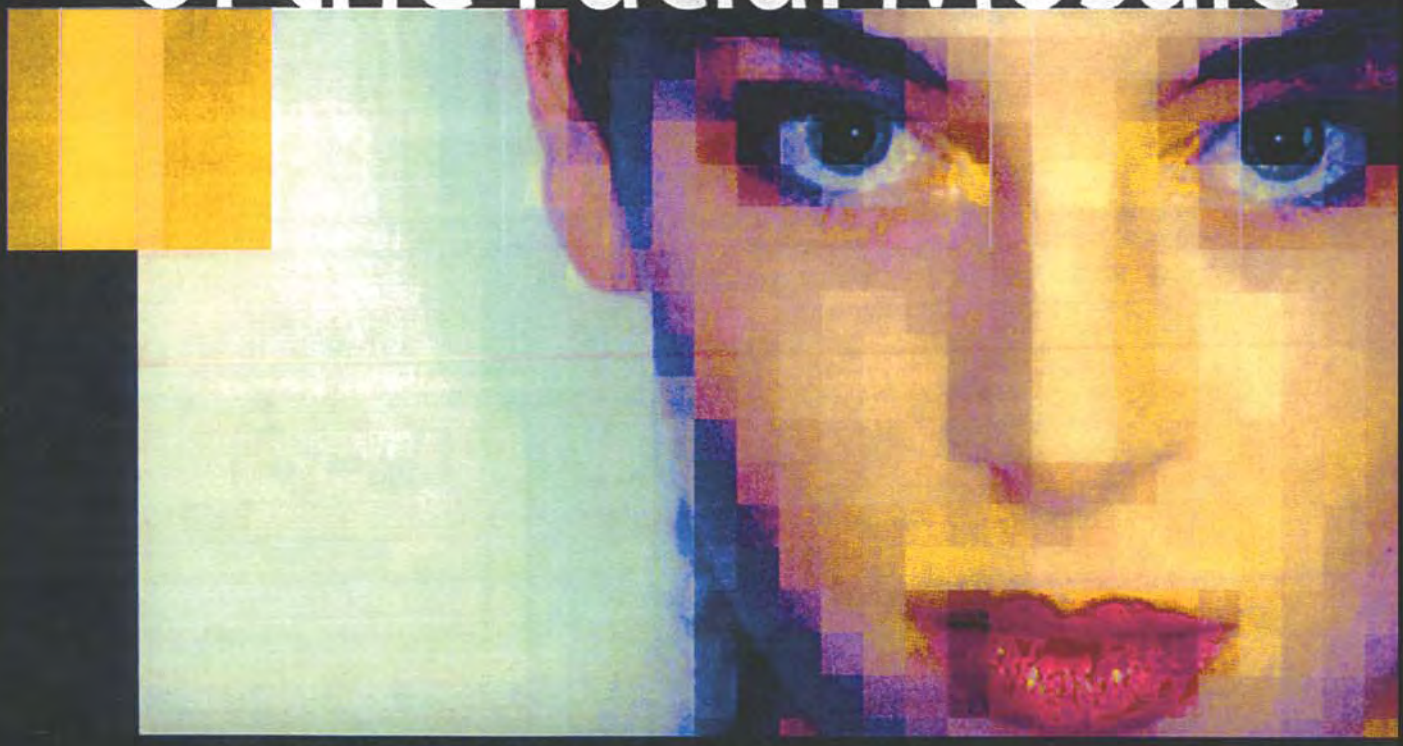
Dimitrije E. Panfilov
Editor

Aesthetic Surgery of the Facial Mosaic



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26 Radiofrequency Surgery as a Refinement in Aesthetic Surgery

Dimitrije E. Panfilov

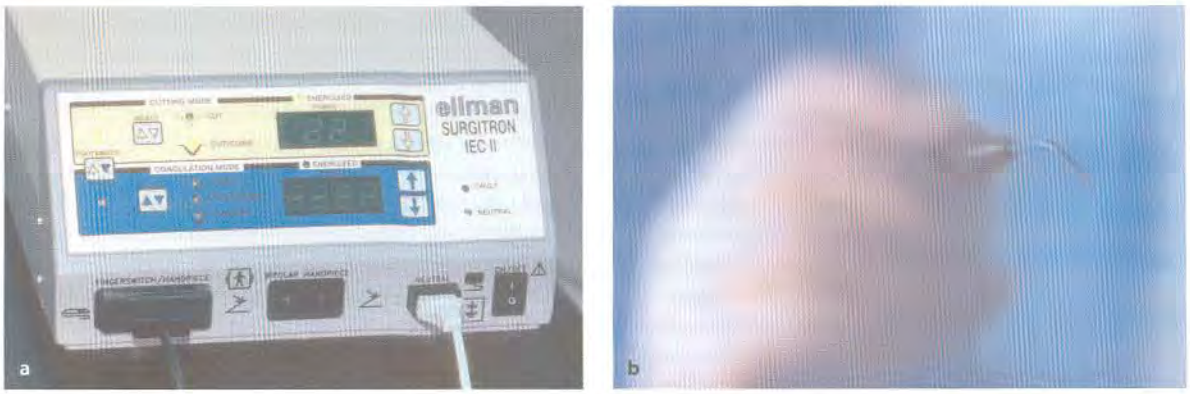

Fig. 26.1. **a** Radiofrequency generator. **b** Radiofrequency "pen" allows maximal precision

There is a need for absolutely precise incisions in many areas of aesthetic surgery. It is also most important to have the option of dry, bloodless incision lines and to avoid pressure of the blade on the skin, allowing it to be divided "by touch". Both of these prerequisites are fulfilled with radiofrequency surgery using a frequency of 4 MHz. It is also useful if the same device is able to coagulate blood vessels.

Ellman International of New York markets patented radiowave instruments and has effectively redefined the significance of radiosurgery, particularly its use in cosmetic surgery. For the experienced operating surgeon, its advantage over all the alternative techniques, such as scalpel, laser, or electrosurgery, is indisputable.

Reduced heat production produces faster healing and lower postoperative discomfort. The aesthetic surgeon is able to make an accurate incision, without applying pressure and without the tissue being pulled; much the same way as an artist wields an ink pen while drawing. The radiowave incisions both improve haemostasis and are antibacterial. Histologic tissue samples are not distorted by artefacts, as is the case with electrosurgery and laser surgery. Scar formation is optimal and superior to all other procedures (scalpel, laser, etc.).

We use this high-tech tool for blepharoplasties, facelifts, direct excisions in facial surgery, nostrils and lip commissures, neck incisions, and in all locations where a high degree of precision is required.

Fig. 26.2. "Bull's-horn" incision with radiofrequency treatment

Radiosurgery is used predominantly in aesthetic facial surgery where surgical techniques cannot be applied with the same degree of precision or they are not as straightforward as radiowave surgery. When making an incision, the skin is simply touched by the electrode; it is 100% precise, and there is no tissue warping. The instrument's hand piece is similar to a penholder. Surgery with lasers, on the other hand, is complicated, imprecise, and associated with pro-

longed wound healing owing to denaturation of the wound edges from the effects of extreme heat, which is an unsatisfactory compromise for the advantage of minimizing intraoperative bleeding. In contrast to radiowaves, the conventional scalpel cuts under application of pressure and pulling, which is an imprecise incision technique for soft tissues such as eyelid skin; the scalpel does also not provide simultaneous haemostasis.

Other operations such as rhinophyma treatment, endoscopic browlift, hair transplant, and tumour removal will benefit from 4.0 MHz radiosurgery, as would many major surgical interventions such as breast surgery, dermolipectomy, abdominal plastic surgery, and vein surgery. A particular issue is the minimal scar tissue formation. At times we are even able to make some scars invisible.

The benefit of radiosurgery for cosmetic surgery lies in its superior results and the ease of the method, establishing it as a valuable aid. Although work with radiowaves requires operative skill and most importantly a steady hand, any surgeon new to this technique need not fear lengthy training or an extended learning curve. Like other high-tech tools, radiosurgery enables us to achieve detail improvement of our operations and softer scarring.

Bibliography

Please see the general bibliography at the end of this book.