



## Sclerotherapy with Monoethanolamine Oleate of Lower Lip Hemangioma

Gabriela Barbosa de Moraes<sup>1</sup>, Estevam Rubens Utumi<sup>2</sup>, Caleb Shitsuka<sup>3</sup>, Leopoldo Penteado Nucci da Silva<sup>4</sup> and Irineu Gregnanin Pedron<sup>5\*</sup>

<sup>1</sup>Undergraduate Student, Universidade Brasil, São Paulo, Brazil

<sup>2</sup>Oral and Maxillofacial Surgeon, Private Practice, São Paulo, Brazil

<sup>3</sup>Professor, Department of Pediatric Dentistry and Cariology, School of Dentistry, Universidade Brasil and Faculdades Metropolitanas Unidas, São Paulo, Brazil

<sup>4</sup>Professor and Researcher, Department of Hospital Dentistry, Hospital Israelita Albert Einstein, São Paulo, and Medical School, Centro Universitário do Planalto Central, Brasília, Brazil

<sup>5</sup>Independent Researcher and Professor, Department of Periodontology, Implantology, Stomatology, Integrated Clinic and Therapeutics, School of Dentistry, Universidade Brasil, São Paulo, Brazil

**\*Corresponding Author:** Irineu Gregnanin Pedron, Independent Researcher and Professor, Department of Periodontology, Implantology, Stomatology, Integrated Clinic and Therapeutics, School of Dentistry, Universidade Brasil, São Paulo, Brazil.

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### Abstract

Hemangioma is a benign tumor characterized by abnormal proliferation of blood vessels. In the oral cavity, it most commonly affects the region of the lips, tongue and jugal mucosa. Among the therapeutic options, sclerotherapy has been used with satisfactory aesthetic and clinical results. The purpose of this article is to present the case of lower lip hemangioma in a patient, treated by means of monoethanolamine oleate sclerosing solution injections with total remission of the lesion. In this case, it was possible to safely promote the involution of the lesion through a non-surgical procedure.

**Keywords:** Hemangioma; Sclerotherapy; Oral Cavity; Lip

### Introduction

Hemangioma, a vascular anomaly characterized by the increase and focal development of blood vessels, is usually present at birth and is observed during childhood [1-7]. Although most hemangiomas may regress [1-4,8], the lesions present in the face cause aesthetic alterations that become constant complaints of the patients during the waiting period for the lesion involution [1,2,7,9,10]. In this perspective, several methods of treatment have been employed in an attempt to control growth and anticipate hemangioma regression, such as the use of corticosteroids (systemic or topical), cryotherapy, embolization, sclerotherapy associated or not with surgical excision, in addition to radiotherapy [1,2,5-8,10-12].

The association of conservative and surgical treatments is also a common practice [8,10,11]. Among the treatment options, sclerotherapy has been used with satisfactory clinical and aesthetic results in small lesions, without the need for surgical intervention, being a viable and low-cost option for cases of oral cavity hemangioma [1,2,8,10,11].

The purpose of this article is to report a case of a lower lip hemangioma in a patient, whose treatment was solved by therapeutic sclerosis with monoethanolamine oleate, with satisfactory esthetic results, after 2 intra-lesional applications.

### Case Report

A Caucasian 27-year-old male patient presented at the clinic complaining of a blackened lower lip lesion (Figure 1).



**Figure 1:** Vascular lesion suggesting hemangioma of the labial mucosa.

At extraoral clinical examination, a lesion composed of an elevated, purplish-colored bubble suggesting a bloody content, with a sessile base, smooth surface, and resilient to palpation, with approximately 10 mm in diameter, was observed, located at the lower lip mucosa of the right side, with a time of evolution of 8 months.

No systemic alteration has been reported.

Under diascopy, ischemia produced by this maneuver was observed and in view of the presence of blood collection inside it, the clinical diagnostic hypothesis of hemangioma was considered (Figure 2).

With the patient’s consent, sclerotherapy was chosen. A therapeutic association (2 ml) between of anesthetic solution (3% mepivacaine hydrochloride without constrictor vessel) and monoethanolamine oleate (Ethamolin™, Zest Farmacêutica Ltda., Rio de Janeiro, Brazil) was injected (Figure 3). During the application a slight burning was observed, which was soon extinguished by the anesthetic sensation.



**Figure 2:** Diascopy performed to favor the diagnosis of hemangioma.



**Figure 3:** Monoethanolamine oleate (Ethamolin™) and anesthetic (3% mepivacaine hydrochloride without vasoconstrictor).

In the post-application consultation (15 days), partial involution of the lesion was observed (Figure 4). A new reapplication was performed in this consultation, with another 2 ml of anesthetic association and monoethanolamine oleate.



**Figure 4:** Partial remission of the lesion 15 days after the first application

After 15 days, the patient was evaluated and total remission of the lesion was observed (Figure 5). The patient has been followed for 9 years, with no signs of recurrence.



**Figure 5:** Total remission of the lesion 15 days after the second application.

## Discussion

Clinically, hemangioma presents as a nodular lesion to the tumor mass, of variable size, resilient consistency under pres-

sure, smooth surface by tissue distention, erythematous to purple staining, according to its location and depth in the adjacent tissue [1,2,5,7,9-13]. Although hemangioma is a benign lesion, it may in some cases, cause compression of adjacent structures, formation of cracks, ulcers or bleeding, secondary infection, and aesthetic and functional problems [7,9,13,14].

Generally, hemangioma develops in the postnatal period or in the first years of life [3-6,12], but it is found in individuals of any age, with considerable frequency in the elderly [5,7], compromising in more than 50% of cases the head and neck region [5,10,14]. It presents a greater predisposition for the female gender in comparison to the male (3:1) and for the white race [3,7,9]. Development is rapid [3,4,6], and the lesions present in childhood [4-6,14] may regress [3,4,6,8]. It affects, in the oral cavity, most commonly the region of the lips, tongue and vestibular mucosa, and may also affect salivary glands, muscles and TMJ [1,2,5,7,9-12].

The diagnosis is basically clinical. Besides the aspects already described, the hemangioma, during diascopy, presents ischemia due to the flow of blood out of the vascular spaces, which does not occur in vascular malformations [1,2,5,11-13]. The final diagnosis is elucidated by histopathological examination. Among the hypotheses that compose the clinical differential diagnosis are retention cysts, mucoceles, Kaposi's Sarcoma and pyogenic granuloma [11,12].

The treatment of hemangioma depends, mainly, on the correct diagnosis of the lesion and should not be confused with vascular malformations. The location, size and duration of the lesion, and the age of the patient, as well as the aesthetic and/or functional damage should be considered when choosing treatment [10]. Once the diagnosis is made, hemangioma can be treated by several methods, such as surgical excision, radiotherapy, use of systemic or intralesional corticoids, cryotherapy, laser surgery, embolization and sclerotherapy [1,2,5-13].

In sclerotherapy, a widely used therapeutic modality, several substances were used, such as sodium morrurate, sodium tetradecyl sulfate, sodium psilate, hypertonic solution associated to heparin and procaine (or lidocaine) and monoethanolamine oleate [1-3,5,7,10-12,14]. In this report, the sclerosing agent used

was monoethanolamine oleate (Ethamolin™). Used mainly in the treatment of esophageal varices [10], monoethanolamine oleate has been widely used in hemangioma therapy with satisfactory results. Through intra lesion injection, it is possible to reduce totally or partially the size of the lesion, so that surgical excision can be performed more safely [3,11]. In this report, it was possible to safely promote total involution of the lesion through a non-surgical procedure, favoring in the postoperative, the aesthetics of the patient, in only 2 consultations.

The monoethanolamine oleate when injected intra lesional, initially acts by irritating the venous or capillary endothelium, producing an extra-vascular inflammatory response that results in fibrosis and occlusion of blood vessels [12-14]. The oleic acid component may also activate coagulation by releasing the Hageman factor. However, the ethanolamine component can inhibit the formation of fibrin clot through calcium chelation [7,10]. In histological sections, lesions treated with sclerosing agents, such as monoethanolamine oleate, presented a replacement of the blood vessels by connective tissue as a result of the inflammatory process induced by the drug [8,14].

It is advisable the use of anesthetics, through its vasoconstrictor agents, ensures peripheral vasoconstriction, limiting the action of the drug and increasing its action time and, consequently, avoiding painful symptoms [1,2,11,12]. The association with glucose was reported [12]. In the present report, it was opted for the application of local anesthesia associated to the sclerosing agent, because the local anesthetic could mask the lesion, losing its delimitation. In this perspective, it is important to emphasize the need for distance anesthesia.

Regarding the pain, it was general consensus that the injection of sclerosing agents promoted, in the postoperative period, local inflammatory response and mild painful symptoms in the area adjacent to the treated lesion. However, it did not extend for more than three days [1,2,8,11,13,14]. In the present report, the patient reported painful symptoms (burning) only at the beginning of the trans-operative period.

Although it is a simple and apparently uncomplicated technique, special care should be taken during sclerotherapy. The injection

should always be applied in the center and in the deepest portion of the lesion, since superficial application can result in tissue necrosis [1,2,10,11]. Sclerotherapy is contraindicated in uncontrolled diabetic patients and in areas of secondary infection. The use of monoethanolamine oleate is contraindicated in pregnant women, since it may present teratogenic effect [1,2,7,10,12]. Injection of a larger volume than recommended may, besides causing tissue necrosis, trigger an anaphylactic reaction in patients sensitive to the drug. Although anaphylactic shock cases resulting from the use of these drugs are rare, the dental surgeon must be prepared to treat it appropriately. In extreme emergencies, 0.25 mL of intravenous solution of epinephrine 1:1000 (0.25 mg) should be administered, and allergic reactions should be controlled with antihistamines [1,2].

## Conclusion

Hemangioma is a benign tumor resulting from abnormal proliferation of blood vessels that relatively often affects the oral cavity. There are many techniques for the treatment of this lesion, among them sclerotherapy, being used with satisfactory results. The intralesional injection of sclerosing agents such as monoethanolamine oleate, used in this report, promoted total involution of the lesion in a fast and safe way, through a non-surgical method, favoring the aesthetic recovery of the patient. However, it is important to emphasize that this choice must respect some criteria, have previous knowledge of the patient's systemic health, indications and contraindications of the technique, as well as the evaluation of the lesion's clinical characteristics. In this way, its use must be surrounded by all care, as well as in any other surgical procedure.

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