

fect arterial, venous or lymphatic vessels. Classification of hemangiomas and vascular malformations was still a source of considerable difficulty and controversy, due to the heterogeneity of the clinicopathologic entity and the confusion generated in the past by many popular medical definitions and rooted in common use. The International Society for the Study of Vascular Anomalies (ISSVA) classified the vascular lesions into vascular tumors and vascular malformations (low and high flow) on the basis of their natural biologic behavior and functional hemodynamic peculiarities. Vascular tumors are characterized by endothelial proliferation while vascular malformations are characterized by different morphogenic vessels and have stable endothelial turnover. Patients with intraoral vascular lesions commonly have no symptoms but complications including bleeding, ulceration, functional and aesthetic problems, can occur. Many treatments, such as conventional surgery, embolization, steroid therapy and laser therapy, are available for vascular lesions. The aim of this study is to describe epithelial thermal damage during the use of Diode laser and suggest a technique to avoid it.

**Methods.** In order to obliterate the vessels, lasers used to treat vascular lesions must have affinity to hemoglobin to obtain photothermolysis with micro-agglutination of intra capillaries red blood cells. Instrumental examinations such as Color-doppler-US and/or Magnetic Resonance Imaging (MRI) allow to know the depth and the extension of the lesions. The laser approach relies more therapeutic techniques: the transmucosal thermophotocoagulation (TMT), intralesional photocoagulation (ILP) and the combination of these two techniques. The TMT is based on laser irradiation without contact of the fiber with the tissue. The distance from the lesion surface is about 2-3mm. For a more safe execution of the TMT, a transparent glass slide is put over the lesion to reduce lesion thickness and to facilitate the laser action. The ILP treatment allows the laser to focus its energy directly into the lesions. The tissues hit by the laser beam underwent a rapid overheating with different consequences depending on the temperature reached. Exceeding the temperature of 300°C the tissue is carbonized and the result is a scar. To avoid this thermal damage, Miyazaki suggests to use a multiple-spot technique with single pulsed wave instead of the continuous one to prevent the overlap that can cause the increasing of the temperature in the involved area. During the use a whitening of the lesion is observed. In the multiple-spot technique the margins of each application of 2-3 mm are separated by at least 2-3 mm, similarly to "leopard" spots. This method results useful for superficial lesions (almost 1 cm), while for deeper lesions is necessary the combination of the two techniques (multiple-spot TMT+ILP).

**Results.** Multiple spot irradiation technique with a single pulsed wave avoids thermal accumulation, decreasing the incidence of erosion without loss of therapeutic effect and avoiding carbonization of adjacent tissues. The great advantage of this technique is that a reepithelization takes place smoothly from the margins of remaining untreated normal mucosa.

This approach allows to remove the lesions with good healing and aesthetic results.

**Conclusion.** Today laser is demonstrated to be the gold standard technique to treat vascular lesions that allows a safe and efficient treatment and a lower post-operative healing time. The only disadvantage is the risk of carbonization that could be avoided by using the multiple-spot single pulsed wave technique, as Miyazaki suggests.

### **Paresthesia of the lip caused by a large osteoma of the mandible treated with a conservative approach: a case report**

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**Aim.** This study focused on a case of paresthesia of the right lip caused by an extensive osteoma of the mandible. This lesion has been subsequently removed with surgical excision and curettage avoiding nerve injury.

**Methods.** A twenty years old boy referred to our institute for a paresthesia of the right lip from one month. Orthopantomography and CT-scan revealed the presence of a large and well defined osteosclerotic lesion between elements 4.5 and 4.6. After three-dimensional reconstruction it was evident that the lesion was not in contact with the alveolar nerve, so paresthesia could be probably due to an inflammation or indirect nerve compression. The lesion determined a complete resorption of the mesial roots of the elements 4.5 and 4.6. The patient did not report the presence of other systemic pathologies.

**Results.** It was performed an incision between elements 4.7 and 4.4 and full-thickness flap was raised to highlight the entire lesion. To obtain a correct visualization it was necessary the extraction of the elements 4.6. After the excision of the lesion, a curettage with rotary instruments was performed to decrease the probability of recurrence. The surgery was performed under local anesthesia and the patient was discharged after three days of observation. Histological examination revealed that the lesion was a benign osteoma of the right mandible. The conservative approach was preferred in order to avoid permanent injury of the inferior alveolar nerve. The reappearance of sensitivity occurred after a period of about nine months. At two years follow up it has been seen the absence of recurrence, and a complete sensitivity recovery.

**Conclusion.** We report a case of an extensive osteoma of the right mandible involving the medial roots of the first molar. Osteomas are benign osteogenic bone tumors arising from the proliferation of compact or cancellous bone. Osteomas are usually asymptomatic and have a very slow growth rate. A correct excision has been achieved with a conservative approach avoiding recurrence and the appearance of permanent nerve injury.