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Radiofrequency in Treatment of Venous Lake in Lips

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Abstract
Background *:LVenous lake is a common vascular lesion presenting as elevated, usually dome-shaped papule, ranging in color from dark blue to dark purple and are most commonly found on lips, face, neck and ear lobes. These lesions are benign but can bleed profusely if injured. Lot of treatment modalities are there including laser sclerosing agents, cryotherapy with variable outcome.*
Objective*: To evaluate the effectiveness of radiofrequency coupled with a surgical incision made on the roof of the venous lake on lips .*
Material and Methods*: Four female patients with venous lake on the lips were taken for this preliminary study.*
Results: *All the four patients treated by this modality were successfully treated after only one session. Healing was completed in approximately 2 to 3 weeks, and none of the patients experienced any complications.*
Conclusion: *Using radiofrequency on fulguration mode on low intensity along an incision made on the roof or top of the venous lake on the lip resulted in better cosmetic results while being equally effective when compared with other modalities.*

Key words: *venous lake, lips ,radiofrequency, diascopy, glass slide*

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I. Introduction

Venous lakes are acquired venous ectasias of the superficial dermal venules, usually observed in older people, most commonly present on the face, lips, neck and ear.[1] On diascopy, it can be compressed easily with a glass slide. Various modalities of treatments including long pulse NDYAG, 808nm diode laser, CO2 laser, sclerosants like polidocanol, surgical excision, infrared coagulation, cryotherapy have been tried an--d have shown promising results.[2,3,4] The use of radiofrequency using electrofulguration mode on low intensity along the incision is one of the novel treatment modalities with minimal side effects and low cost of treatment. The purpose of this study was to evaluate its effectiveness on lips as lips are one of the most sensitive areas of the face and constitute the aesthetic appeal in an individual.

II. Materials and Methods:

Four patients aged between 30 to 65years were taken in this study with lesions present on the upper lip. The size of the lesions varied from 1to 2 cms. Diascopy was done which showed blanching of lesions. Patients written informed consent was taken.The upper lip was anaesthetized by using infraorbital block. This kept the venous lake intact and the procedure almost painless. An incision was made on top of the venous lake very superficially, giving us a view of venules radiating parallel to each other. The straight probe of radiofrequency kept on fulguration mode on low intensity to prevent heat damage, was introduced through the incision and moved in a circular movement till the lesion blanched and visibly shrunk.The incision was sutured using prolene 60 and pressure bandage was kept for 2 to 3 days. Sutures were removed on the 7th day. Results were assessed visually and before-and-after photographs were taken to illustrate the effectiveness objectively.

Fig. 1

Fig 2

Fig 3

Patients photograph of venous lake A(fig 1). before B (fig 2).after 7 days and C (fig3). immediately after procedure using radiofrequency on fulguration on low intensity mode and incision sutured by using prolene 60

III. Results

All the patients received just one sitting of electrofulguration and the results were noticeable immediately. All of the patients (100%) lesions were completely cleared following just one session and outcome of the surgery was excellent. There was a bit of oedema and pain which lasted for one or two days postoperatively. No bleeding or any other complication was seen postoperatively. Before-and-after photographs are provided to illustrate the effectiveness objectively of this treatment modality.

IV. Discussion

Various therapeutic modalities are available for benign vascular diseases, depending on their type and location and the depth and progression of the lesions. Clinical uses of various modalities of laser treatment such as argon laser, neodymium-doped yttrium aluminum garnet (Nd:YAG) laser, carbon dioxide (CO_2) laser and diode laser have been found to be safe and effective for the treatment of vascular lesions. The long-pulsed 1064 nm Nd:YAG laser provides greater depth of penetration but lower specificity. Because of this deep penetration, the long-pulsed Nd:YAG laser has shown to be effective in treating venous lakes.[5] However the high cost and

the availability of this laser may be a limiting factor. The 595 nm pulsed-dye laser induces a selective destruction of small cutaneous vessels, so it is considered to be the most effective device for treating smaller, more superficial vessels with minimal scarring and other complications. However, it has limitations because of the shallow depth of penetration and thus is not much effective in treating venous lakes.[6] . Carbon dioxide lasers are also effective in treating these lesions but the appearance of pigmentary and/or textural changes on treated areas is more frequent with carbon dioxide laser than with visible light lasers.[7] The use of cryosurgery, as an alternative treatment for VL, may result in aesthetic scarring, mainly in lesions located on the vermilion border of the lips.[8,9.10] Surgical excision is another treatment modality but can also lead to scarring.

Radiofrequency on low intensity node is an easy, inexpensive, easily accessible, and an effective modality, without any significant tissue damage and inflammation. Moreover, the results are immediate, with minimal recovery time. However, tht electrofulguration mode should not be kept on high intensity to avoid tissue damage.

V. Conclusion

The low cost of the machine with easy availability makes it far ahead of other systems and safe as well as effective modality of treatment in venous lakes on lip or any other area.

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