

PERIANGULAR APPROACH IN THE TREATMENT OF CONDYLAR-BASE AND LOW CONDYLAR NECK FRACTURES: RETROSPECTIVE STUDY



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Introduction: Management of mandibular condylar fractures (MCFs) remains controversial. This retrospective study presents the authors' experience with the periangular transcutaneous surgical approach to MCFs. 81 patients underwent open reduction and fixation (ORIF) of MCFs at our department in 01/2010-12/2018 via periangular infraparotid transmasseteric surgical approach.

Inclusion criteria for ORIF:

- 1) Age > 12 years
- 2) Trauma related malocclusion
- 3) Ramus shortening, dislocation of the condyle out of the fossa, medially displaced condylar fragment

Exclusion criteria:

- 1) Age < 12 years
- 2) Edentulous alveolar ridges
- 3) High risk of general anaesthesia
- 4) Noncompliant patients

Results: OPG and CT scans were used. Patients were invited for follow-ups 7 days, 1, 3, 6 and 12 months after the operation. Following parameters were assessed: occlusion, maximal interincisal opening (MIO), deviation of the mandible during function, facial nerve function (FNF), occurrence of salivary fistulae and aesthetic result.

Surgical technique:

- 30 - 40 mm long curved skin incision at the palpable mandibular angle
- ↓
- Platysma muscle identified
- ↓
- Masseter muscle exposed and undermined
- ↓
- Marginal facial nerve branch identified traversing the lower angular border
- ↓
- Masseter muscle dissection above the visible marginal nerve branch directly to the bone
- ↓
- Fracture stumps identified and mobilized from soft tissues
- ↓
- Reduction
- ↓
- Rigid fixation using plates - 2 straight plates, lambda or trapezoid plates, chosen according to the individual fracture type and appropriate screws



Conclusion: Periangular infraparotid transmasseteric approach is an effective and safe approach for ORIF of condylar base and low condylar neck fractures for following reasons:

- Direct visualisation of the marginal mandibular branch of the facial nerve in most cases reduces risk of facial nerve injury
- Direct visualisation of bony fragments and orthogonal application of the plate(s) and screws possible
- Avoiding injury of the parotid gland.

Age (years)	to 15	16-25	26-35	36-45	46-55	56+
Patients	2	20	28	17	9	15
Localisation	Unilateral	Bilateral	Single	Combined with another mandible fracture		
Patients	66	15	30	51		
Cause of the Fracture	Violence	Sport	Work	Traffic	Falls	
Patients	21	12	7	12	29	
Type of fixation	1 straight plate	2 straight plates	Lambda	Trapezoid		
Patients	14	22	31	14		
Postoperative (MIO)	7 days	1 month	3 months	6 months	12 months	
Millimeters	26	34	41	43	43	

Table no. 1 – Results of the Study

The authors certify that they have NO affiliations with or involvement in any organization or entity with any financial or non-financial interest.

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