
3 Osteotomies and fragment fixation

Maxillary osteotomies, with their long tradition, have seen several modifications over the years and have become generally accepted, standardized, and safe procedures. The intention of all procedures is the preservation of the blood supply, proper positioning and sufficient fixation of the fragments, and the prevention of relapse.

Usually the osteotomies are performed with burrs, osteotomes, reciprocating saws, or piezoelectric devices. New technologies which employ navigation or endoscopic approaches are already in clinical use.

The use of plates and screws for internal fixation was revolutionary. Patient comfort has increased dramatically with stable internal fixation, and the risk for relapse has significantly diminished. Today, adaptation plates 1.5, 2.0, or Matrix plates are most used for maxillary fixation. Special plate configurations, such as L-plates, help to simplify the osteosynthesis technique and to save time. It is of major importance to realize that the plates must be bent accurately (“passive”) to the bone surface without any “active” influence to the fragment position. Therefore, compression plate osteosynthesis is not indicated in fixation of maxillary osteotomies. If internal fixation is carried out properly, no additional mandibulomaxillary fixation is required in the postoperative phase. Sometimes training elastics are used to guide the patient into the desired postoperative position.

