The use of laser devices has now become a desirable alternative to traditional surgical modalities. The specific advantages of lasers in surgery are aseptic incision of tissues, coagulation during operation and postoperative benefits. The multiwave diode laser SMARTm PRO (Lasotronix, Piaseczno, Poland) is an innovative device characterized by two sources of light waves: 635 and 980 nm. Light wavelength of 635 nm is dedicated to the bio-stimulation therapy and photoactivated disinfection (PAD), while the wave 980 nm allows for bloodless cutting of soft tissue, treatment of teeth sensitivity and teeth whitening. In soft tissue oral surgery, the use of 980 nm wavelength.

**Fig. 1.** The clinical feature of sessile lesion with a diameter of 6 mm on the palate.

**Fig. 2.** Removal of the lesion with a 980 nm diode laser.

**Fig. 3.** After laser excision of the lesion.

**Fig. 4.** Tissue healing after 7 days.
for excisions and 635 nm for biostimulation therapy gives a lot of benefits, both for the doctor and the patient.

**Aim of the study:** The aim of the study is to present the use of multibeam diode laser for removing asymptomatic fibromatosis lesions presented on the oral mucosa.

**Materials and methods:** Ten patients, both male and female, aged between 16 and 65, were referred to the Department of Periodontal Diseases and Oral Mucosa Diseases in Zabrze, in order to consult lesions located on their oral mucosa. A detailed evaluation of medical history and oral examination, treatment plan contained the use of multibeam diode laser SMARTm PRO – a device characterized by two sources of light waves: 635 and 980 nm (Fig. 1 – 17). Firstly, to remove each lesion, diode laser was used with 980 nm wavelength, in continuous mode (Fig. 18). Secondly, immediately after the procedure, on the 2nd and 4th day, every postoperative wound was treated with laser biostimulation with 635 nm wavelength and energy of 4 J/cm² (Fig. 19). All materials were sent for histopathological evaluation.
Results: The average duration of each treatment, containing anesthesia infiltration (approx. 4 minutes) and biostimulation, was about 10 minutes. Local anesthesia contained circa 0.4 ml of anesthetic. Postoperative wounds did not require sutures. On follow-up sessions, patients did not report any postoperative pain and/or swelling of the wounds. All patients were highly satisfied. Each removed lesion was successfully subjected to histopathological evaluation – in all cases the result was: fibroma.

ADVANTAGES:
- precise, aseptic and visible cuts
- easy application
- shorter operation time
- better coagulation / bloodless cut
- minimal or no suturing
- less anesthesia
- minimal risk of infection
- less or no post-operative pain and swelling
- faster healing
Fig. 9. The clinical feature of the sessile lesion with a diameter of 6 mm on the right corner of patient's mouth.

Fig. 11. After laser excision of the lesion.
Fig. 10. During surgery by 980 nm diode laser.

Fig. 12. Tissue healing after 7 days.
Fig. 13. The clinical feature of the sessile lesion with a diameter of 8 mm on the tongue.

Fig. 14. Preparing for the removal.

Fig. 15. Removal of the lesion with a 980 nm diode laser.

Fig. 16. After laser excision of the lesion.

Fig. 17. Tissue healing after 7 days.
DISADVANTAGES:
- cost of the device
- availability

Conclusions: The study undoubtedly confirms the benefits of using the diode laser in the oral soft tissue surgery (Tab. 20). One device enables a precise, clean cut with a concurrent coagulation, which eliminates the intra- and postoperative bleeding and the need for sutures, also biostimulation therapy supports healing processes, reduces swelling and postoperative pain. The taken samples may be subjected to histopathological evaluation. Patients praise the high psychological comfort with the use of modern technologies.

References:

Niniejsza praca została zaprezentowana w formie plakatu podczas 2. Kongresu Polskiego Towarzystwa Stomatologii Laserowej (PTSL) w Krakowie.
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