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Pyogenic Granuloma

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Parameters:

Laser source:	Nd:YAG, 1064 nm
Pulse duration:	40 ms
Fluence:	100 J/cm ²
Frequency:	1 Hz
Handpiece:	R33
Spot size:	4 mm

Treatment procedure:

Pyogenic granuloma (eruptive granuloma) is a rapidly growing capillary hemangioma, i.e. a benign vascular tumor. It typically presents as an eroded, weeping or friable tumor that can reach several centimeters of size in just a few weeks. Most frequently, it occurs on the lips, gingival mucosa, and fingers. Children and pregnant women are most frequently affected. It is usually clinically distinct; however, nail lesions should be histologically confirmed to exclude amelanotic melanoma. Polypoid lesions on the feet can be confused with Kaposi sarcoma. In patients with HIV/aids, bacillary angiomatosis should also be considered. Surgery is the usual method of treatment; however, it might leave the patient with an unnecessary scar. Any other destructive measures of treatment are appropriate.

The case shown is a 12-year old boy with a pyogenic granuloma on his lower lip. Before treatment, local infiltrative anesthesia was provided with 2% xylocaine with adrenaline (Xylorest 2 ml). The tumor was cleaned with wet compresses to remove scales and debris as much as possible.

During laser treatment, consecutive laser shots were delivered. Shot by shot, the tumor shrank; shots were placed over the entire surface to ensure an even response. After 5 shots, the tumor burst and started to bleed. The treatment was stopped and the tumor was compressed manually to reduce the bleeding, and debris was removed. After 10-20 seconds of compression, laser treatment was continued. The tumor continued to bleed until about 20 shots, when the tumor shrunk completely and the bleeding stopped. The patient was discharged with instructions to apply an ointment containing dexpanthenol (Bepanthen ung.) several times daily, and to compress the wound should bleeding occur. Healing was complete within two weeks, with no residual scarring.

Practical tips for the procedure:

- Laser treatment of a pyogenic granuloma should only be performed if the diagnosis is beyond doubt. Several malignant tumors might mimic pyogenic granuloma, and laser treatment of malignant tumors is severe malpractice. Consult a dermatologist before laser treatment of a pyogenic granuloma.
- During treatment, the tumor behaves dramatically: it shrinks, it bursts, it bleeds. It is important to reach the endpoint: complete shrinkage of the tumor and hemostasis.

Conclusion:

Nd:YAG laser treatment is an excellent option for treatment of pyogenic granuloma, offering several advantages over surgery: faster procedure, no sutures, faster healing, no residual scarring.



Fig. 1: Before treatment



Fig. 2: Immediately after treatment



Fig. 3: 5 days after treatment



Fig. 4: 30 days after treatment



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