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7.5 Perioperative and postoperative management

Nasal intubation is standard in orthognathic surgery. Hypotension must be guaranteed via deep anesthesia. Local infiltration with epinephrine 1/100.000 is injected submucosally for hemostasis.

1 Mandibulomaxillary fixation (MMF)

Postoperative mandibulomaxillary fixation after internal fixation is not necessary in cases where correct stable internal fixation has been applied. Elastics for functional training are recommended to achieve neuromuscular adaptation.

2 Postoperative x-ray control

X-rays in two planes are taken immediately after surgery and before the patient is allowed to return to full function.

3 Implant removal

After uneventful healing, the removal of pure titanium plates is usually not necessary.

4 Occlusal splints

After internal fixation with plates and screws and before wound closure, the occlusal splint is removed and the achieved position is checked and compared to the planning models. If there are discrepancies, the reason must be determined and corrections must be undertaken, for instance new positioning of the osteotomized segments.

In case the postsurgical occlusion is as desired, the splint is reinserted and fixed with two or three wire ligatures to brackets of upper teeth for postoperative neuromuscular adaptation. In the early postoperative situation with swelling and restricted mouth opening, it is helpful to keep the splint in place up to 2 weeks to secure the occlusion before orthodontic treatment continues.

A good interdisciplinary coordination between the surgeon and the orthodontist is essential to achieve good results. The orthodontist must be informed when the splint is going to be removed and when the postoperative orthodontic treatment can be started. There should be no prolonged time gap between surgical and orthodontic treatment.

5 Medication

Antibiotic prophylaxis is used by the majority of surgeons performing jaw osteotomies. The argument is that in elective bone surgery in a contaminated area, such as the oral cavity, the patient should have only a minimal risk for infections.

With antibiotics an infection rate below 5% can be achieved. Nevertheless, the application of antibiotics in that field, as in others, is part of controversial discussions.

Astringent nose drops and disinfectant mouth-washes are part of the postoperative care during the first days.

The prevention or reduction of postoperative edema by the use of steroids is widely discussed for its clinical evidence.