Microstomy after Erythema Multiforme: Surgical Treatment and Results

Cristovão Marcondes de Castro Rodrigues, Danyella Carolyne Soares dos Reis, Luiz Gustavo Jaime Paiva, Luiz Fernando Barbosa de Paula, and Lívia Bonjardim Lima

INTRODUCTION

Microstomy is a term used to describe a decreased oral opening [1]. Most cases are caused by scar contracture following facial trauma, chemical, electrical or thermal burns of the perioral tissues, excision of tumors, genetic disorders and connective tissue diseases, such as systemic sclerosis [2-5]. The cause and severity of the condition can influence the treatment approach [3]. The goals of microstomy repair include reconstructing the orbicular sphincter for proper lip function, achieving lip symmetry and well-positioned scars [6]. Different surgical and non-surgical procedures have been presented for the treatment of microstomy [7-9]. Commissuroplasty is a successful treatment modality to reconstruct the microstomy aesthetically and functionally [2,5]. In addition, several non-surgical procedures have been described to maintain adequate mouth opening by using intraoral and extraoral stretching devices [7,10]. Erythema multiforme (EM), is a rare acute mucocutaneous condition caused by a hypersensitivity reaction [4]. EM usually involves two or more mucous membranes with variable skin involvement, it can involve internal organs and there is a 10% mortality rate for patients with extensive Stevens-Johnson syndrome [7,8]. It has been reported that EM has been triggered by several agents, particularly viruses and a variety of other infectious agents, immunological conditions, non-infectious agents, such as food additives or chemicals (benzoates and nitrobenzene) and drugs [8,9]. In this article, we report a rare case of lip microstomy after EM and discuss surgical correction and patient outcomes.

CASE PRESENTATION

A seven-year-old female patient found it difficult to open the mouth in the past six months. The mother reported that the child had erosions on the oral mucosa due to an episode of stomatitis seven months before. The mouth had become smaller and smaller by contracting the scar on the oral mucosa. Then, the patient was referred by the dentist to the oral and maxillofacial surgery service (Federal University of Uberlândia), in May 2013. The contracture of the scar was ring-shaped and located on the oral mucosa (Figure-1A, 1B and 1C). The interincisal distance was 31 mm and the distance between the commissures was 41 mm. The manifestation of bullous diseases on oral mucoses leading scarring sequel are widely described in toxic epidermal necrolysis (TEN). These complications cause disfigurement and functional impairment. They are more rarely reported in erythema multiforme (EM). This article aims to describe a case of lip adhesion after EM induced by mycoplasma pneumoniae, where corrective surgery was performed to increase the mouth opening range of a young female patient.

Abstract

Purpose: The manifestation of bullous diseases on oral mucoses leading scarring sequel are widely described in toxic epidermal necrolysis (TEN). These complications cause disfigurement and functional impairment. They are more rarely reported in erythema multiforme (EM). This article aims to describe a case of lip adhesion after EM induced by mycoplasma pneumoniae, where corrective surgery was performed to increase the mouth opening range of a young female patient.

Methods: Through the 5-flap Z plasty, mucosal flap rotation was performed for better flexibility and better mouth opening.

Results: The interincisal distance improved by 12 mm and the intercomissural distance increased by 10 mm, with no type of scar that had an aesthetic impairment reestablishing functional improvement.

Conclusion: Through the microstomy and the choice of using 5-flap Z plasty, there was a significant increase in the patient’s mouth opening, thus improving the functional and cosmetic condition, with the patient’s satisfactory evolution over the long term, with no more idea relapse.
The reconstruction of the mouth with microstomy is a complex surgical procedure, in which providing a good functioning of the lips must be the first objective of the treatment method and relapses must be avoided in order to obtain stability and lasting results [15,16]. In consensus within the team, obtaining lip symmetry and an acceptable aesthetic result is the second goal of treatment.

Many procedures have been described for microstomy reconstruction in the literature as skin graft, composed of auricular lobe graft, variations of the mucous flap and a combination of skin and mucosal flaps [2,4,7,16]. In the case in question, the surgeons opted to perform a variation of the mucous flap, decreasing the scar index as it deals with the aesthetic area, with less risk of dehiscence and familiarity with tissue manipulation.

The adoption of Z plasia of 5 flaps that did not produce skin scars during reconstruction. The polarity of the scar on the mucous flap was evenly distributed in the mouth. The aesthetically pleasing continuation of the vermilion skin and the symmetrical appearance of the neo-commission was achieved, as in other reports [15,17]. Considering that this patient did not come from previous aesthetic defects, like other cases of microstomy, that usually happen in victims of burns or animal attacks, orbicular aesthetic maintenance was maintained and the range of oral functionality was maximized.

ACKNOWLEDGEMENTS

Dr Cristóvão Marcondes de Castro Rodrigues contributed with literature review, with the writing of the article and submission of the article. Dr. Daniella Carolyna Soares dos Reis contributed with writing the article, adopting the magazine’s rules and photographing the case. Dr. Luiz Gustavo Jaime Paiva contributed through the surgery and the final review of the article. Dr Luiz Fernando Barbosa de Paulo contributed with the performance of the surgery and with a final revision of the text for submission. Dr. Lívia Bonjardim Lima contributes with work by means of assistance during the surgery, guidance during the writing of the article, final correction of the article for submission.

CONFLICT OF INTEREST

Financing: There was no financing from any company or development agency for this case. Conflict of interest: There is no conflict of interest on the part of any of the authors of this article. The author Cristóvão Marcondes de Castro Rodrigues declares that he has no conflict of interest. The author Daniella Carolyna Soares dos Reis declares that she has no conflict of interest. The author Luiz Gustavo Jaime Paiva declares that he has no conflict of interest. The author Luiz Fernando Barbosa de Paulo declares that he has no conflict of interest. The author Lívia Bonjardim Lima declares that she has no conflict of interest. Ethical approval: The work was not submitted to the ethics and research committee for being a clinical case report. This article does not contain studies with human participants carried out by any of the authors. Informed concentration: The legal guardians of the patient referred to in the clinical case, signed a free and informed consent form to perform the procedure and publicize the case for academic purposes.

REFERENCES


