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Melkersson-Rosenthal syndrome: a classical case report

Síndrome de Melkersson-Rosenthal: relato de caso clássico

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ABSTRACT

The Melkersson-Rosenthal syndrome constitutes a rare manifestation characterized by a triad of signs and symptoms: recurrent orofacial edema, fissured tongue, and recurrent facial paralysis. The difficulty in diagnosing Melkersson-Rosenthal syndrome is that orofacial edema is common to various diseases besides the lack of awareness of the syndrome by health professionals and the frequent metachronous manifestation of its symptomatology. The aim of this report is to present a classical case of Melkersson-Rosenthal syndrome and its clinical and therapeutic approach. A patient who sought for assistance at the Stomatology Clinic presented a synchronous manifestation of the triad: a left lip and cheek nonpitting edema accompanied by facial paralysis on the same side and fissured tongue. Melkersson-Rosenthal syndrome was diagnosed due to the presence of the triad of signs and symptoms after initially ruling out Crohn's disease, Sarcoidosis, and tuberculosis due to a lack of intestinal or respiratory complaints and absence of other clinical evidence. The treatment administered was steroids, the most common treatment with a satisfied prognosis we found in the literature for Melkersson-Rosenthal syndrome patients. We recommend its implementation intralesional injections of betamethasone dipropionate as after four infiltrations the edema subsided by 80% with no further relapses within one-year follow-up.

Indexing terms: Facial paralysis. Fissured tongue. Melkersson-Rosenthal syndrome.

RESUMO

A síndrome de Melkersson-Rosenthal constitui uma manifestação rara caracterizada por uma tríade de sinais e sintomas: edema orofacial recorrente, língua fissurada e paralisia facial recorrente. A dificuldade no diagnóstico da síndrome de Melkersson-Rosenthal é que o edema orofacial é comum a diversas doenças, além do desconhecimento da síndrome pelos profissionais de saúde e da frequente manifestação metacrônica de sua sintomatologia. O objetivo deste relato é apresentar um caso clássico de síndrome de Melkersson-Rosenthal e sua abordagem clínica e terapêutica. Paciente procurou atendimento no Ambulatório de Estomatologia apresentando manifestação sincrônica da tríade: edema não depressível em lábio e bochecha esquerdos acompanhado de paralisia facial do mesmo lado e língua fissurada. A síndrome de Melkersson-Rosenthal foi diagnosticada devido à presença da tríade de sinais e sintomas após a exclusão inicial de doença de Crohn, sarcoidose e tuberculose por ausência de queixas intestinais ou respiratórias e ausência de outras evidências clínicas. O tratamento administrado foi o esteroide, sendo o tratamento mais comum com prognóstico satisfatório

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que encontramos na literatura para pacientes com SRM. Recomendamos a aplicação de injeções intralesionais de dipropionato de betametasona, pois após quatro infiltrações o edema cedeu em 80% sem novas recidivas em um ano de seguimento.

Termos de indexação: *Paralisia facial. Língua fissurada. Síndrome de Melkersson-Rosenthal.*

INTRODUCTION

Melkersson-Rosenthal syndrome (MRS) is an unusual manifestation of head and neck defined as a neuro-mucocutaneous disorder of unknown etiology [1,2], characterized by a symptom triad defined by the presence of recurrent orofacial edema, fissured tongue, and recurrent facial paralysis [1,3-5]. The onset of symptoms is most commonly between 25 and 40 years (range 1-69 years), it is rare in children, and only a few cases have been described in the literature [6,7], the incidence around 0.08% in the general population, and is found more often in females (sex ratio of 2:1) [5-11].

The simultaneous occurrence of all three features is rare (25% of the cases) [1,12]. It is more common of one or two of the triad characteristics has been considered consistent with the diagnosis [13] of MRS taking into account the exclusion of other granulomatous diseases, such as Crohn's disease, tuberculosis, sarcoidosis, allergic reactions or recurrence of MRS manifestations itself [3,8,14]. The most frequent sign is orofacial edema, which affects, in most cases, the upper lip, cheeks, nose, and eyelids [1,9].

A monosymptomatic variant of MRS is a clinical picture characterized by a swollen lip, known as granulomatous cheilitis of Miescher [9].

Histologically, either the granulomatous cheilitis of Miescher or MRS is characterized by a chronic inflammatory process, showing epithelioid granulomas, Langerhans giant cells and lymphocytic perivascular infiltration [1,6]. It is characterized histologically by the presence of non-caseating epithelioid cell granulomas undistinguishable to sarcoidosis and Crohn disease [14]. Recently, a FATP1 mutation, a fatty acid transport protein 1 (FATP1/SLC 27A1) which is important in the supply of Docosahexaenoic Acid (DHA) to the brain across the blood-brain barrier was reported by exome sequencing [15]. Further possible etiologies are hypersensitivity and neurotrophic factors. In addition deficiency of complement C1-INH leading to vasomotor disturbances might also contribute to swelling of the facial nerve [16].

Therapy of MRS remains difficult and systemic steroids are the most commonly administered [7,14] followed by surgery [10,14] and antibiotics. A great number of published reports didn't mention a therapy given in cases of MRS, therefore no treatment was administered in nearly 40 % of cases. Subtracting cases without therapy, steroids in various presentation forms were the most common treatment administered [14].

The aim of this report is to present a case with the whole classical triad of MRS, along with its clinical and therapeutic approach.

CASE REPORT

A black female patient, 42 years-old, sought for assistance at the Stomatology Clinic presenting facial edema involving her middle face and her lower lip [figure 1]. She reported that a similar manifestation occurred when she was twelve years old. At query time, she presented a left lip and cheek nonpitting edema accompanied by facial paralysis on the same side. During physical examination, it was noticed a fissured tongue [figure 2] beyond lip swollen and an oral mucosa showing a cobblestone appearance [figure 3]. Additionally, the patient reported constant and severe headaches. There were no other skin lesions, as also no intestinal or respiratory complaints.

A provisional diagnosis of orofacial granulomatosis was established and an incisional biopsy of lower lip was performed. Concomitantly, blood tests were requested: serum IgG and IgA, in order to exclude intestinal inflammatory diseases. Blood tests were within normal range and the microscopic analysis provided a diagnosis of granulomatous cheilitis.

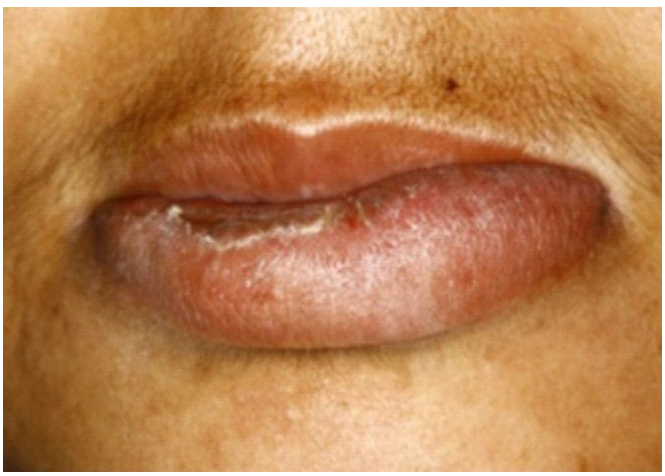

Figure 1. Lip swelling.

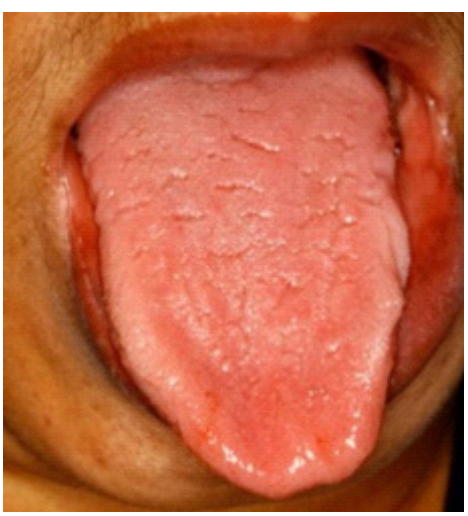

Figure 2. Fissured tongue / cracked togue.

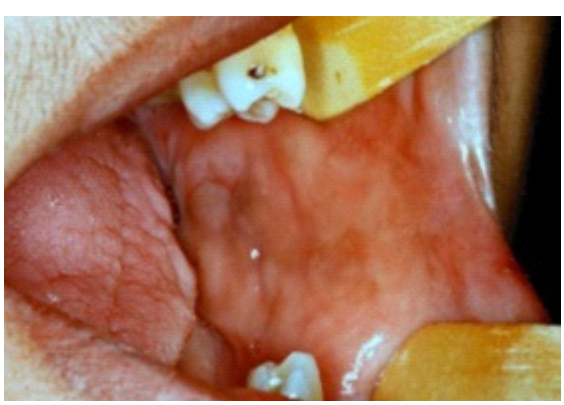

Figure 3. Aspect of stony.

Crohn's disease was ruled out due to the lack of intestinal complaints and blood tests results. Sarcoidosis and tuberculosis were ruled out due to either the absence of other clinical evidence or respiratory complaints.

The patient was awarded an MRS diagnosis based on the presence of orofacial edema associated with facial paralysis, and the presence of fissured tongue, the classical triad of the condition.

Once the main complaint of the patient was her swollen lips, a treatment based on intralesional injection of betamethasone dipropionate was accomplished. Four infiltrations were done at days 1, 7, 21 and 51 (figure 4). The edema subsided by 80% of its former volume. The patient was put under clinical periodic control presenting no further relapses within one-year follow-up.

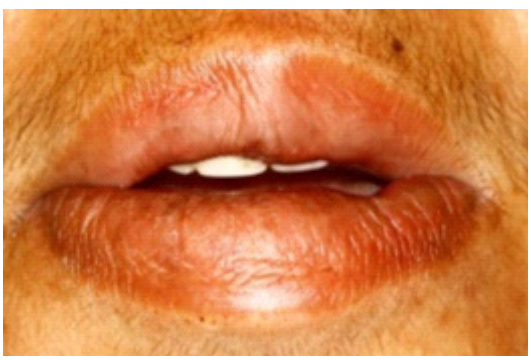

Figure 4. Four weeks after intra lesional treatment with corticosteroids.

DISCUSSION

The etiology of MRS is still unknown; viral infections, allergic factors and hereditary origin were suggested as possible contributing factors [17,18]. This disease occurs worldwide, has no racial predilection and is found more often in females [14,19].

The simultaneous occurrence of all three characteristics as reported in this case is rare, Elias et al. [20], in a retrospective study, found that facial edema was always present, with isolated lip involvement in 74% of cases and with only 13% of patients showing the full triad of symptoms of MRS. This orofacial edema may extend unilaterally or bilaterally to the oral mucosa and even to other region of the face [1,9]. Interestingly, the majority of 21 MRS patients diagnosed at a university-based facial nerve center presented the full manifestation of the syndrome (61%), and looked for assistance due to facial paralysis instead orofacial edema [13].

Oligosymptomatic and monosymptomatic forms are more common than the complete triad [21] and the most part of the reports in literature are oligosymptomatic (only two features of the triad) forms [14,17,21]. Other signs and symptoms are associated to MRS as minor criteria, mainly migraine, disorders of salivary and lacrimal glands, hyperhidrosis, and acroparesthesia [9] corroborating the complaint of recurrent headaches in this clinical case.

Clinical findings define the diagnosis when the whole symptomatology of MRS is present, as occurred with the case presented here. When only orofacial swelling, characterized by nonspecific and non-caseating granulomatous inflammation, is present the diagnosis of MRS must be concluded through the exclusion of other granulomatous oral diseases [6]. Neither sarcoidosis nor Crohn's disease are associated with the concurrent occurrence of fissured tongue or facial paralysis. The orofacial swelling in sarcoidosis usually shows a nodular characteristic that is quite different from the massive edema present in MRS [20,21]. Besides that, skin and pulmonary complications are common features in sarcoidosis [2]. Crohn's disease shows edema similar to the one present in MRS, but also manifests a wide variety of intestinal symptoms, which once absent may suggest a diagnosis of granulomatous Miescher cheilitis [2].

Treatment is still an issue in MRS. Corticosteroids (systemic, topically or intralesional) are the treatment of choice [2,10,20]. Other treatments include combinations of topical and systemic corticosteroids, nystatin, tetracycline,

antihistamine, clofazimine, and chlorhexidine gluconate rinses [1]. Stein et al. [19], reported a case successfully treated with the TNF-α blocker adalimumab as reported and supported in the literature by de Moll et al. [23] and Elliott et al. [24]. Surgical procedures are thought to be effective to treat facial edema in MRS performing liposuction and cheiloplasty [24] or total decompression of the facial nerve to prevent further attacks of facial paralysis in MRS [25]. Spontaneous remission of MRS symptoms is rare and the therapies available present a very unpredictable outcome [3,9]. In the case presented, complete remission of the orofacial edema was not achieved despite patient's satisfaction with the result.

MRS patients must be regularly followed in order to control clinical manifestations, especially in those cases diagnosed as oligosymptomatic. This syndrome represents a clinically highly variable condition, which etiopathogenesis remains obscure, that demands health professional awareness in order to allow proper patient diagnosis and management.

CONCLUSION

The Melkersson-Rosenthal syndrome (MRS) has a low prevalence in the general population. Although orofacial edema is a common signal, clinicians may exclude other diseases recognizing the triad of signs and symptoms presented. An effective and non-invasive therapy, as intralesional corticosteroids, can be implemented and brings a satisfied prognosis for MRS patients. Our case demonstrates also that the MRS classical diagnostic and therapeutical features are similar to the literature.

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Collaborators

C Domaneschi, conceptualization (lead), data curation (lead), formal analysis (lead), investigation (lead), methodology (lead), project administration (lead), supervision (lead), writing - original draft (lead). CFJ Arruda, formal analysis (supporting), investigation (supporting), methodology (supporting), writing - original draft (supporting). VJG Carvalho, conceptualization (supporting), methodology (supporting), writing - original draft (supporting), writing - review & editing (supporting). RLO Santos, formal analysis (supporting), investigation (supporting), methodology (supporting), supervision (supporting), visualization (supporting), writing - original draft (supporting). NN Sugaya, conceptualization (supporting), methodology (supporting), writing - original draft (supporting), writing - review & editing (supporting).

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