

Treatment of Oral Hemangioma with 1%Tétradécyl Sulfate De Sodium: Case Report

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Abstract: Hemangioma, is benign vascular lesions, common in the head and neck regions, but relatively rare in the oral cavity. The most common site is the upper lip, but they can occur in other areas, such as the tongue, buccal mucosa and palate. Hemangiomas possess an extremely challenging treatment dilemma for surgeons and the patients. Treatment is primarily dependent on correct diagnosis of the lesion and on its anatomic location. Oral hemangioma can be treated with sclerotherapy, systemic corticosteroids, interferon α , laser, embolization, cryotherapy and surgery. The purpose of this article is to provide a description of a case of a hemangioma on the lower lip, treated by therapeutic sclerosis with Sodium tetradecyl sulfate (1 %) (Trombovar). Hemangioma regressed with considerable relief of symptoms with minimal complications. When used in appropriate doses, Sclerosing agent, 1% Sodium tetradecyl sulfate (STS), is very effective for treatment of oral hemangioma.

Keywords: Hemangioma, Lower lip mucosa, Sclerotherapy, Sodium tetradecyl sulfate.

INTRODUCTION

Benign vascular lesions are a consequence of blood vessel abnormalities or endothelial cell proliferation [1]. The International Society for the Study of Vascular Anomalies (ISSVA), in 1996, approved a classification system modified from the one proposed by Mulliken, Glowacki [2].

The lesions were subdivided into two types: the first type exhibits endothelial proliferation (hemangioma), with rapid growth, followed by gradual involution, meaning. The second type does not exhibit proliferation of the endothelium (vascular malformation), is present at birth and remains throughout life, affecting around 0.3 to 1% of newborn infants [3].

A hemangioma is a common and benign neoplasm of the head and neck. Frequently it is not present at birth and develops in three phases: proliferating, involution, and involuted [3]. There is no significant gender predilection [4-6]. In the oral and perioral region it can cause esthetic and functional impairment, depending on location [7, 8]. The most common site is the lips, but other areas, such as the tongue, buccal mucosa and palate have also been described [2, 9-11].

Clinically, it presents as a red macula, papule or nodule, depending on the congestion degree and the depth of the lesion and the localization of the affected tissue, disappear momentarily on digital compression or diascopy [12, 13]. Size is variable, ranging from a few millimeters to several centimeters and may cause facial

asymmetry [7]. Although hemangioma is a benign lesion, in some cases, it may lead to compression of surrounding structures, formation of fissures, ulcers or hemorrhages, and functional and aesthetic problems [1, 14].

Hemangiomas invariably involute however at least a 10–20% case needs active intervention because of their tendency to bleed and become ulcerated [15]. The options of treatments are sclerotherapy, systemic corticosteroids, and interferon α , laser, embolization, cryotherapy, and surgery. The treatment depends on the patient's age, and on lesion site and size [14, 16, 17]. A recurrence has been reported [18].

Sclerotherapy is one treatment option that has been used with great success on small lesions located in sites with esthetic impact, where surgery could leave unattractive scarring [10, 19-21]. The objective of this article is to describe a case of a female patient with a hemangioma of the lower lip that was treated with therapeutic sclerosis (Sodium tetradecyl sulfate: Trombovar 1%), covering clinical characteristics and diagnostic methods.

CASE REPORT

A 29-year-old woman presented at the department of medicine and surgery oral of the dentistry clinic of Monastir, Tunisia with a primary complaint of a 'blue-colored lesion' about 4 mm in diameters on the right located at the lower lip mucosa near the vermilion at the commissure. The lesion had been present for at least 3 months without change in size. During history taking, she had acquired the habit of biting her lip. There was no pulsation, bleeding or pain. No other vascular lesions were clinically visible in the head and neck region. Intraoral physical examination revealed a lesion that was firm on palpation and purple colored, with sessile attachment, smooth skin and intact mucosa (Fig-1). During a diascopy test the purple color was observed to fade. The lesion was interpreted to be consistent with hemangioma. The decision was taken to employ sclerotherapy with Sodium tetradecyl sulfate: Trombovar 1 % (Fig.2), administered via slow infiltration of 2 mL into the center of the lesion.

From the first injection, after one week (Fig. 3), a total regression of the lesion was observed. Currently, at 1-year follow-up, no signs of relapse have been noted.



Fig-1: Physical examination, intraoral view



Fig-2: The sclerosing agent



Fig-3: Postoperative appearance after one week: total regression.

DISCUSSIONS

The term hemangioma has been commonly used to describe a large number of vasoformative tumours. Oral hemangiomas are most common in the regions of the lips, tongue and buccal mucosa, presenting as red, purple or violet macules or nodules of variable size, which may be well-delineated or diffuse and are relatively depressible [8, 12].

In the case described here, the lesion was located on the right side of the lower lip, with no significant changes to extraoral appearance. However, intraorally, there was palpable increased volume and purplish coloration. Hemangiomas can have onset during childhood or adulthood and are etiologically linked to genetic causes or to traumas at the site of the lesion [12, 22]. This patient also described having a habit of biting her upper lip, which is possibly the source of the trauma that caused the lesion.

The diagnoses of hemangioma are straightforward from the history and clinical examination. A correct diagnosis is of fundamental importance [7, 23] and the differential diagnoses are limited [2]. In the case described here, the clinical characteristics suggested a diagnosis of hemangioma was on diascopy, the lesion blanched under glass in response to pressure and reduced in size, as the blood vessels emptied, differentiating it from other lesions, such as cysts and mucocele, which would not have blanched. Although this test can simplify diagnosis greatly, there are certain areas, such as the gingiva and the palate, where the technique is difficult to perform [13, 24]. Supplementary tests such as ultrasonography with Doppler are requested for cases to confirm suspicion of hemangioma [9]. The Doppler study revealed discreetly dilated vessels with low resistance flow and identified the lesion as venous in nature.

Lesions on the face cause esthetic problems and become constant complaints while patients wait for involution of the lesion to take place, which can take a long time, depending on patient response [25].

Treatment of hemangiomas is dependent on their location, size and nature (venous or arterial). For smaller and peripheral lesions, treatment options include sclerotherapy, conventional surgical excision, laser treatment, radiotherapy, electrocoagulation and cryotherapy [21, 26]. For larger and/or intraosseous, lesions located in areas with esthetic impact, treatment should consist of embolization or obliteration of the lesion and adjacent vessels; indicated with the objective of achieving involution of the lesion for a subsequent surgical procedure [26, 27].

Sclerotherapy is a simple technique that is apparently free from complications, offering partial or total regression of the lesion, facilitating resection in a subsequent surgical intervention, if this proves

necessary. In some cases, sclerotherapy may be the definitive treatment, achieving total regression of the lesion. Possible sclerosing agents include sodium morrhuate, sodium psylliate, hypertonic glucose solution, and sodium tetradecyl sulfate and ethanolamine oleate [10, 20, 21]. For this technique a special precautions must be taken. The sclerosing agent should be administered using an insulin needle, injecting the solution into the middle of the lesion, to avoid necrosis of surrounding tissues [10, 20]. The quantity injected will depend to the size of the lesion, but, as a rule, should not exceed 2 ml. The interval between the injections was usually 2–4 weeks [10, 17].

Sodium tetradecyl sulfate (sotradecol) is the sclerosing agent which has been used for years in the treatment of hemangioma [28]. Intravenous injection causes intima inflammation and thrombus formation. This usually occludes the injected vein and subsequent formation of fibrous tissue results in partial or complete vein obliteration that may or may not be permanent.

Sclerotherapy is contraindicated in uncontrolled diabetic patients and in areas of secondary infection. Administration of Sodium tetradecyl sulfate is contraindicated in expectant mothers, because it can have teratogenic effects. In addition to causing tissue necrosis, injection of volumes greater than the recommended can trigger anaphylactic reactions in patients who are sensitive to the drug [2].

CONCLUSION

Hemangioma is of benign origin and behaviour, but haemangioma in the oral cavity is of clinical importance. It often mimics other lesion clinically and requires appropriate clinical diagnosis and proper management. Sclerotherapy is, without doubt, a feasible treatment method that can effectively resolve this type of vascular neoplasm, providing it is correctly indicated on the basis of its benefits and limitations. In the case described here, administration of the sclerosing agent Sodium tetradecyl sulfate is very effective for treatment of oral hemangioma. Dosage and site of injection should be precisely decided according to the size of the lesion to prevent complications and to provoke rapid and safe involution of the lesion. Using a non-surgical method, in some cases, is more likely to lead to the patient's esthetic recovery.

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