EP-011

악간 고정용 나사와 거닝 스플린트를 병용한 무치악 노인 환자의 하악 과두 골절 치료: 증례 보고

Management of Mandibular Condyle Fracture in an Edentulous Geriatric Patient Using IMF Screws and a Gunning Splint: A Case Report

노원을지대학교병원 성형외과
홍주현, 이동락 ★

Purpose: Mandibular condyle fractures in edentulous patients are typically managed with their own dentures. However, when the denture is damaged at injury, this approach becomes unavailable. We report a case in which IMF was achieved using IMF screws with a newly fabricated Gunning splint.

Methods: A 74-year-old edentulous female patient presented with a right mandibular condyle fracture and a 2-cm chin laceration following a slip down. Examination revealed malocclusion and trismus (2-finger width). Her maxillary denture was deformed at presentation, precluding use of the existing denture. Under local anesthesia, four 8-mm IMF screws were placed at the upper and lower gingivomucosal junctions between the canines and first premolars. In collaboration with the dental department, a new Gunning splint was modified to expose screw heads for rubber band application.

Results: IMF was successfully established without general anesthesia or open dissection. The new Gunning splint restored stable occlusion lost due to fracture. The chin laceration has healed by primary intention, and the sutures were removed on postoperative day 5. IMF was maintained for 15 days. After rubber bands removal, the patient demonstrated stable occlusion and improved mouth opening without complications. Notably, the splint was fabricated without a conventional anterior feeding opening; nutrition was maintained on a liquid diet throughout fixation.

Conclusion: When an edentulous patient's existing denture is damaged at the time of condylar fracture, conventional denture splint use is not feasible. IMF screws combined with a newly fabricated Gunning splint provide a reliable, minimally invasive solution, enabling IMF under local anesthesia while restoring functional occlusion.

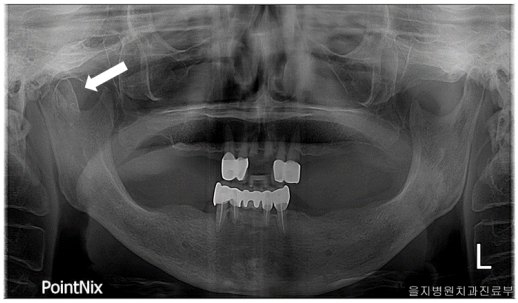

Fig. 1. Preoperative panoramic radiograph demonstrating a displaced fracture of the right mandibular condyle (arrow). The condylar head shows apparent discontinuity and medial displacement, consistent with an intracapsular condylar fracture. Malocclusion was clinically evident at presentation.

Fig. 2. (Left) Newly fabricated maxillary Gunning splint design to expose IMF screw heads for rubber band application. (Right) The patient's original mandibular removable partial denture (RPD) with metal framework, which was found damaged at presentation and could not be utilized for intermaxillary fixation.

Fig. 3. Clinical photograph demonstrating intermaxillary fixation with rubber bands applied between the IMF screws and the Gunning splint.