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Original Research Article

EVALUATING THE EFFICIENCY OF ADJUNCTIVE USE OF SUPERFICIAL CERVICAL PLEXUS BLOCK FOR MANAGEMENT OF MANDIBULAR FRACTURES – A COMPARATIVE STUDY

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ABSTRACT

Background: Effective perioperative pain management is crucial in mandibular fractures. Regional anesthesia techniques, such as the Superficial Cervical Plexus Nerve Block (SCPNB), offer a safer, cost-effective alternative with fewer complications and improved patient comfort compared to general anesthesia.

Materials and Methods: Purpose: To evaluate the efficacy of SCPNB when used in conjunction with mandibular nerve block (MNB) in managing pain and improving surgical outcomes in mandibular fracture surgeries. **Study design, setting, sample:** A prospective, randomized controlled clinical trial involving 20 participants undergoing mandibular fracture surgery. Participants were divided into two groups: the experimental group received MNB + SCPNB, while the control group received MNB + local infiltration. Pain scores, anesthetic requirements, onset time, operative duration, patient satisfaction, and surgical ease were assessed and statistically analyzed. **Predictor variable:** Type of anesthesia administered (MNB + SCPNB vs MNB + local infiltration). Main outcome variable (s): Pain assessed using the Visual Analog Scale (VAS) at pre-operative (T0), intra-operative (T1), and immediate post-operative (T2) time points; intraoperative anesthetic requirements; onset time; operative duration; patient satisfaction; and surgical ease. **Covariates:** Age, sex, fracture type/location, comorbidities, airway status, and baseline vitals. **Analyses:** Statistical analyses were conducted using SPSS version 26, with the Shapiro-Wilk test applied to assess normality. For continuous variables, the independent samples t-test was used, while categorical variables were analyzed using the Chi-square test, with statistical significance set at a p value < 0.05.

Results: The experimental group showed significantly lower intraoperative (2.60 ± 0.70 vs. 5.10 ± 1.37; $p < 0.001$) and immediate postoperative pain scores (5.00 ± 1.05 vs. 6.30 ± 1.25; $p = 0.022$). Although anesthesia onset was slower in the SCPNB group (169.10 ± 16.39 seconds vs. 22.20 ± 3.94 seconds; $p < 0.001$), it required fewer intraoperative anesthetic supplements (50% vs. 90%;

p = 0.051). Patient satisfaction was higher (70% vs. 0%; p = 0.004), and surgical ease was improved (90% vs. 30%; p = 0.006) in the SCPNB group.

Conclusion: SCPB in conjunction with MNB enhances perioperative pain control, reduces anesthetic supplementation, and improves both patient satisfaction and surgical conditions. It is a viable option to GA for certain surgical procedures.

Keywords: Superficial Cervical Plexus Block, Mandibular Fracture, Regional Anaesthesia, Maxillofacial Surgery, Postoperative Analgesia, Pain Management.

INTRODUCTION

Pain control plays a crucial role in maxillofacial surgery. Ensuring effective anesthesia during the perioperative period and providing adequate pain relief after surgery are essential for improving functional recovery, reducing the risk of complications, and promoting patient comfort across all surgical interventions.[1] To accomplish this, general anesthesia (GA) is usually employed in contemporary medical practice as a straightforward approach to induce surgical anesthesia. However, this practice is associated with several disadvantages, including significant costs, the need for a highly skilled medical team and advanced equipment, as well as associated risks such as morbidity and mortality.[2] Regional anesthesia represents a viable alternative to circumvent these limitations, as it employs a relatively simple technique associated with attenuated catecholamine release, reduced intraoperative blood loss via the combined effect of local vasoconstrictors and sympathetic blockade, and low morbidity rates when local anesthetics are administered within recommended dosage ranges.[3] Regional techniques are especially advantageous in medically compromised patients and those with anticipated airway difficulties, where avoidance of general anesthesia reduces perioperative risk.[4,5]

Among the regional anesthetic techniques, the superficial cervical plexus nerve block (SCPNB) can be used as a valuable adjunct due to its ability to anesthetize the skin and superficial tissues overlying the mandible and lower face without significant motor blockade or systemic effects.[3,6] The SCPNB provides effective analgesia by targeting its four branches- lesser occipital, greater auricular, supraclavicular, and transverse cervical nerves, which supply sensory innervation to the lateral face, angle of the mandible, ear region and anterolateral neck. When combined with mandibular nerve block (MNB), SCPNB enhances intraoperative comfort and reduces the requirement for systemic analgesics.[7,8] The SCPNB can be performed by either landmark-guided or ultrasound-guided technique. While no significant differences have been identified between the techniques in terms of success rates, the landmark-guided technique is easier to perform and requires less equipment.[9] In the case of mandibular fractures (MF), a condition usually treated via open reduction and internal fixation (ORIF),[10] effective anesthesia is critical for ensuring pain-free surgery. Considering these factors, the present study aimed to evaluate the efficacy of the SCPNB as an adjunct to the MNB in enhancing anesthesia and improving surgical outcomes while treating mandibular fractures. The null hypothesis tested was that the addition of SCPNB to MNB would not influence the efficacy of anesthesia achieved, improve intraoperative analgesia, or enhance surgical outcomes.

The current research was undertaken to address the following objectives

Primary objective: To evaluate the effectiveness of SCPNB with MNB in reducing intraoperative pain.

Secondary objectives: To evaluate anesthetic requirements, identify the onset time of anesthesia, record operative duration, assess patient satisfaction, and evaluate surgical ease from the surgeon’s perspective.

MATERIALS AND METHODS

Study design

A single-center, two-arm, randomized controlled clinical trial was planned, comprising an experimental group (EG) treated with NB in conjunction with SCPNB and a control group (CG) treated with NB in conjunction with local infiltration. The study protocol adhered to the ethical guidelines set forth by the World Medical Association in the Declaration of Helsinki,[11] and was approved by the institutional ethics committee (24/D001/IEC/GDC&H/A1/2023-24). The study was executed in compliance with the CONSORT 2025 guidelines for randomized controlled clinical trials.[12]

Patients were recruited for this trial from among those presenting to the outpatient department of Oral and Maxillofacial Surgery, Government Dental College (Vijayawada, India). The inclusion criteria comprised healthy patients aged 18 to 65 years old, requiring surgical intervention in mandible/peri mandibular areas along the distribution of superficial cervical plexus especially for MF. The exclusion criteria included excessively anxious and apprehensive patients, those with known allergy to any component of local anesthetic (LA), patients with a documented history of active infectious diseases (HIV, Hepatitis) and/or systemic diseases (diabetes, hyperthyroidism), patients on immunosuppressant therapy, those with a history of drug abuse and/or alcoholism, and patients with a significantly compromised upper necessitating an endotracheal intubation.

Predictor Variable: The predictor variable was the type of anesthesia administered, based on which patients were segregated into the following groups:

1. **Experimental group (EG):** MNB combined with SCPNB
2. **Control group (CG):** MNB combined with local infiltration

Outcome variable

The primary outcome variables were:

- Pain experience: The level of pain experienced, as measured by the Visual Analog Scale (VAS),[13] at three time intervals (Pre-operative - T0, Intra-operative - T1, and Post-operative - T2) by an independent investigator.
- Anesthetic requirements: Evaluated based on the total dose/volume of local anesthetic administered intraoperatively (milliliters)
- Onset time of anesthesia: Determined from the time of administration of anesthesia to the time of reporting of first subjective/objective sign of soft tissue anesthesia, documented by an independent investigator with a stopwatch.

The secondary outcome variables were:

- Operative duration: Measured from time of administration of anesthesia till completion of the procedure as assessed by a timer monitored by an independent investigator.
- Patient satisfaction: Evaluated by the satisfaction survey question administered post-operatively wherein the score is calculated based on three options (Satisfied/Adequate/Unsatisfied)
- Surgical ease: Documented from the surgeon's perspective with surgeons scoring the ease of surgery post-operatively as Yes/No

Covariates: The covariates were demographic variables (age, sex), fracture type/location, comorbidities, airway status and baseline vitals.

Randomization and blinding

Participants were allocated to the two study groups using a lottery-based randomization method (Figure 1). Each eligible patient drew a sealed slip from an opaque container indicating assignment to the EG or the CG. Randomization was performed prior to the start of surgery to ensure allocation concealment. Operator blinding was not feasible in this study, as the surgical team needed to be aware of the anesthesia technique being administered in order to perform the procedure accurately and ensure patient safety. However, outcome assessment for pain scores, patient satisfaction, and surgical ease was conducted by an independent observer who was blinded to group allocation.

Procedure

All patients were administered antibiotics and analgesics via intravenous/intramuscular route on the day of surgery. All the MFs were treated with ORIF via an intraoral approach except for three cases wherein a trans buccal trocar approach was utilized. 2% lignocaine with adrenaline (1:200000) was administered in both groups (CG and EG) using a 26-gauge x 1inch long needle.

The CG received the treatment under the conventional intraoral MNB,[14,15] in conjunction with an extraoral infiltration of LA administered subcutaneously to achieve soft tissue anesthesia (Figure 2). The EG were treated under a similar intra-oral MNB in conjunction with SCPNB on the same side.

The SCPNB was performed using a landmark-guided approach, with the patient supine and the head rotated away from the side of injection. The patient was instructed to raise the head slightly in response to gentle pressure from the surgeon's hand. Under strict aseptic conditions, three reference points were identified on the patient's neck using a sterile marker: the mastoid process, the sternal portion of the sternocleidomastoid (SCM) muscle, and a point equidistant between these two landmarks. The marked points were joined using a dotted line along the SCM muscle's posterior border. A total of 5 ml of LA was administered following multi-planar aspiration at the second injection point, using a "fan" technique with superior and inferior needle redirections 1–2 cm above and below the SCM muscle's posterior border. This is the point wherein the superficial plexus' terminal branches arise as four distinct nerves. The needle was not advanced beyond the indicated depth to avoid complications (Figure 3). The volumes of LA deposited were as follows: 1.8 to 2 ml for inferior alveolar nerve block, 0.6 ml for long buccal nerve block, 1 ml for local infiltration near the incision area, 2 ml for extra-oral infiltration in CG, and 5 ml for SCPNB in EG. A noteworthy aspect of the LA administration is the relatively higher volume (approximately 3 ml more) used in the EG compared with the CG, attributable to the technique employed. Additional LA was administered if required during the intra-operative period and documented.

Post-operative instructions were provided and oral medication was given for a period of 5 days.

Data collection methods

Sample size calculation was performed prior to enrollment of study subjects using G*Power version 3.1.9.7. Based on the difference in postoperative pain scores reported by Kende P et al. (2021), an effect size of 1.52 was estimated. To ensure 80% statistical power at a significance level of 0.05 ($\alpha = 0.05$) using an independent samples t-test, at least 16 participants (8 per group) were required. The final sample size was rounded up to 20 patients (10 per group) to enhance the reliability of the study and ensure adequate statistical power, yielding an actual power of approximately 90%.

Statistical Analysis

Data were analyzed using SPSS version 26 (SPSS Inc., Chicago, IL, USA), following a per-protocol approach. The normality of continuous variables was assessed using the Shapiro-Wilk test. Parametric analyses were applied to variables with a normal distribution. Independent-samples t-tests were used to compare continuous variables between groups, while categorical variables were analyzed with Chi-square tests. All statistical tests were two-tailed, and significance was defined as $p < 0.05$.

RESULTS

The final sample comprised 20 subjects, with 10 participants in each group. The mean age in the control group was 33.5 ± 13.2 years, while in the experimental group it was 29.9 ± 6.1 years ($p = 0.443$). Each group had the same sex distribution, with 9 males (90%) and 1 female (10%) in both groups ($p = 1.000$). The comparable baseline demographic characteristics indicate that the groups were well matched for age and gender. [Table 1]

The distribution of fracture types varied across the two study groups. [Table 2] Although some differences in fracture type distribution were observed between groups, these differences were not of significance ($p = 0.260$), indicating that fracture types were comparable at baseline. [Table 2]

Pain scores differed between groups at T1 and T2, with the EG reporting significantly lower scores. At T1, mean pain scores were 5.10 ± 1.37 in the CG and 2.60 ± 0.70 in the EG ($p < 0.001$), and at T2, 6.30 ± 1.25 versus 5.00 ± 1.05, respectively ($p = 0.022$) (Table 3, Figure 4). No significant difference was observed at T0 ($p = 0.160$).

Anesthesia parameters also differed. The onset time of anesthesia was significantly shorter in the CG (22.20 ± 3.94 s) compared to the EG (169.10 ± 16.39 s; $p < 0.001$), and the initial anesthetic dose was lower in the CG (2.00 ± 0.00 ml vs 5.60 ± 1.26 ml; $p < 0.001$). Operative time was comparable between groups (control: 67.30 ± 25.07 min; experimental: 70.80 ± 26.57 min; $p = 0.765$). [Table 4]

Intraoperative supplementation and feedback revealed that anesthetic supplementation was required in 90.0% of the CG and 50.0% of the EG, although not of significance ($p = 0.051$). Patient satisfaction was higher in the EG, with 70.0% reporting "satisfied" versus none in the CG, a parameter found to be statistically significant ($p = 0.004$). Surgeon-reported ease was also significantly higher in the EG ($p = 0.006$). [Table 5]

Table 1: Demographic characteristics of study participants

Variables	Control n (%)	Experimental n (%)	*p* value
Sex¥			
Male	9 (90.0)	9 (90.0)	1.000
Female	1 (10.0)	1 (10.0)	
Age‡ (Mean ± SD)	33.50 ± 13.19	29.90 ± 6.08	0.443

SD: Standard deviation; All values are expressed as frequency with percentages (in parentheses) and mean ± SD. *The statistical test applied: ¥Chi- Square Test and ‡Independent sample t test; *p ≤ 0.05 indicates statistically* significant.

Table 2: Pattern of mandibular fracture sites among participants in the two groups

Diagnosis	**Control n (%)**	**Experimental n (%)**	**p value**
Left angle and right body fracture	0 (0.0)	1 (10.0)	0.260
Left angle fracture	0 (0.0)	2 (20.0)	
Left body fracture	2 (20.0)	0 (0.0)	
Left body and right angle	1 (10.0)	0 (0.0)	
Left Para symphysis and right angle	1 (10.0)	2 (20.0)	
Left Para symphysis	0 (0.0)	1 (10.0)	
Right and left angle	0 (0.0)	2 (20.0)	
Right angle	1 (10.0)	2 (20.0)	
Right body and Para symphysis	1 (10.0)	0 (0.0)	
Right body fracture	1 (10.0)	0 (0.0)	
Right Para symphysis and left angle	1 (10.0)	0 (0.0)	
Right Para symphysis and left condyle	1 (10.0)	0 (0.0)	
Right body and Mandibular condyle (Right and left)	1 (10.0)	0 (0.0)	
Total	10 (100.0)	10 (100.0)	

All values are expressed as frequency with percentages (in parentheses. The statistical test applied: Chi- Square Test; *p ≤ 0.05 indicates statistically significant.

Table 3: Comparison of pain scores at different time intervals between control and experimental groups

Pain score	**Control (Mean ± SD)**	**Experimental (Mean ± SD)**	**t value**	***p* value**
Immediate	2.40 ± 1.35	1.70 ± 0.67	1.467	0.160
Intraoperatively after 10 mins of incision	5.10 ± 1.37	2.60 ± 0.70	5.139	<0.001*
Immediate Postoperative	6.30 ± 1.25	5.00 ± 1.05	2.512	0.022*

SD: Standard deviation; All values are expressed as frequency with percentages (in parentheses. The statistical test applied: Independent sample t test; *p ≤ 0.05 indicates statistically significant.

Table 4: Comparison of operative anesthesia parameters in control and experimental groups

Variables	Control (Mean ± SD)	Experimental (Mean ± SD)	t value	p value
Time of onset of anesthesia (Seconds)	22.20 ± 3.94	169.10 ± 16.39	-27.56	<0.001*
Operative time(mins)	67.30 ± 25.07	70.80 ± 26.57	-0.30	0.765
Amount of Anesthesia given (ml)-initial dose	2.00 ± 0.00	5.60 ± 1.26	-9.00	<0.001*

SD: Standard deviation; All values are expressed as frequency with percentages (in parentheses. The statistical test applied: Independent sample t test; *p ≤ 0.05 indicates statistically significant.

Table 5: Comparison of intraoperative anesthetic needs, patient feedback, and surgical ease between study groups

Variables	Control n (%)	Experimental n (%)	*p* value
Intra Operative Anesthetic Requirement			
Yes	9 (90.0)	5 (50.0)	0.051
No	1 (10.0)	5 (50.0)	
Patient satisfaction			
Satisfied	0 (0.0)	7 (70.0)	0.004*
Adequate	5 (50.0)	2 (20.0)	
Unsatisfied	5 (50.0)	1 (10.0)	
Ease of doing surgery			
Yes	3 (30.0)	9 (90.0)	0.006*
No	7 (70.0)	1 (10.0)	

All values are expressed as frequency with percentages (in parentheses). The statistical test applied: Chi square test; *p ≤ 0.05 indicates statistically significant.

DISCUSSION

The present study aimed to evaluate the efficacy of the SCPNB as an adjunct to MNB in patients undergoing surgical management of mandibular fractures. The null hypothesis tested was that the addition of SCPNB to MNB would not influence the efficacy of anesthesia achieved, improve intraoperative analgesia, or enhance surgical outcomes. This study aimed to evaluate whether the addition of SCPNB results in a significant change in the clinical outcomes evaluated.

The key findings of the present study indicate that the SCPNB group (EG) demonstrated significantly lower intraoperative (T1) and postoperative (T2) pain scores, along with higher levels of patient satisfaction and surgical ease. However, the control group without SCPNB (CG) demonstrated a faster onset of anesthesia and required a lower initial dose. Based on these observations, the null hypothesis can be partially rejected: while the overall anesthetic efficacy was comparable between groups, the advantages differed, with CG favoring onset and dose requirements, and EG favoring pain control, satisfaction, and surgical ease.

Pain management is an essential component of any surgical procedure, especially those in the cases requiring emergency management such as trauma. The findings of the present investigation identify pain reduction as one of the most notable advantages of SCPNB administration. This is consistent with previous literature on pain management with SCPNB wherein Kende et al.(2021) reported lower levels of intra-operative and overall pain scores with SCPNB use in comparison to conventional techniques.1 The increased patient satisfaction and reduced post-operative discomfort observed were also in support of the level of analgesia achieved.(Figure 4)

The SCPNB is administered as a regional anesthetic technique that selectively targets the superficial cervical plexus to provide sensory anesthesia without inducing motor blockade in the neck.[16,17] This contributes to enhanced soft-tissue anesthesia in the mandibular region. Accordingly, when combined with the MNB, SCPNB is expected to improve patient comfort and satisfaction, a notable key finding of the present study. These results are in line with those reported by Kanthan et al. (2016),[3] who demonstrated similar benefits of this combination in managing mandibular space infections.

The greater initial volume of LA and the prolonged onset time observed with SCPNB in the present investigation can be explained by the anatomical and pharmacokinetic characteristics of the superficial cervical plexus.[18] Anesthetic must diffuse through fascial planes to reach the terminal sensory branches, which contributes to these features. Previous studies evaluating SCPNB have reported similar findings,[7,19-21] reinforcing the present observation that, despite a longer onset period and higher anesthetic volume, the technique remains highly effective in providing regional anesthesia and ensuring patient comfort during mandibular procedures. In line with this, the present study performed modified Y plate fixation in three cases of mandibular angle fractures in the EG using the trans buccal trocar approach,[22] a procedure typically performed under general anesthesia.[23] Notably, this was successfully achieved under LA with SCPNB. While 5 ml provided only partial analgesia, increasing the dose to 8 ml ensured complete anesthesia, highlighting the importance of adjusting anesthetic volume according to procedural requirements for optimal intraoperative analgesia. While this has been previously tried using ketamine with SCPNB,[18] the present investigation is one of the few studies reporting this technique using LA.

Although SCPNB is effective, it requires technical skill and experience to achieve adequate intraoperative analgesia without the need for supplemental anesthesia.[24,25] In the present study, intraoperative supplementation was required in 50% of patients in the EG compared to 90% in the CG, confirming the superior efficacy of SCPNB. The residual need for supplementation in some cases may be attributed to the extensive sensory coverage required,[24] and/or variations in operator experience. As the study included surgeons with both extensive (>10 years) and lesser experience levels, this factor should be considered when interpreting the need for supplemental anesthesia and surgical ease. Nevertheless, surgical ease was notably higher in the EG, likely due to improved patient comfort, which may have minimized intraoperative movement and facilitated the procedure.

Patient satisfaction and comfort were significantly higher in the SCPNB group, underscoring the critical role of effective analgesia in surgical procedures. These findings are consistent with previous studies utilizing SCPNB as an adjunct to MNB for pain management.[1,3,16] An additional highlight of the present investigation is its focus on patients with mandibular fractures, a condition associated with significant trauma and heightened analgesic requirements, demonstrating that SCPNB can provide meaningful improvements in comfort and intraoperative experience even in such challenging clinical scenarios.

The strengths of the present investigation include its procedure-specific focus on mandibular fractures, providing clinically relevant evidence for a population often managed under general anesthesia; a comprehensive evaluation of anesthetic parameters; a randomized trial design with adequate statistical power, enhancing the reliability of the findings; and, importantly, its generalizability to clinical practice, as procedures were performed by surgeons with varying levels of experience, reflecting real-world variability. Despite the clinical significance of these findings, certain limitations should be acknowledged, such as the relatively lower sample size, operator-dependent variability in measuring the need for supplemental anesthesia and assessing surgical ease, the inability to blind operators due to the technical nature of the procedure, potentially influencing operator performance, and the lack of assessment of long-term outcomes, such as functional recovery and potential delayed complications.

CONCLUSION

In conclusion, the present study demonstrates that the addition of SCPNB to MNB in mandibular fracture management significantly improves intraoperative and postoperative analgesia, enhances patient comfort, and facilitates surgical ease. These findings highlight the clinical applicability of SCPNB as a safe and effective adjunct to regional anesthesia in routine practice. Future research should focus on larger, multicenter trials, long-term outcomes, and optimization of anesthetic volume and technique to further refine its use in diverse clinical settings.

REFERENCES

1. Kende P, Wadewale M, Mathai P, Landge J, Desai H, Nimma V. Role of superficial cervical plexus nerve block as an adjuvant to local anesthesia in the maxillofacial surgical practice. J Oral Maxillofac Surg 79:2247, 2021.
2. Saripalli RRK, Kasaraneni S, Yadavilli SS, Alluri LSC. Superficial cervical plexus block in selective cases of oral and maxillofacial surgery as an alternative to general anesthesia: A case presentation. Cureus 14:e21371, 2022.
3. Kanthan RK. The use of superficial cervical plexus block in oral and maxillofacial surgical practice as an alternative to general anesthesia in selective cases. Ann Maxillofac Surg 6:4, 2016.
4. Bodenham AR, Howell SJ. General anaesthesia vs local anaesthesia: an ongoing story. Br J Anaesth 103:785, 2009.
5. Rastogi A, Gyanesh P, Nisha S, Agarwal A, Mishra P, Tiwari AK. Comparison of general anaesthesia versus regional anaesthesia with sedation in selected maxillofacial surgery: a randomized controlled trial. J Craniomaxillofac Surg 42:250, 2014.
6. Mayhew D, Sahgal N, Khirwadkar R, Hunter JM, Banerjee A. Analgesic efficacy of bilateral superficial cervical plexus block for thyroid surgery: meta-analysis and systematic review. Br J Anaesth 120:241, 2018.
7. Patel H, Shah N, Syed A, Shah P, Macwan S. Evaluating the analgesic efficacy of superficial cervical plexus block for head and neck surgeries: A comparative randomized control study. Cureus 15:e39303, 2023.
8. Goulart TF, Araujo-Filho VJF de, Cernea CR, Matos LL. Superficial cervical plexus blockade improves pain control after thyroidectomy: A randomized controlled trial. Clinics (Sao Paulo) 74:e605, 2019.
9. Tran DQH, Dugani S, Finlayson RJ. A randomized comparison between ultrasound-guided and landmark-based superficial cervical plexus block. Reg Anesth Pain Med 35:539, 2010.
10. Gassner R, Tuli T, Hächl O, Rudisch A, Ulmer H. Cranio-maxillofacial trauma: a 10 year review of 9543 cases with 21067 injuries. J Craniomaxillofac Surg 31:51, 2003.
11. World Medical Association. World Medical Association Declaration of Helsinki: ethical principles for medical research involving human subjects. JAMA 310:2191, 2013.
12. Hopewell S, Chan AW, Collins GS, et al. CONSORT 2025 statement: updated guideline for reporting randomised trials. Lancet 405:1633, 2025.
13. Gift AG. Visual analogue scales: Measurement of subjective phenomena. Nurs Res 38:286, 1989.
14. Malamed SF. Handbook of Local Anesthesia. St. Louis, Mosby, Elsevier, 2019, pp. 241–307.
15. Brizuela M, Daley JO. Inferior alveolar nerve block. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025. Available from: https://www.ncbi.nlm.nih.gov/books/NBK564368/
16. Hakim TA, Shah AA, Teli Z, Farooq S, Kosar S, Younis M. The safety and effectiveness of superficial cervical plexus block in oral and maxillofacial surgery as an alternative to general anesthesia in selective cases: A clinical study. J Maxillofac Oral Surg 18:23, 2019.
17. Kumar S, Parashar P, Mallick S, Abhishek D, L Mane S, Girija A. SCPNB is an adjuvant to local anaesthesia for maxillofacial surgical practice. Bioinformation 19:605, 2023.
18. Mukhopadhyay S, Niyogi M, Dutta M, et al. Bilateral superficial cervical plexus block with or without low-dose intravenous ketamine analgesia: effective, simple, safe, and cheap alternative to conventional general anesthesia for selected neck surgeries. Local Reg Anesth 5:1, 2012.
19. Liu Y, Sun W, Chen S, Yin S, Fan G. Ultrasound-guided mandibular nerve block combined with superficial cervical plexus nerve block in patients undergoing radical surgery for

tongue canceron: a randomized controlled trial. BMC Anesthesiol 25:340, 2025.

20. Ahmadzadeh S, Ford BM, Hollander AV, Luetkemeier MK, Parker-Actlis TQ, Shekoohi S. Superficial cervical plexus block for postoperative pain management in occipital craniotomies: A narrative review. Med Sci (Basel) 13:101, 2025.
21. Kumar AK, Narayanan V. Does the addition of an adjuvant superficial cervical plexus block to inferior alveolar nerve block enhance intraoperative pain control in mandibular third molar surgery? A randomized controlled trial. J Maxillofac Oral Surg 24:766, 2025.
22. Gulses A, Kilic C, Sencimen M. Determination of a safety zone for transbuccal trocar placement: an anatomical study. Int J Oral Maxillofac Surg 41:930, 2012.
23. You HJ, Moon KC, Yoon ES, Lee BI, Park SH. Clinical and radiological outcomes of transoral endoscope-assisted treatment of mandibular condylar fractures. Int J Oral Maxillofac Surg 45:284, 2016.
24. Koshy RC, Thankamony H. Superficial cervical plexus block for urgent tracheostomy. Indian J Anaesth 63:65, 2019.
25. Maruthappu M, Gilbert BJ, El-Harasis MA, et al. The influence of volume and experience on individual surgical performance: a systematic review. Ann Surg 261:642, 2015.