

Mandibular Subcondylar Fracture: Improved Functional Outcomes in Selected Patients with Open Treatment

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BACKGROUND

Subcondylar fractures represent 25-35% of all mandibular fractures, yet the treatment paradigm has remained controversial¹. Closed treatment relies on the plasticity of the condyle head during recovery while open treatment is challenging and risks facial nerve injury. Perioperative, functional, and patient-reported outcomes were measured to compare methods of open vs closed treatment of subcondylar fractures.

METHODS

Selected displaced subcondylar fracture cases with Open (ORIF +MMF) vs Closed (MMF) treatment were compared (n=60). Subcondylar fracture cases were included if 3D CT scans showed displacement of more than 15 degrees in any direction and at least 3mm of mandibular ramus height loss. Treatment was decided based on whether it was an odd or even month. Demographic, perioperative data, complications, persistent symptoms, chin deviation, malocclusion, change in mouth opening, functional scores, and FACE-Q patient satisfaction were recorded.

RESULTS

Open vs Closed groups had similar demographics and perioperative data except the Open group had longer OR time (76.39 vs 56.15min). In long-term follow-up, Open treated patients had statistically significantly less condylar symptoms (9%vs 67%, p<0.05), chin deviation (0% vs 40%, p<0.05), and restricted mouth opening (3:5, p<0.05), as well as significantly better functional scores (1.92 vs 0.861, p<0.05). Transient facial nerve weakness was seen in 6% of Open cases. Patients who underwent open treatment had significantly better scores on the FACE-Q under the Quality of Life and Process of Care categories.

CONCLUSION

For selected subcondylar fracture patients, open treatment with endoscopic assistance, nerve monitoring, and specialized plates provides superior long-term results compared to closed treatment when considering symptoms and functional parameters.

REFERENCES

1. MD AMS, MD RMK. Current Management of Subcondylar Fractures of the Mandible, Including Endoscopic Repair. *Facial Plastic Surgery Clinics of NA*. 2017;25(4):577-580. doi:10.1016/j.fsc.2017.06.008.



