form only appearing orally [Rees, 2000; Sticker and Braegger, 2000; Mahadevan and Sandborn, 2001]. Similar lesions may also be associated with a wide range of several conditions such as chronic granulomatous disease, Melkesson-Rosenthal syndrome (a triad of orofacial swelling, facial paralysis and a fissured tongue), hairy cell leukemia, sarcoidosis and mycobacterial infection. Orofacial granulomatosis in the children may be an initial manifestation of Crohn’s disease and careful evaluation is recommended. Furthermore the buccal epithelium of children with Crohn disease is immunologically active, even in the absence of oral lesions [Damen et al. 2006].

Saliva and Crohn’s disease

Salivary analysis in Crohn’s patients revealed increased levels of IgA, IgM and IgG [Sundh et al., 1993]. The number of IgA plasma cells does not correlate with disease activity. The buffering capacity of saliva, the concentrations of amylase, total protein and the antimicrobial components did not differ between Crohn’s disease patients and the control group [Sundh et al., 1993; M. erman et al., 1994]. It was also reported that patients with active Crohn’s disease have a greater frequency of oral mucosal inflammation and increased dental infections than those who have quiescent disease [Rooney, 1984; Halme et al., 1993]. It has been suggested that the increased consumption of sugars and the poor oral hygiene in patients with active disease could be the causes of high caries incidence [Jarnerot et al., 1983; Bevenius, 1988].

Case report

A 12-year-old Hispanic male was referred to the Tufts University Pediatric Dentistry Department from the Pediatric Gastroenterology Department of New England Medical Center to examine his oral condition. Past medical history revealed Crohn’s disease diagnosed in November 1995 (Fig. 1) after he developed significant lower gastrointestinal bleeding. Diarrhoea, abdominal pain, fever, and weight loss were the presenting symptoms. He
was hospitalized in the intensive care unit for three weeks. Colonoscopy showed inflammation, cryptitis and crypt abscesses, more pronounced in the cecum and extending throughout the large intestine. The patient was treated with sulfasalazine 3 tablets twice a day at 2,4 g/day, 6-MP 1-1/2 tablets once a day at 75mg/day, Flagyl tablet once a day and folic acid 1 tablet once a day.

**Oral examination**

He presented to our clinic complaining of mild intra-oral soreness in the left side of the mandible. After clinical examination the prominent finding was a well-defined hyperplastic, corrugated, linear lesion in the left retromolar area. Upon examination it hemorrhaged slightly but was not associated with any pain (Fig. 2). The lesion was unilateral for unknown reasons. He also complained of burning sensation during swallowing. He had poor oral hygiene, gingivitis and a bleeding tendency during the clinical examination. After clinical evaluation there were no pockets nor any bone loss. The alveolar mucosa was inflamed, and erythematous. There was no evidence of lymphadenopathy, skin or conjunctival lesions.

His teeth were cleaned by pumice with a prophylaxis cup and after that topical fluoride gel (APF 1.23%) was applied. Fluoride treatment is strongly recommended every six months. Fluoride lozenges with flavoring agents should be avoided because of the gastrointestinal disturbances. Proper oral hygiene and diet instructions were also given. His dental recall visit decreased to three months, while his effective tooth brushing and interproximal cleaning were checked weekly.

Usually, patients with Crohn’s disease have high DMFT scores. However, our patient didn’t have any decayed or filled tooth surfaces. Nevertheless, because of the increased risk of developing caries he was scheduled for sealants application on his permanent molars.

**Treatment**

The oral lesion was treated with systemic prednisone 20 mg once a day. We avoided any topical corticosteroid therapy because of the risk of mucosal atrophy, systemic absorption and questionable results.

We should stress here the importance to avoid any complicated dental procedures because of adrenal gland suppression risk. Upon follow up in the clinic 6 weeks (Fig. 3), and 6 months (Fig. 4) after the initiation of the treatment, the retromolar lesion had dramatically reduced. The dysphagia and the burning sensation disappeared.

**Discussion**

**Oral manifestations**

- **Specific lesions.** The most common affected intraoral sites in Crohn’s disease are the buccal mucosa, gingiva, lips, vestibular and retromolar area. The buccal mucosa shows a painless cobblestone or corrugated, fissured pattern, while the vestibular lesion are more often characterised as hyperplastic folds of elongated tissue with or without linear ulcerations. These corrugations may include ulcers lying deep in the tissue folds or may become traumatised with more superficial ulceration. The gingiva displays diffuse labial-buccal swellings, while granulomatous cheilitis and diffuse swollen-fissured lips are characteristic oral lesions of Crohn’s disease. The retromolar area shows characteristic polyloid tag lesions [Plauth et al.,1991; Malins et al., 1991; Halme et al., 1993; M urman et al., 1994].

- **Non-specific lesions.** Non-specific lesions are angular cheilitis, perioral erythema, glossitis, mucosal
discoloration, lichen planus, pyostomatitis vegetans and metallic dysgeusia. The non-specific symptoms are more common and more prominent than the specific lesions making the differential diagnosis from other diseases more critical. However, the non-specific lesions also could be secondary symptoms related to nutritional deficiencies or reactions to medications. Abnormal absorption of folic acid and iron may lead to glossitis [Soames and Southam, 1998], while metronidazole can cause discoloration and metallic dysgeusia [Gugler et al., 1989]. Diffuse lips swelling and dysphagia could be the result of infliximab administration [Sandborn and Hanauer, 1999].

**Treatment of oral lesions**

Corticosteroids can be used to treat oral lesions in patients with Crohn’s disease. The systemic steroids application should be preferred over the topical. Topical corticosteroid therapy should be used only for a limited time [Siegel and Jacobson, 1999]. Local dexamethasone should be applied by means of cotton swab on the lesion for five minutes [Winter, 1998]. Sometimes local application of xylocaine is helpful to relieve the acute symptoms of aphthous ulcers [Lebwohl and Lebwohl, 1998]. Thalidomide should also be considered an effective therapy for the short period of time [Hegarty et al., 2003], whereas when the oral lesions are resistant to steroid therapy infliximab can be an alternative medicine [Ottaviani et al., 2003].

**Conclusion**

More than one third of the children presenting with Crohn disease have involvement of the mouth [Harty et al 2005]. Expert oral evaluation and cooperation between the physician and the dentist to relieve the acute oral symptoms seems mandatory. Every painless cobblestone or corrugated lesion in the buccal mucosa or hyperplastic folds in the vestibular area should make the dentist suspicious for further evaluation.

**References**


