The little surgical magic box – hf Surg® is essential for every dental practice

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The most valuable resource for dentists is time, captured aptly by Benjamin Franklin's phrase of "Time is money". In this respect, we constantly have to critically assess our workfl ows. Innovative solutions that help to save time, reduce costs and improve the comfort of patients, as well as treatment outcomes, are in high demand. In this regard, the affordable hf Surg® (Hager & Werken) makes a valuable contribution to everyday practice.

The hf Surg is the little brother of the last-generation of proven high-frequency electrosurgical devices that are used in daily practice. Long gone are the days when patients had to endure the unpleasant side-effects of this technology. Unfortunately, since old devices are still present in many practices, some patients are still exposed to these effects.

State-of-the-art equipment such as the hf Surg work at a frequency of 2 MHz, which lies in the frequency range of a BBC broadcast. That is why it is often referred to as "radio surgery". I have never received complaints from patients or came across disadvantages when using modern high-frequency devices. The technology is simple and clinically proven. A thin electrode made from a special metal alloy transmits electromagnetic waves into the tissue. This way, the tissue cells collapse on a macroscopic level, which appears as a minimally invasive cut from the outside. This cutting procedure is performed without pressure and allows a precise and almost non-thermal cutting of the soft tissue. The accompanying handpiece is extremely lightweight and boasts extraordinary haptics, allowing the depth of penetration to be precisely determined.

Saving time

Unfortunately, modern practice management is increasingly hampered by regulatory interventions and as a result we have to achieve more in less time. Every minute lost by working with ineffi cient tools is a minute we cannot afford to lose. The hf Surg works reliably and not only 20 times faster than a laser in my estimation but also signifi cantly faster than a scalpel (Figs. 1 & 2).

Of course, the laser has proven its value in many areas, but it is inferior in many respects when used in soft-tissue surgery. While laser can only remove layer by layer, an incision with the hf Surg is simultaneously performed over the entire penetrated diode length. Scalpels and other instruments too have their limitations, including becoming blunt over time and needing to be replaced or sharpened, sometimes even during surgery, which is not only annoying but also time-consuming and nerve-wracking. In contrast, an electrode always remains ready for use (Fig. 3).

Moreover, the hf Surg has a coagulation capability, which allows cutting and stemming of bleeding simultaneously. The operating area stays free of blood and an unobstructed fi eld of view is maintained for fast treatment. Some of the indications for which this

Fig. 1: Preoperative diagnosis: a patient with gingival hyperplasia.

Fig. 2: Precise and bleeding-free removal using the loop electrode.

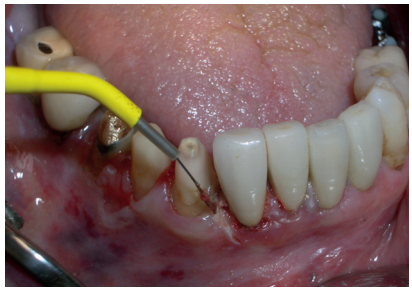

Fig. 3: Exposure of the preparation margin prior to impression taking.

Cutting	Cutting + Coagulation
Sulcus extension	Gingivoplasty
Gingivectomy	Exposing teeth, stumps
Open curettage	Removal of hyperplasias
Flap surgery	Tongue fraenum surgery
Excision	Haemostasis prior to impression taking

Fig. 4: Indication table

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is of great importance are gingivoplasties, the removal of hyperplasias, the exposure of teeth, establishing haemostasis before impression taking and sulcular resection.

Saving costs and safety considerations

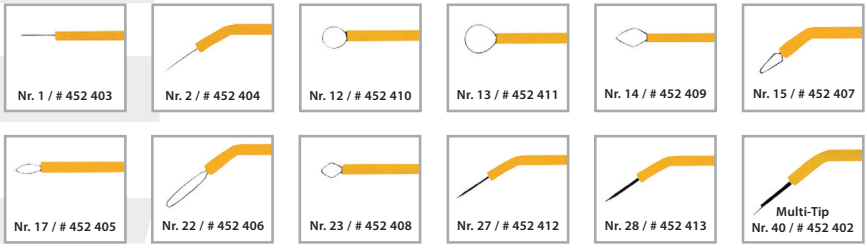
Single-use scalpels and conventional means of arresting excessive bleeding cost money. Owing to the integrated coagulation functionality of the hf Surg, wounds can be reduced with-in seconds during cutting. The cleancut edges and the precise alignment of incisions are impressive. Furthermore, the electrodes are durable and autoclavable. Therefore, they are the more environmentally friendly and economical alternative in the long term. In contrast to scalpels, the hf Surg electrodes can be individually adjusted for different indications. The dimensionally stable wire can be bent according to the treatment. The included loop electrode is optimally suited for operculectomy of third molars or removal of fi bromas (Figs. 4 & 5). The variety of electrodes is comprehensive (Fig. 6). Furthermore, there is the consistent danger of injuries from conventional instruments, such as scalpels. The hf Surg electrode is activated only when the foot pedal is depressed; hence, it offers greater safety.

Patient comfort and treatment success

In most of the cases I have treated with the hf Surg, there was no need for sutures, as I was able to perform direct coagulation. The shortened treatment time is benefi cial to the clinician and patient, particularly in the case of surgically demanding procedures. Compared with other methods, the duration of healing is shorter as well, often completed after 72 hours. The painless treatment and the aesthetic result too are pleasing for both the patient and clinician. In summary, the maintenance of the tissue turgor and necrosis-free cutting with simultaneous optional coagulation allows better and faster treatment. The small and handy unit permits easy transfer between different treatment rooms. Before the hf Surg became an integral part of my everyday practice, I had doubts, but these were allayed after a personal demonstration and my subsequent use of the device.

Fig. 5: Removal of a fibroma from the lower lip.

Fig. 6: Results three days after surgery.



Figs. 7: Overview of commonly used electrodes.

hf Surg® (REF 452 400)
Device with foot pedal, hand piece, 4 electrodes and neutral electrode.

Technical Data
2.2 MHz, max. 50 W
Voltage: 230 V / 50 Hz

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