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Perioperative Care and Functional Recovery After Mandibular Fracture Repair: Roles of Nurses, Operating Room Technicians, Dental Assistants, and Physical Therapists

Alaa Sami T Sheikh[1]; Mohammed Ali Saddiq[2]; Abed Abdullah Alhelali[3]; Majed Salem Alkhattabi[4]; Anas Salem Obood Batyyab[5]; Osamah Mohammad Zakaria[6]; Mohammed Nabil Ozbak[7]; Ghalib Ayid Safer Alotaibi[8]; Naimah Hamed Jaber Alharthi[9]; Bakur Jmal Badwi[10]; Fahad Mohammed Saleh Alzahrani[11]; Hani Dakeal Rabu Almaghthwi[12]; Abeer Abdulsalam Reemallah[13]; Hammad Ibrahim Gasim[14]

[1] Senior Specialist-Cardiovascular Nursing; King Abdullah medical city
[2] nursing; King abdulaziz hospital
[3] Nursing technician; Health cluster makkah
[4] Nursing technician; Primary health care center in Molagiya
[5] Nursing technician; Health cluster makkah
[6] Nursing technician; Health cluster makkah
[7] Makkah Health Cluster; Nursing Technician
[8] Nursing technician; Health cluster makkah
[9] Nurse specialist; King Abdul allah medical city
[10] Makkah Health Cluster; Nursing Technician
[11] Makkah Health Cluster; Nursing Technician
[12] O.R technician; Health cluster Makkah
[13] Dental assistant; King abdullah medical city
[14] King Abdullah Medical City; Physiotherapy specialist

Abstract

Background: Recovery after mandibular fracture repair depends on airway safety, perioperative reliability, nutrition, oral care, and rehabilitation. Nurses, operating room technicians, dental assistants, and physical therapists contribute complementary capabilities.
Methods: A targeted review examined clinical studies and professional guidance available by 31 December 2024, distinguishing evidence for individual interventions from proposed multidisciplinary arrangements.
Results: Priorities include recognizing airway deterioration, documenting fixation-specific emergency plans, maintaining sterile equipment and instrument accountability, providing individualized analgesia, and preventing nutritional decline. Guidelines discourage prolonged postoperative antibiotic prophylaxis without established infection. Rehabilitation should follow surgical restrictions and assess jaw movement, occlusion, eating, and patient-reported function. Small rehabilitation trials do not establish a universal exercise schedule or demonstrate the effectiveness of a combined four-profession model.
Conclusion: Integrated care should connect procedural safety with protected functional recovery through explicit responsibilities, reliable handovers, accessible patient education, and coordinated follow-up. Each profession contributes within its authorized scope, while surgical and anesthesia decisions remain with the treating specialists. Prospective evaluation is needed to establish effects on clinical outcomes.

Keywords: Mandibular fractures; Perioperative nursing; Operating room technicians; Dental assistants; Physical therapy; Functional recovery.

INTRODUCTION

The outcome of mandibular fracture treatment extends beyond satisfactory postoperative imaging. Patients need to breathe comfortably, maintain nutrition, communicate, clean their mouths, and recover useful jaw movement. Fracture location, displacement, dentition, associated injuries, and treatment choice determine how these goals can be pursued safely. Open reduction and internal fixation (ORIF), closed treatment, and maxillomandibular fixation (MMF) create different requirements for observation, oral access, and movement. Consequently, an instruction such as “resume jaw exercises” is incomplete without a clear description of the permitted activity and the fixation precautions.[1,2]

This review examines the contributions of nurses, operating room technicians, dental assistants, and physical therapists across the perioperative pathway. Their responsibilities intersect but remain distinct. Nurses provide continuing assessment and coordinate bedside care; operating room technicians support equipment readiness and accountable sterile practice; dental assistants facilitate dental care and reinforce approved oral-hygiene instructions; and physical therapists assess and guide functional rehabilitation within surgical restrictions. Surgical treatment selection and fixation decisions remain the responsibility of the treating surgical team, while anesthesia professionals direct airway and anesthetic management. A useful multidisciplinary model makes these interfaces explicit and ensures that a change in one part of the plan reaches everyone implementing it.

Review approach and evidence interpretation

A targeted literature review used PubMed-indexed publications, accessible full texts, and guidance from relevant professional and public-health organizations. Search concepts combined mandibular fracture, perioperative care, airway management, antibiotic prophylaxis, oral hygiene, nutrition, rehabilitation, physiotherapy, and patient safety. Sources were restricted to publications available by 31 December 2024. Clinical trials and observational studies informed intervention-specific findings; systematic reviews and guidelines provided context and practice recommendations. Selected established publications were retained where they addressed enduring safety requirements.

This is a selective synthesis rather than a systematic review with exhaustive retrieval, duplicate screening, or quantitative pooling. No new patient data were collected. The proposed responsibility assignments and implementation measures represent an application of the reviewed evidence, not a validated multidisciplinary intervention. Findings from general surgical safety studies and mixed maxillofacial populations are identified as indirect evidence, and differences between fracture patterns are maintained throughout the discussion.

Clinical assessment and treatment-dependent recovery

Initial care follows trauma priorities, including airway evaluation, bleeding assessment, associated injury recognition, and appropriate cervical spine precautions. Assessment also records altered occlusion, damaged or missing teeth, sensory symptoms, and the patient's preinjury function. These findings establish a reference for postoperative review. Airway planning requires communication between surgical and anesthesia teams because the chosen route must accommodate both ventilation and operative access. A systematic review of airway techniques supports individualized planning rather than a universally applicable intubation method.[3]

Recovery protocols must reflect the actual repair. A randomized multicenter study of displaced condylar fractures reported better results for several functional outcomes after operative treatment among patients completing follow-up. However, only 66 of 88 randomized patients were evaluated, and its findings should not be generalized to all mandibular fractures or treated as proof that every condylar injury requires surgery.[4] Rehabilitation instructions should therefore specify fracture site, fixation type, whether MMF or guiding elastics remain, and the activities authorized by the surgeon. Physical therapists need this information before applying a program developed for a different fracture population.

Risk assessment also includes practical barriers to recovery. The prospective MANTRA audit recorded 947 patients across 49 centers and identified associations between complications and factors including smoking, alcohol use, oral hygiene, medical history, and delayed presentation. These observational

associations do not establish that any single educational intervention prevents complications.[5] They nevertheless support asking about tobacco exposure, capacity for oral care, access to suitable food, and attendance at follow-up. Nurses can identify these barriers early and communicate them to the treating team without equating difficulty following instructions with unwillingness to recover.

Operating room preparation and procedural reliability

Operating room technicians support the surgical plan by checking the availability, compatibility, integrity, and sterility of required instruments and equipment. Preparation may include fixation systems, drills and irrigation, suction, and equipment needed for an agreed contingency. Implant selection and changes to the repair remain surgical decisions. Dental assistants can contribute knowledge of dental instruments and small components, and help prepare the oral-care environment under locally authorized supervision. These contributions are particularly useful when dental and surgical teams share the operative field.

Counts and handovers require a consistent institutional process. The WHO safe-surgery guidance emphasizes accounting for instruments and other items that might be retained, recording discrepancies, and communicating unresolved concerns before the patient leaves the operating room.[6] Technicians and nurses perform their assigned counting functions together according to policy; introducing a small dental instrument should not place it outside that process. A large before-and-after study associated implementation of a surgical safety checklist with fewer complications across diverse noncardiac operations. It supports structured team communication, but neither isolates the effect of technicians nor specifically establishes benefit after mandibular repair.[7]

Throat packs require particular caution. The 2018 DAS, BAOMS, and ENT-UK consensus did not recommend routine anesthetist-inserted throat packs because clear benefit had not been demonstrated and serious retained-pack complications had been reported. If a pack is judged necessary, insertion, accountability, and removal need an explicit, documented process.[8] The recovery handover should identify any continuing airway concern, fixation status, prescribed diet, movement restrictions, analgesic plan, and required monitoring. The proposed allocation of responsibilities in Table 1 connects these safety tasks to recovery needs; it is intended for local adaptation to professional scope and demonstrated competence.

Table 1. Complementary responsibilities across mandibular fracture care

Professional group	Principal contribution	Required coordination or boundary
Nurses	Assess airway, bleeding, pain, hydration, oral intake, and understanding; escalate deterioration and coordinate discharge.	Implement the surgical and anesthesia plans; specialist nursing experience requires relevant perioperative competency.
Operating room technicians	Prepare sterile equipment, assist instrument accountability, and identify equipment or count discrepancies.	Work with scrub and circulating personnel under institutional policy; do not independently select fixation or alter the repair.
Dental assistants	Prepare dental instruments, support authorized dental procedures, and reinforce individualized oral-care instructions.	Follow the dentist or surgeon's direction; report dental or hardware concerns without independently changing appliances.

Professional group	Principal contribution	Required coordination or boundary
Physical therapists	Assess functional limitations and guide authorized jaw movement and relevant general mobility.	Obtain fracture and fixation restrictions; seek review for new malocclusion, worsening pain, or unexpected loss of movement.

Nursing surveillance and airway safety after repair

Postoperative airway risk persists because swelling, bleeding, impaired secretion clearance, and residual anesthetic effects can coexist with restricted oral access. Nurses should assess respiratory effort, oxygenation, consciousness, secretion handling, and changes from the recovery baseline. Increasing swelling, noisy breathing, agitation with respiratory distress, or inability to manage secretions requires urgent clinical escalation. Monitoring intensity and location should reflect the airway assessment and the anesthesia plan rather than the apparent simplicity of the fracture repair.[9]

For patients remaining in MMF, emergency preparation needs to be specific to the actual fixation. The team should document how help is summoned, what equipment is immediately available, and which personnel are trained and authorized to perform emergency release if required. Established maxillofacial airway literature emphasizes bedside access to appropriate release tools and staff knowledge of their use.[10] Possession of a cutter alone is insufficient when staff do not know the appliance or the escalation sequence. Emergency release is part of a rehearsed airway response, not a substitute for urgent airway expertise.

Nursing observations should also track bleeding, wound appearance, nausea, oral intake, and medication effects. Cardiovascular nursing expertise can contribute to interpretation of hemodynamic trends and comorbidity assessment, provided the nurse has the competency and authorization required for the perioperative setting. A title alone does not confer independent airway or maxillofacial decision-making authority. Patients with limited speech need an accessible communication method, such as a writing board or agreed signals. The care plan should record how they can request help, describe pain, and indicate nausea. These communication arrangements are practical safeguards proposed for the pathway rather than independently proven fracture-specific interventions.

Oral care, infection prevention, and antibiotic stewardship

Dental assistants and nurses should provide consistent instructions on cleaning accessible teeth and appliances without disturbing wounds or fixation. The treating dental or surgical clinician determines appropriate cleansing methods and whether a prescribed rinse is suitable. The patient's ability to perform the demonstrated technique matters more than handing over generic advice. Staff should report wound discharge, progressive swelling, fever, hardware exposure, or a new bite change for clinical assessment rather than attempting independent appliance adjustment.

During dental and perioperative care, standard precautions, hand hygiene, appropriate protective equipment, sharps safety, and validated instrument reprocessing remain essential. CDC guidance explicitly includes dental assistants among personnel covered by dental infection-control recommendations.[11] Local procedures should ensure that instruments returning from oral care enter the correct reprocessing pathway and that visibly compromised packaging or incomplete processing records are addressed before use. These general infection-control principles support procedural reliability; they do not quantify the independent effect of dental assisting on fracture union.

Antibiotic decisions require distinction between prophylaxis and treatment of an established infection. The Surgical Infection Society recommends against postoperative prophylaxis extending beyond 24 hours in adults with operative mandibular fractures. Its terminology separates antibiotics given more than one hour before surgery from the perioperative period, so its recommendations should not be misread as advising omission of indicated perioperative prophylaxis.[12] The 2024 AAST consensus supports 24 hours or less

for open or contaminated mandibular fractures and no postoperative antibiotics for closed, non-contaminated operative facial fractures.[13]

A randomized trial of 77 patients undergoing mandibular ORIF did not demonstrate a statistically significant infection benefit from adding five days of oral antibiotics to the perioperative regimen. The small sample and absence of a significant difference do not establish precise equivalence.[14] Prescribers should account for contamination, infection, allergy, and individual clinical circumstances. Nurses verify administration and planned stop dates, while technicians and assistants communicate relevant observations. Continuing prophylaxis indefinitely because fixation material remains in place is not supported by these findings.

Analgesia, nutrition, and supported self-care

Pain management should enable rest, oral care, and permitted activity while limiting adverse effects. General postoperative pain guidance supports an individualized multimodal plan incorporating assessment, education, pharmacological options, and transition to outpatient care.[15] Nurses reassess pain and function after treatment and observe for excessive sedation, respiratory compromise, and nausea. Persistent or increasing pain that conflicts with the expected course warrants assessment rather than automatic escalation of analgesics. Medication selection, contraindications, and dosing remain prescriber responsibilities.

Regional techniques may contribute to an opioid-sparing approach. In a randomized study of 60 patients with unilateral mandibular fractures, a pre-incision ultrasound-guided mandibular nerve block reduced postoperative morphine use compared with the same block administered after surgery.[16] The study supports consideration of timing within specialist anesthetic practice; it does not justify universal block use or transfer the procedure to other professional groups. Communication about the block and expected duration helps nursing staff interpret subsequent symptoms and plan reassessment.

Nutrition requires an explicit plan when chewing or oral opening is restricted. A randomized study involving 50 patients undergoing MMF found that a dietitian-developed home dietary plan reduced weight loss and improved several quality-of-life measures compared with less structured dietary advice.[17] Nurses can identify poor intake, monitor weight and hydration as appropriate, and arrange dietetic review. Dental assistants reinforce practical cleaning advice for the prescribed diet, while physical therapists avoid exercise recommendations that conflict with feeding or fixation precautions.

Diet progression should be individualized. A randomized study comparing return toward normal diet at two, four, or six weeks after ORIF found no significant difference in complications and suggested that selected low-risk patients could progress earlier.[18] This finding does not authorize unrestricted chewing after every repair. Discharge teaching should specify permitted consistency, the person responsible for changing the diet, medication administration arrangements, and whom to contact if intake becomes inadequate. Teach-back can reveal misunderstandings about these practical instructions before the patient leaves hospital.

Physical therapy and functional rehabilitation

Functional rehabilitation starts with assessment and planning, but the timing of jaw movement depends on the repair. Physical therapists should obtain written restrictions and establish baseline pain, comfortable mouth opening, mandibular deviation, and limitations in eating or speaking when assessment is permitted. Occlusion must remain a central consideration: increasing range at the expense of the intended bite or fixation stability is not a successful outcome. Specialist discussion of MMF and physiotherapy describes progression from stabilization and occlusal guidance toward restoration of jaw movement.[2]

A systematic review of functional rehabilitation after condylar fractures included seven studies and found that different open and closed approaches could produce useful functional outcomes. Its small and heterogeneous evidence base does not establish one rehabilitation schedule for every fracture pattern.[19] Progression should therefore follow the surgeon's instructions and the individual's response. The therapist can provide graded active movement and a clearly explained home program when authorized, documenting symptoms and adherence. Forceful stretching, unsupervised resistance work, or

manipulation across a healing fracture should not be inferred from general temporomandibular exercise advice.

Adjunctive treatments deserve proportionate interpretation. A randomized trial of 14 surgically treated patients compared photobiomodulation with sham treatment while both groups performed oral exercises. The active group reported less exercise-related pain, but the study did not show a between-group advantage in mouth opening or food consistency at one month.[20] Because both groups exercised, the trial cannot isolate the benefit of exercise itself; its sample is also too small to establish routine photobiomodulation as standard care.

Rehabilitation reviews should integrate observed movement with the patient's priorities. Comfortable eating, clear speech, oral hygiene, return to work, and reduced fear of movement may matter as much as a single opening measurement. Nurses can reinforce an agreed program between therapy sessions, and dental assistants can identify practical interference from appliances during supervised care. New malocclusion, increasing asymmetry, unexpected loss of movement, or worsening pain should prompt surgical reassessment before progression. General mobility and posture work may be appropriate for associated limitations, but should not be presented as a proven method for accelerating mandibular union.

Coordinated discharge, follow-up, and evaluation

A practical pathway should identify one accountable service for follow-up and provide consistent instructions across professions. The discharge record should state fixation status, oral-care method, medication plan, diet, permitted exercise, warning symptoms, and scheduled review. These elements should be understandable to the patient and available to the receiving clinician. Table 2 proposes a small set of measures for evaluating implementation; these are suggested quality indicators, not validated performance thresholds or results from a new study.

Table 2. Proposed measures for evaluating an integrated care pathway

Domain	Suggested process or outcome measure	Interpretation and response
Airway preparedness	Documented monitoring and fixation-specific emergency plan; unexpected airway escalation.	Review clinical context and response capability; low event counts do not demonstrate readiness.
Procedural reliability	Completion of counts and handover; unresolved equipment or pack discrepancies.	Investigate discrepancies and communication failures without attributing all outcomes to one profession.
Nutrition and self-care	Adequacy of intake, clinically relevant weight change, and demonstrated understanding of instructions.	Trigger targeted nursing, dental, or dietetic support when needs are unmet.
Functional recovery	Mouth opening when permitted, occlusion concerns, pain during activity, and eating or speaking limitations.	Interpret change against fracture type, fixation restrictions, and the patient's baseline.
Continuity and complications	Attendance at planned review, unplanned visits, infection, and revision procedures.	Account for injury severity and follow-up completeness before comparing services.

Limitations and research priorities

The evidence is uneven across the proposed pathway. Some recommendations derive from general perioperative guidance, whereas fracture-specific trials often evaluate a single intervention in small, selected populations. Condylar rehabilitation findings cannot automatically be extended to comminuted body fractures, associated injuries, or prolonged fixation. Observational associations are vulnerable to confounding, and short follow-up may miss persistent functional or psychosocial difficulties. This selective review did not apply formal risk-of-bias scoring or grade the certainty of every recommendation.

Most importantly, the reviewed literature does not establish the clinical effect of a defined combined nursing, operating room technician, dental assistant, and physical therapy program. Future multicenter studies should specify intervention components, professional competencies, fracture characteristics, and comparator care. Outcomes should include complications, nutrition, patient-reported function, treatment burden, and access to follow-up. Evaluations should distinguish improved documentation from improved care and report unintended consequences, including conflicting advice or exercise progression that exceeds repair restrictions.

Conclusion

Perioperative care after mandibular fracture repair should connect immediate safety with recovery of everyday function. Technical success is necessary, but patients also need a reliable route through airway observation, oral care, pain control, feeding, and rehabilitation. The evidence available by the end of 2024 supports attention to these individual components while showing considerable variation in the strength and applicability of the underlying studies. It does not support a single recovery schedule for all fractures or a claim that a particular combination of professional groups has already been proven superior.

Each specialty nevertheless has a clear place in a coherent pathway. Nurses provide continuing assessment, symptom management, education, and coordination. Operating room technicians contribute equipment readiness and accountable procedural practice. Dental assistants help maintain safe dental-care processes and translate approved oral-care instructions into practical routines. Physical therapists assess functional limitations and guide movement within the requirements of the repair. These contributions work best when the surgical and anesthesia plans are explicit, accessible, and updated whenever clinical circumstances change.

The central implementation priorities are consistent communication, demonstrated patient understanding, timely recognition of deterioration, and continuity after discharge. Nutrition and function should be reviewed alongside wound healing and occlusion rather than postponed until a complication develops. Services adopting an integrated approach should audit both its delivery and its outcomes, allowing for fracture severity and follow-up completeness. Such evaluation can identify where coordination improves recovery, where additional expertise is required, and which elements need stronger prospective evidence. A disciplined multidisciplinary approach is therefore a practical framework for care and a testable direction for future research.

References

1. Panesar K, Susarla SM. Mandibular Fractures: Diagnosis and Management. Semin Plast Surg. 2021;35(4):238-249. doi:10.1055/s-0041-1735818.
2. Meara DJ. Applications of Maxillomandibular Fixation, Occlusal Guidance, and Jaw Physiotherapy in the Management of Fractures of the Mandible. Otolaryngol Clin North Am. 2023;56(6):1113-1123. doi:10.1016/j.otc.2023.07.001.
3. Patel A, Saadi R, Lighthall JG. Securing the Airway in Maxillofacial Trauma Patients: A Systematic Review of Techniques. Craniomaxillofac Trauma Reconstr. 2021;14(2):100-109. doi:10.1177/1943387520950096.
4. Eckelt U, Schneider M, Erasmus F, Gerlach KL, Kuhlisch E, Loukota R, et al. Open versus closed treatment of fractures of the mandibular condylar process-a prospective randomized multi-centre study. J Craniomaxillofac Surg. 2006;34(5):306-314. doi:10.1016/j.jcms.2006.03.003.

5. Kent S, Adatia A, James P, Bains K, Henry A, Blore C, et al. Risk factors associated with short-term complications in mandibular fractures: the MANTRA study-a Maxillofacial Trainee Research Collaborative (MTReC). Oral Maxillofac Surg. 2023;27(4):609-616. doi:10.1007/s10006-022-01096-5.
6. World Health Organization. WHO guidelines for safe surgery 2009: safe surgery saves lives. Geneva: World Health Organization; 2009. Available from: https://www.ncbi.nlm.nih.gov/books/NBK143243/
7. Haynes AB, Weiser TG, Berry WR, Lipsitz SR, Breizat AH, Dellinger EP, et al. A surgical safety checklist to reduce morbidity and mortality in a global population. N Engl J Med. 2009;360(5):491-499. doi:10.1056/nejmsa0810119.
8. Athanassoglou V, Patel A, McGuire B, Higgs A, Dover MS, Brennan PA, et al. Systematic review of benefits or harms of routine anaesthetist-inserted throat packs in adults: practice recommendations for inserting and counting throat packs: An evidence-based consensus statement by the Difficult Airway Society (DAS), the British Association of Oral and Maxillofacial Surgery (BAOMS) and the British Association of Otorhinolaryngology, Head and Neck Surgery (ENT-UK). Anaesthesia. 2018;73(5):612-618. doi:10.1111/anae.14197.
9. Saini S, Singhal S, Prakash S. Airway management in maxillofacial trauma. J Anaesthesiol Clin Pharmacol. 2021;37(3):319-327. doi:10.4103/joacp.joacp_315_19.
10. Kellman RM, Losquadro WD. Comprehensive airway management of patients with maxillofacial trauma. Craniomaxillofac Trauma Reconstr. 2008;1(1):39-47. doi:10.1055/s-0028-1098962.
11. Kohn WG, Collins AS, Cleveland JL, Harte JA, Eklund KJ, Malvitz DM. Guidelines for infection control in dental health-care settings--2003. MMWR Recomm Rep. 2003;52(RR-17):1-61. Available from: https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5217a1.htm
12. Forrester JD, Wolff CJ, Choi J, Colling KP, Huston JM. Surgical Infection Society Guidelines for Antibiotic Use in Patients with Traumatic Facial Fractures. Surg Infect (Larchmt). 2021;22(3):274-282. doi:10.1089/sur.2020.107.
13. Appelbaum RD, Farrell MS, Gelbard RB, Hoth JJ, Jawa RS, Kirsch JM, et al. Antibiotic prophylaxis in injury: an American Association for the Surgery of Trauma Critical Care Committee clinical consensus document. Trauma Surg Acute Care Open. 2024;9(1):e001304. doi:10.1136/tsaco-2023-001304.
14. Rikhotso RE, Mohotlhoane GP. The Effect of Duration of Antibiotic Prophylaxis on Infections Following Open Reduction and Internal Fixation of Mandibular Fractures: A Prospective Randomized Clinical Trial. J Craniofac Surg. 2024;35(1):185-188. doi:10.1097/scs.0000000000009784.
15. Chou R, Gordon DB, de Leon-Casasola OA, Rosenberg JM, Bickler S, Brennan T, et al. Management of Postoperative Pain: A Clinical Practice Guideline From the American Pain Society, the American Society of Regional Anesthesia and Pain Medicine, and the American Society of Anesthesiologists' Committee on Regional Anesthesia, Executive Committee, and Administrative Council. J Pain. 2016;17(2):131-157. doi:10.1016/j.jpain.2015.12.008.
16. Venkatraman R, Karthik K, Belinda C, Balaji R. A Randomized Observer-Blinded Controlled Trial to Compare Pre-Emptive with Postoperative Ultrasound-Guided Mandibular Nerve Block for Postoperative Analgesia in Mandibular Fracture Surgeries. Local Reg Anesth. 2021;14:13-20. doi:10.2147/lra.s290462.
17. Popat SP, Rattan V, Rai S, Jolly SS, Malhotra S. Nutritional intervention during maxillomandibular fixation of jaw fractures prevents weight loss and improves quality of life. Br J Oral Maxillofac Surg. 2021;59(4):478-484. doi:10.1016/j.bjoms.2020.10.009.
18. Manzie T, David MC, Bobinskas A. Return to normal diet following mandibular fractures - how long is long enough? Br J Oral Maxillofac Surg. 2021;59(9):1050-1055. doi:10.1016/j.bjoms.2021.02.020.
19. Petronis Z, Spaicyte N, Sakalys D, Januzis G. Functional Rehabilitation after Mandibular Fracture - A Systematic Review. Ann Maxillofac Surg. 2022;12(2):197-202. doi:10.4103/ams.ams_99_22.
20. Dos Santos KW, Hugo FN, da Cunha Rodrigues E, Stein AT, Hilgert JB. Effect of oral exercises and photobiomodulation therapy in the rehabilitation of patients with mandible fractures: randomized double-blind clinical trial. Lasers Med Sci. 2022;37(3):1727-1735. doi:10.1007/s10103-021-03423-w.