CASE REPORT

Non- Syndromic Chelitis Granulomatosis: A Case Report

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ABSTRACT

Aim: To present a rare case report of Chelitis Granulomatosis (CG) in 16-year-old female, not associated with any other syndrome.

Summary: Orofacial granulomatosis (OFG) encompasses a condition which is characterized by granulomatous non-necrotizing inflammation of the oral and maxillofacial region that present clinically as labial enlargement, perioral and/or mucosal swelling, oral ulcerations, and gingivitis. The unifying term "OFG" has been introduced for the spectrum of various disorders, including Melkersson-Rosenthal syndrome (MRS) and CG, and has been shown to be associated with Crohn's disease, sarcoidosis, and infectious diseases such as tuberculosis.

Keywords: Melkersson–Rosenthal syndrome, orofacial-granulomatosis, Montoux test.

INTRODUCTION

Cheilitis granulomatosa (CG) is a unique disorder. This condition is characterized by chronic swelling of the lips due to granulomatous inflammation. It is a rare inflammatory disorder first described by Miescher in 1945.[1,2] It is an incomplete variant of Melkersson-Rosenthal syndrome (MRS); a triad of recurrent orofacialedema, fissuring of the tongue and recurrent facial nerve palsy. CG is also considered a subset of an uncommon disease Orofacialgranulomatosis, which was introduced by Wiesenfeld in 1985.[3]

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Today both CG and MRS are considered subsets of OFG. Clinical feature for OFG and CG include labial swelling, oral ulcers, mucosal swelling, mucosal tags, gingival enlargement, fissured tongue, fasial palsy, and cervical lymphadenopathy. A non-tender, recurrent labial swelling that may eventually become persistent.[5] When severe, may lead to median cheilitis and/or angular cheilitis. The swelling is non-pitting and varies in consistency from soft to rubbery. This swelling is usually due to lymphatic blockage caused by granulomas, leading to diffuse swelling from lymphedema.

Oral ulcers associated with OFG are of three types.[6] The most common types are chronic, deep with wide erythmatous margins and slightly raised surroundings occurring usually in vestibules.[7] Less common type of ulcers is superficial aphthous like ulcer on any mucosal surface. The least common type of these ulcers is multiple small superficial erosions on gingival, vestibule, or soft palate. "Cobblestone" appearance due to swelling in mucosa and painless mucosal tags arising from vestibules or in the retromolar region could be also seen. Painless enlargement of free and/ or attached gingiva arises in the localized or generalized pattern. It varies in color from normal to salmon pink to red.[8] Lateral aspects of the dorsum of the tongue are usually fissured and a lower motor neuron palsy of facial nerve may rarely arise in OFG,[9] along with cervical lymphadenopathy of variable size is with rubbery consistency may also be observed. Present case report discusses a rare case of non-syndromic CG in a young female.

CASE REPORT

A 16-year-old female patient reported to Department of Oral Pathology, with a chief complaint of persistent swelling in upper lip, since two months (Fig. 1). She also reported burning in perioral area. There was no history of local trauma or any applied irritants. Her past history revealed that patient had been treated for similar condition with various different modalities including ayurvedic medication, homeopathy and topical steroids in last one year. She was diagnosed by the dermatologist as chelitis granulomatosis. On examination the swelling was approxamitaly 2 x 2 cm in maximum diameter. The overlying skin was normal with

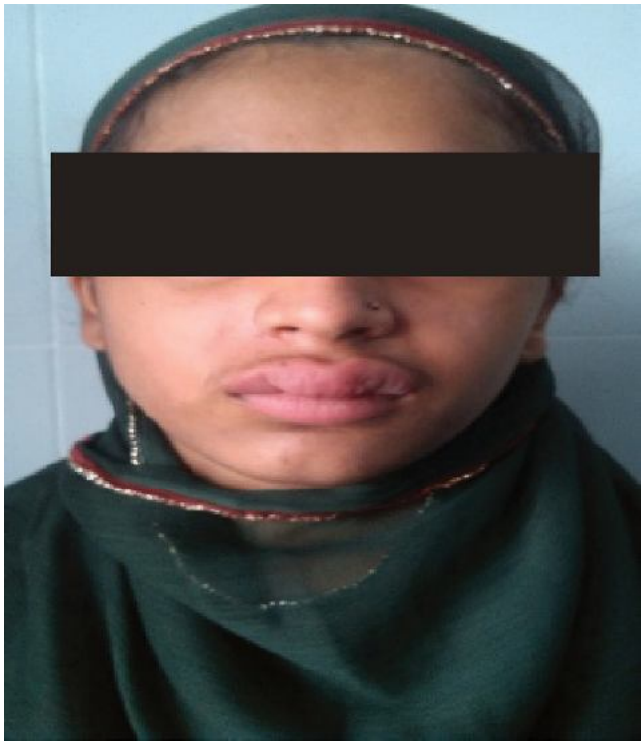

Figure 1: Extra-oral photograph

no crusting and fissuring (Fig. 2). On palpation it was soft to firm in consistency and was symptomatic. Cervical lymph nodes were palpable and non-tender. The patient was other wise well built with fair oral hygiene. No other extra-oral or intra oral abnormality was detected. A Clinically differential diagnosis of Angioedema, minor salivary gland tumor and CG was made. An incisional biopsy was done under local anaesthesia and was routinely processed and slides were stained (H & E).

Histopathological examination under lower magnification (10X) revealed hyperplastic epithelium of variable thickness covered by fibrinopurulent exudate (Fig. 3). Under

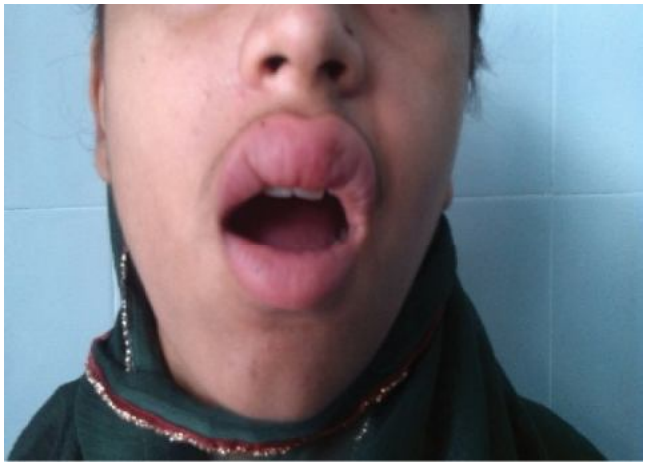

Figure 2: Photograph showing swelling of the upper lip

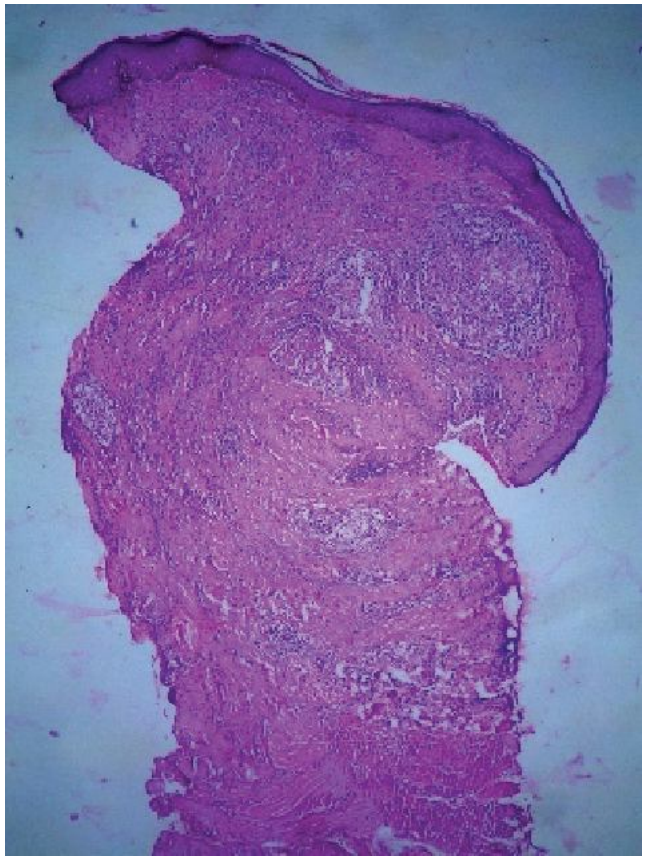

Figure 3: Photomicrograph showing hyperplastic epithelium of variable thickness covered by fibrinopurulent exudate (H & E, 10x)

higher magnification (40X) the superficial lamina propria was loose and edematous. The underlying fibrocellular connective tissue revealed with abundant non caseating granulomas with Langhans type multinucleated giant cells and perivascular lymphocyte aggregations (Fig. 4). In other investigations was done such as, chest radiograph revealed no abnormalities, and Mantoux test which was negative. Evaluation for food allergies revealed higher allergen quantity for the following food items; normal range being 0-0.35 Ku/L (Table 1). Patient has higher allergen level for different food items. So it was thought that the lesion may be because of allergic reaction to food items. From all these findings a diagnosis of CG secondary to certain food items was made.

Table 1: Food items and their allergens range

Food Items	Allergens Range
Almond	1.90
Cashew nut	1.30
Cabbage	1.80
Tomato	2.00
Rajma	1.20

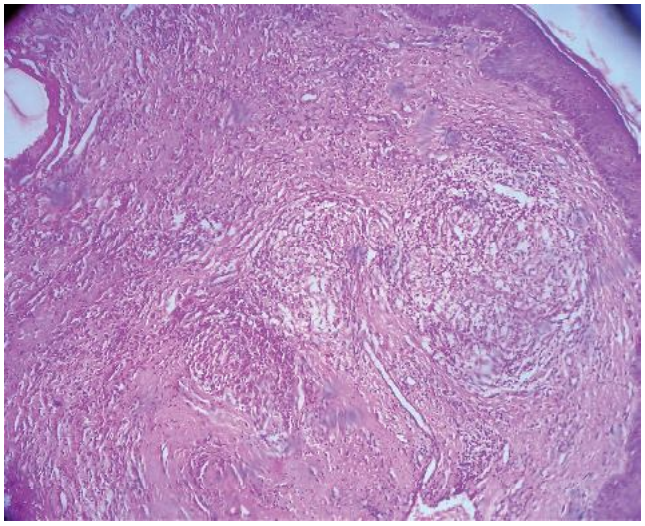

Figure 4: Photomicrograph showing Loose and edematous superficial lamina propria. Abundant non caseating granulomas with Langhans type multinucleated giant cells and perivascular lymphocyte aggregations (H & E, 40x)

DISCUSSION

CG is a chronic swelling of the lip due to granulomatous inflammation. It is an incomplete variant of MRS which is a triad of recurrent orofacial swelling, relapsing facial paralysis and fissuring of the tongue. Presentation of complete MRS with all three elements of the triad in a single patient is rare, being reported in only 10-20% of cases, and bilateral facial palsy in MRS is even rarer.[4] In approximately 40% of cases, CG is the presenting sign of MRS, with subsequent development of neurological signs.[4] The presence of CG without lingua plicata or facial palsies also is called Miescher syndrome or Miescher's Cheilitis.[1,2] In 1985, Wiesenfield[3] introduced the concept of Orofacial granulomatosis (OFG).

The etiology of CG remains unfolded. Reports suggest that some cases may demonstrate an autosomal dominant inheritance pattern, with the responsible gene mapping to chromosome 9 p11.[10] Other authors have proposed a wide range of causes including infection, allergic reactions, odontogenic foci and autoimmune mechanism, as an association with Crohn's disease and sarcoidosis or even as oral manifestation of systemic diseases.[11] The age of onset is usually adulthood with no racial or sexual predilection.

Zimmer *et al.*[12] in their analyses of 42 patients and review of 220 cases they showed female predilection and a wide range of onset with a mean of 33.8 years. Granulomatous cheilitis should be considered in children as well according to Oliver *et al.*[13] who reported Granulomatous Cheilitis in an eight-year-old girl, which persisted for more than one year. In patients presenting with CG it is important to perform an appropriate evaluation, which includes a chest radiograph and a Mantoux test to exclude other etiologies of granulomatous disease, such as sarcoidosis or Mycobacterium infection. Gastrointestinal tract endoscopy and radiography may be used to exclude Crohn's disease. Patch tests have implicated cobalt and the food additives cinnamaldehyde and benzoates in the pathogenesis of CG.[3]

Wide variety treatments for CG have been reported, including antibiotics like tetracycline and clofazimine,[15] intralesional steroids,[16] and surgical resection.[13] Rapid improvement and/or complete resolution after dental treatment have been reported.[18] Some believe that intralesional triamcinolone (TAC) combined with dapsone yields the best result, whereas others report success using intralesional TAC alone; incidentally TAC has also been successfully combined with clofazimine.[10,11] Because of the link between CG and Crohn disease, it has been postulated that tumor necrosis factor-á production is involved in the pathogenesis of both conditions. A single case report describes the successful treatment of CG, which had been refractory to multiple standard therapies, with infliximab at doses that are used for Crohn disease.[20] Surgical intervention and radiation have been proposed in the management of CG in cases of severe disfigurement and post-surgical relapses are common.[21]

According to new concepts, "diagnosis" is not merely naming the disease but should also include probable etiological factors. In this case diagnosis of CG was made by correlating patient's history, clinical features, investigations and histopathological findings. The present case highlights the importance of thorough investigations in the diagnosis of this lesion, as the findings resemble many other granulomatosis diseases. Although, there are several treatment options emerging, such as anti-TNF-a antibodies, the mainstay of treatment for patients with OFG appears to be individually tailored depending on a changing clinical presentation. Both clinician and patient need to be aware of the extremely frustrating nature of OFG and the common need to change treatment depending upon the changing severity of the disease process. An escalation through a number of topical medications with variable strength and efficacy, the occasional need for a course of intralesional injections, and ultimately, the possibility of requiring long-term systemic medication must be contemplated and openly discussed.

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