

Therapy of the recurring epulis granulomatosa

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ABSTRACT

Epulis granuloma is a primarily oral disease which is caused by hormonal factors, irritation or physical trauma. It is characterised by an overgrowth of tissue. This article discusses the laser-supported therapy of recurring epulis granulomatosa with reference to a patient case.

KEYWORDS

Diode laser, 970 nm, epulis granulomatosa

Introduction

In surgical dental practices, there are quite a few cases where you will be faced with an epulis. During pregnancy there may also be a clinical epulis, depending on hormone levels, which will often disappear after the birth of a child (epulis gravidarum). In most other cases, excision is the most promising therapy (epulis fibromatosa or granulomatosa). This can be done either with conventional methods like the electrotome or, thanks to the further development of dental lasers, with a diode laser system like the SIROLaser Advance.

In some special cases, the practitioner will be faced with the problem of a recurring epulis. On initial clinical inspection, there is no chance of diagnosing this correctly. This article will explain the diagnosis, therapy and histological summary of the recurring epulis granulomatosa under the special circumstances of a laser therapy with the SIROLaser Advance. We have used this method for several other cases of epulis with remarkable results. As of today, we have successfully treated 10–15 cases with the SIROLaser Advance.

Diagnosis

The patient makes regular, twice-yearly visits to our practice. In early 2012 he came to us with the clinical picture of an elevated, inflamed small area of about 3x4 millimeters between teeth 14 and 15, reaching through the approximal space to the palatal part of the papilla. It immediately bled on probing, was a dark red color and showed a definite border to the vestibular gingiva. During anamnesis, the patient told us that he didn't feel any pain or discomfort. It had appeared over a few weeks without specific changes in habits. With this information, we diagnosed an epulis and decided to excise it.

Therapy

The area was anaesthetized from tooth 13 to 16 and the epulis was excised conventionally with the electrotome approximately 0.5 mm below the level of the surrounding gingiva. Due to the location of the wound, no further surgical dressing was applied. It was an open granulation.

Eight days later, the patient came for post-operative treatment, as is standard in these cases. The wound showed quite complete healing. No pain or other complications were reported.

Six months later, the patient showed up for a recall appointment and reported that the epulis had recurred to its former appearance. As a result, we decided to try a new method that is made possible by the SIROLaser Advance, a 970 nm diode laser from Sirona Dental Systems GmbH, Bensheim, Germany (Fig. 1).

The second procedure was quite similar to the first. However, we decided to excise a larger area with a safety distance of about 1–1.5 millimeters. Eight days later, the patient showed the same indications of almost complete healing.

In January 2013, the patient had another recall appointment. The clinical finding was the same so we changed our diagnosis to a recurring epulis granulomatosa. In this case, there was direct contact with the alveolar bone. We say the epulis is pedunculated with the alveolar bone. The proper therapy is a complete excision of the epulis and parts of the alveolar bone. In some cases, adjacent teeth could be affected, making an extraction necessary. The incidence of a malignant tumor is very low, but possible.

We anaesthetized the area from tooth 13 to 16 with an anesthetic that contained a high dose of adrenaline (1 : 100,000) to avoid having too much blood in the surgical area. We excised the entire epulis, with a safety distance of 1.5 mm, and the periosteum through the approximal space to the palate with the SIROLaser Advance. This was because we wanted to try another method of saving the adjacent teeth by not excising the alveolar bone. We then decontaminated the entire area with the SIROLaser Advance and, additionally, with a sterile isotonic saline solution and Penicillin G (1 Mega). We remodeled the approximal papilla and the surrounding gingival with a micro-invasive papilla reconstruction plastic and a 5-0 atraumatic suture. We stored the excision in a sterile isotonic saline solution for the histological examination.

The patient was instructed not to get food near the surgical area. We also instructed him not to eat any carbohydrates or dairy products for eight days. Post-operative treatment was done after two, eight and fourteen days. Again, no pain

or other complications were reported so we removed the suture. Three months later, there was no recurring epulis. The anatomical-histological finding was a benignant epulis granulomatosa.

Conclusion

We can say that this therapy was successful but there are no studies or articles about this method so more trials are still required before it can become an objective surgical standard. In dental surgeries, there are very few cases of a recurring epulis. In most cases you will find a superficial epulis fibromatosa, granulomatosa or gravidarum which are easy to excise. Sometimes they heal without treatment. For cases that require surgery, the SIROLaser Advance is a unique and promising therapy approach. The biggest advantage lies in the bloodless surgical procedure. The laser also seems to have an antibacterial effect. It reduces post-surgical pain levels and the risk of unwanted aftereffects in modern micro-invasive dental surgery. ◀



Fig. 1: SIROLaser Advance on dentist element of TENE0 treatment center.