

Sequence of treatment of a labial hemangioma

Secuencia de tratamiento de un hemangioma labial

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Abstract

This paper presents the case of a woman of forty- four years old, wich go for volumen increase, violet color more tan ten years of evolution in lower lip, greather growth in tle last year. This papaer shows the treatment sequence by placling of cooper needles and subsequent satisfactory resección restricting risk of bleeding to mínimum.

Labial hemangioma, Vascular injures, Cooper needles, Wires cooper

Resumen

Se presenta el caso de un paciente del sexo femenino que se presenta por aumento de volumen violáceo de más de 10 años de evolución en labio inferior con incremento en el tamaño de la lesión en el último año. Se muestra la secuencia clínica de tratamiento mediante la colocación prequirurgica de agujas de cobre y posterior resección satisfactoria de la lesión restringiendo riesgo de sangrado al mínimo.

Hemangioma labial, Malformaciones venosas, Agujas de cobre

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Introduction

Vascular lesions represent a group of relatively frequent lesions in dental practice and in the maxillofacial region. In 1982, Mulliken and Glowacki classify them into two large groups: hemangiomas and vascular malformations, this classification was modified in 1996 by the International Society for the Study of Vascular Abnormalities (ISSVA) proposing a new internationally accepted classification.

Classification of vascular anomalies ISSVA 1996

Vascular tumors	Vascular malformations
Hemangioma	Capillaries
Kaposiform hemangioendothelioma	Venous
Angioma in plume	Lymphatic
Hemangiopericytoma	Arteriovenous
Pyogenic Granuloma	Combined
Spindle-cell hemangioendothelioma	

In children, spontaneous involution has been described, involving minimal or no sequelae.

Etiology

Vascular lesions of the skin represent a very frequent anomaly; They can range from a pink macula to tumors that can condition disabling malformations. Its etiology is unknown, genetic factors and / or disorders of vasculogenetic activity, and angiogenetic are suspected either during pregnancy, the first months of life or during adulthood.

Vasculogenesis includes the processes that precede the formation of blood vessels from endothelial cells, while the term angiogenesis implies the development of new blood vessels from existing ones.

Angiogenic factors such as vascular endothelial growth factor (VEGF) and fibroblast growth factor (BFGF) are involved in the hemangioma growth phase, and high levels of them can be observed in affected patients (1).

Clinical manifestations

Its clinical manifestation is usually diverse, and diversity is related to its depth, location and degree of evolution.

According to the anatomical structures involved, they can be superficial, deep or subcutaneous and mixed when they involve both superficial and deep tissues.

Superficial hemangiomas can be flat or raised with regular or not bright red borders. (Formerly called capillaries, in strawberry or strawberry).

The deep or subcutaneous ones are usually delimited by transparent with bluish or violet color and previously they were known as "cavernous" attributed to blood vessels of greater caliber than the superficial ones.

The mixed ones have combined characteristics of the previous two and can be single or multiple and must carry out complementary diagnostic studies to rule out the presence of multiple organic lesions in special cases.

The most frequent topographies are: head and neck 60%, trunk 25% and limbs 15%. According to Fernanda Salvo and Cols 65% of them are superficial, 15% deep and 20% mixed.

Vascular malformations

Bleeding is a common feature when it comes to removing these lesions surgically so their diagnosis, management and location should be extensively studied.

Mulliken and Enjolras distinguish those with high vascular flow (arteriovenous malformations) and those with low vascular flow (capillary, venous and lymphatic malformations), based on their location, biological, histological and clinical behavior. (1,2)

It is possible to observe combinations of malformations as part of complex syndromes that require combined or special treatments.

The most frequently affected places in the mouth are the lips, tongue and jugular mucosa.

– The size of mouth hemangiomas varies from a few millimeters to extensive lesions that can cause deformities such as macroglossia or macrocheilia.

- About 10 percent of hemangiomas are congenital. Some tend to disappear spontaneously and are called immature hemangiomas.
- A characteristic sign of the lesion is that, when pressed with a finger, the red color disappears and reappears when pressure is stopped. (3)

Study approach

In those cases of large lesions or in the case of suspected multiple lesions, it will be convenient to supplement with special imaging studies such as ultrasound, computed tomography (CT) or Magnetic Resonance Imaging (MRI) if necessary.

Treatment

There are various techniques all aimed at the disappearance of the lesion, which when it appears congenitally or during the first months of life if it is not large usually involves.

Some treatment alternatives described are:

- a. Systemic steroids (Prednisone) in doses of 2 to 5 mg / Kg / day until the desired regression is obtained.
- b. Intralesional corticosteroids such as triamsinolone alone or associated with dexamethasone sclerotherapy offer the risk of necrosis, allergic reactions and scars.
- c. Sclerotherapy based on solutions such as 3% polidocanol in children and adolescents has been reported effectively.
- d. Interferon - alpha for antiproliferative and antiangiogenic purposes in the form of subcutaneous or intramuscular injections with side effects including fever, fatigue, vertigo, leukopenia, thrombocytopenia, liver damage, thyroid function disorders and neurotoxicity.
- e. Use of laser especially effective in superficial and small lesions, since in large lesions occasionally ulceration and secondary infection may occur.

- f. Needles or copper wires. Based on the observations of the peasants who notice that a minor injury when punctured or ulcer reduces in size, Wang in 1993 in China, recommended puncturing venous malformations with copper needles and applying light electric shocks on them. We modified the method: we implanted simple copper wires using a long straight needle and under local anesthesia on an outpatient basis, creating a wire grid in the lesion. Weekly they are extracted. The irritation we produce stimulates intravascular coagulation and when the clots are reabsorbed, the malformation disappears or so Less reduces considerably in size. If necessary, then dry the excess skin under local anesthesia

Also on an outpatient basis Intralesional copper needles. Coiffman (2007) modified the technique by inserting copper needles as a grid omitting electric shocks.

- g. In 2008, the use of propranolol in hemangiomas was published, when used for the treatment of cardiac complications derived from prolonged use of corticosteroids in patients with hemangiomas The use of propranolol has been an alternative treatment that has shown positive results especially in hemangiomas in children (4,5)
- h. Surgery has proven useful for resection of residual lesions. The use of compressive bandages for the treatment of minor limb injuries has been reported in some cases. Cryosurgery offers the risk of scar injuries.

Radiation therapy is not an alternative in the treatment of hemangiomas since they are benign lesions that do not respond to this treatment. (8,9,10)

Presentation of the case

This is a female patient who comes to the consultation with a history of volume increase in the lower lip of approximately 10 years of evolution, initially asymptomatic, however, during the last year, progressive growth of the lesion accompanied by intermittent pain. Alternate events of greater growth that prevent food.

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There is a well-defined lesion larger than 2cm in diameter, well-defined edges which shows ischemia at the digits pressure and volume recovery when removing local pressure. It was decided to initiate a treatment protocol with the placement of copper needles in order to reduce the size of the lesion, taking a weekly check after their placement.

Occupational income manifestations



Figure 1

Increase in the volume of deforming violet color in the central area of the lip at the time of initial assessment.

The initial placement of low copper needles is established as a treatment plan

Local anesthesia in order to reduce the size of the lesion after resection.

Copper caliber segments are prepared and sterilized and placed on an outpatient basis under local anesthesia.

Sequence in the placement of copper needles



Figure 2

Local anesthesia prior placement of copper needles

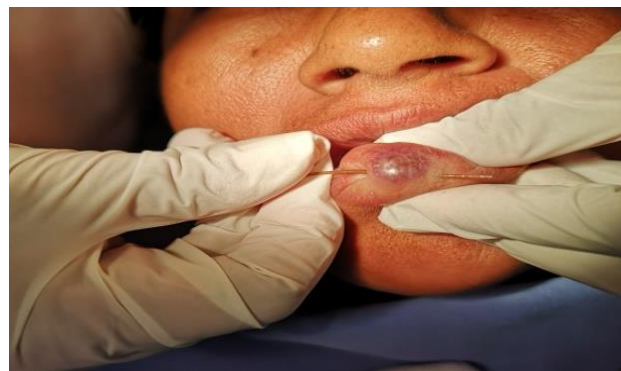


Figure 3

Needle placement is initiated, the change in the color of the lesion upon introduction to the needle is evident



Figure 4

Needle placement is concluded without adverse events

The copper needles are kept for one week giving only as a complementary treatment amoxicillin 500mg orally every 8 hours and lysine clonixinate 250mg tablets every 6 hours for 3 to 5 days depending on pain, citing a week after withdrawal.

Needle control and removal images

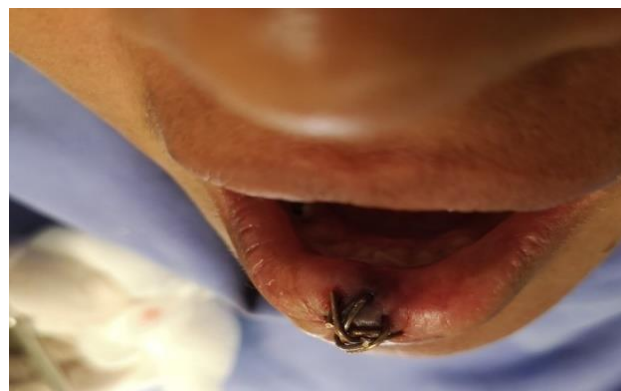


Figure 5



Figure 6

Appearance of the lesion at 48 hours and one week after coloring to monitor evolution and their removal

One week after the initial treatment, a control appointment for needle removal is granted AND Close monitoring is continued to regulate conduct to be followed.



Figure 7

Characteristics of the lip three weeks after needle placement and removal

After the placement of needles, it was possible to observe the decrease in the diameter and depth of the hemangioma by more than fifty percent, thus reducing the risk of trans-surgical active bleeding and once the healing of the placement sites is guaranteed, the removal of the remaining lesion.

Resection of residual injury



Figure 8

Final resection of the lesion with minimal bleeding

Post-Surgical Follow-Up



Figure 9

Follow-up 10 days after the removal of a residual lesion



Figure 10

Clinical appearance of lip at 2 weeks postoperatively

Conclusion

Hemangiomas are vascular lesions that offer aesthetic and functional alterations to the patient but above all they offer a risk of significant bleeding during their resection, although there is successful evidence of their removal by laser surgery, it remains an alternative treatment the use of copper needles in order to reduce their size and vascular flow, provided that the patient's systemic conditions allow it.

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