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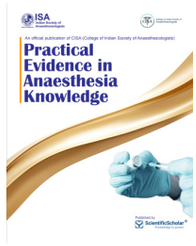

ORIGINAL ARTICLE

Role of superficial cervical plexus block with lignocaine and dexamethasone following modified radical mastoidectomy: A randomised controlled trial

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ABSTRACT

Aims and Objectives: The study aimed to compare the worst pain levels following superficial cervical plexus block (SCPB) with lignocaine and perineural dexamethasone versus no block using the PAIN OUT patient outcome questionnaire.

Material and Methods: This randomised, placebo-controlled trial included 46 patients, 18–70 years of age, of the American Society of Anesthesiologists (ASA) physical status I/II scheduled for mastoidectomy. The postoperative maximum pain intensity scores using the PAIN OUT patient outcome questionnaire were considered as the primary outcome. The patients received interventions as per group allocation. In group block (n = 23), an ultrasound-guided (USG) SCPB was administered using 5 ml of 2% lignocaine with 4 mg dexamethasone. In group control (n = 23), no block was performed, and only dressing was done. All patients received intravenous (IV) paracetamol 1 g every 6 h. In case any patient-reported pain, IV diclofenac was administered.

Results: During the study period of 24 hours, patients in group block experienced lower worst pain as compared to group control(p-value = 0.001). Similarly, the visual analogue scale score on movement was lower in group block at the following intervals: 15 min (p-value = 0.02), at 1 hour (p-value = 0.007), at 4 hours (p = 0.03), and 12 hours (p-value = 0.04) following surgery. Rescue analgesia was lower in group block versus group control (p-value < 0.01).

Conclusion: Postoperative SCPB with lignocaine and perineural dexamethasone provided a superior worst pain score during 24 hours using the PAIN OUT patient outcome questionnaire following modified radical mastoidectomy.

Keywords: Analgesia, mastoidectomy, pain, patient outcome questionnaire, visual analogue scale

INTRODUCTION

Patients undergoing mastoidectomy surgery often complain of side effects such as pain, dizziness, and postoperative nausea and vomiting (PONV). Postoperative pain relief is important as it reduces the stress response of the immune system and improves wound healing and recovery.[1] Drilling and irrigation in the bones next to the inner ear during surgery can cause vertigo. The mastoid drilling produces low-frequency vibrations and noise that stimulate distinct vestibular labyrinth receptors and enhance the vomiting response.[2] Additionally, vagus nerve stimulation can intensify the postoperative vomiting reaction.[3] PONV may be exacerbated with the use of intraoperative and postoperative opioids.[4] All these adverse effects can lead to delayed recovery and discharge from the hospital.

Multimodal analgesia with peripheral nerve blocks reduces the requirement for opioid analgesics and their adverse effects.[5] In a previous randomised controlled trial, we demonstrated the efficacy of superficial cervical plexus block (SCPB) for pain relief following mastoidectomy surgery.[6] The cervical nerves (C1-4) contribute to the superficial cervical plexus (SCP). The greater auricular nerve (GAN), a branch of the SCP, provides sensory supply to the area behind the ear and the angle of the mandible.[6,7] Ultrasonography is useful in preventing vascular injury, blockade of the phrenic nerve, recurrent laryngeal nerves, and other important structures of the neck. To increase the effect of sensory block, adjuvants like dexamethasone have shown promising results in the literature.[8,9] It is known that perineural dexamethasone reduces PONV in mastoidectomy patients when used to reduce postoperative pain; however, the duration of analgesia has not been studied.[9,10]

Any pain-relieving modality requires a comprehensive method of assessment, which includes pain assessment and its functional benefits. PAIN OUT is an international pain registry which has developed the PAIN OUT patient outcome questionnaire. PAIN OUT patient outcome questionnaire has a set of questions with scales of 0–10 to evaluate for postoperative pain relief and functional assessment.[11] The primary goal of the PAIN OUT patient outcome questionnaire is to identify, evaluate, and compare postoperative pain management outcomes based on the surgical speciality, current pain, and follow-up pain relief.[11] PAIN OUT patient outcome questionnaire is unique because of its strong emphasis on patient outcomes, practicality in daily practice, capability to provide quick feedback on results, and utilisation of external benchmarking.

We planned to use perineural lignocaine with dexamethasone for SCPB in mastoidectomy surgery for postoperative pain relief, as both agents have anti-inflammatory properties. We aimed to study the effectiveness of SCPB with perineural dexamethasone in reducing postoperative worst pain using the PAIN OUT patient outcome questionnaire. We hypothesised that the worst Pain Out score using the PAIN OUT patient outcome questionnaire would be superior in patients receiving SCPB as compared to no block following modified radical mastoidectomy. The secondary outcomes were pain assessment using the PAIN OUT patient outcome questionnaire, any requirement of rescue analgesic in the postoperative period, perioperative haemodynamics, visual analogue scale (VAS) score for pain, PONV, vertigo, and any adverse effects.

MATERIAL AND METHODS

This randomised clinical trial was conducted in the Department of Anaesthesia and Intensive Care in collaboration with the Department of Otorhinolaryngology in a tertiary care hospital. The study was approved by the Institutional Ethics Committee (GMCH/IEC/2020/464/53, dated 16/02/2021) and was registered in the Clinical Trials Registry-India (CTRI/2021/03/032232, dated 23/03/2021). After completing the process of approvals, the first clinical case was enroled on 29/07/2021, and the last case was enroled on 09/08/2022. The study followed the guidelines of the Declaration of Helsinki 2013 and was conducted as per Good Clinical Practice guidelines.

The parameters used for sample size calculation were the differences in worst pain intensity scores, as noted in a previous study.[11] The worst pain intensity was 5.2, with a standard deviation (SD) of 2.1. Considering a 30% difference in pain score following SCPB with perineural dexamethasone in modified radical mastoidectomy as clinically significant versus no block, the study required a sample size of 21 subjects per group at a confidence interval of 95% and a power of 80%. We finally included 23 patients in each group to make up for any loss to follow-up during the study.

We included patients in the age group of 18–70 years, belonging to both genders and the American Society of Anesthesiologists (ASA) physical status I/II, scheduled for modified radical mastoidectomy under general anaesthesia (GA). Patients who were pregnant, lactating, having allergies, or having contraindications to the drugs used in the present study; those with a history of substance abuse; patients not able to understand the VAS score; and those having a history of vertigo/PONV were excluded.

All patients underwent pre-anaesthetic evaluation a day before the surgery and received premedication. A written informed consent was taken from them. They were educated on the use of the PAIN OUT patient outcome questionnaire, which was interpreted as 0, which means no pain, and 10 means the worst pain possible.[11] A satisfaction score was also used, which was interpreted as 0, meaning very unsatisfied and 10, meaning very satisfied. VAS interpretation includes 0, meaning no pain, and 10, meaning the worst pain, on a line with no other numbers mentioned. The pain scale used in the PAIN OUT patient outcome questionnaire has a rating of 0–10, with all numbers written as in numerical rating scale (NRS). The patients were monitored using ASA standards for monitoring, and haemodynamics were recorded. After establishing intravenous (IV) access, 0.9% normal saline 500 ml was started. A standard anaesthetic technique was followed using IV morphine 0.1 mg/kg, propofol 2 mg/kg, and vecuronium 0.1 mg/kg. The trachea was intubated, and anaesthesia was maintained with sevoflurane and oxygen in nitrous oxide. IV ondansetron 4 mg was administered at the end of surgery.

Allocation concealment, randomisation, and patient blinding were ensured for all the patients. Randomisation was done using the computer-generated random number method by a doctor not involved in the study. The slips with group allocation details were kept in opaque-coloured envelopes and were sequentially numbered. The intervention as per

group allocation was done when the patient was under GA so that the patient remained blinded to the group allocation. During the postoperative period, the assessor was blinded to group allocation. The SCPB was performed by an anaesthesiologist experienced in ultrasound-guided (USG) regional anaesthesia. The enroled patients were randomised into two groups-group block (n = 23): USG SCPB with 5 ml lignocaine 2% + 4 mg dexamethasone; group control (n = 23): USG preparation of SCPB but no block.

Patients were positioned in the lateral position. Under all aseptic precautions, USG (Fuji Film Sono Site EDGE II, Inc., Bothell, WA, 98021, USA) SCPB was performed. Using a high-frequency linear probe, an ultrasound echogenic 22G needle was inserted from the lateral edge of the sternocleidomastoid muscle on the same side of the operated ear. The final placement of the tip of the needle was between the investing layer of deep cervical fascia and prevertebral fascia. The group block received 5 ml of 2% lignocaine with 4 mg dexamethasone. The neuromuscular effect was reversed at the end of surgery, and all patients received IV paracetamol 1 g as an analgesic. If any patient reported a VAS pain score > 3, IV diclofenac 75 mg was administered as a rescue drug for pain relief.

The patients were asked to fill out the PAIN OUT patient outcome questionnaire following surgery at the end of 24 hours. PAIN OUT patient outcome questionnaire has 13 questions, which include pain assessment, functional impairment, and side effects of pain treatment.[11] Haemodynamics, reduction in VAS scores for pain at rest and during movement (jaw movement), total rescue analgesia, first rescue analgesia time, PONV, and any adverse effects were monitored at 5, 10, 15 min, 1, 4, 8, 12, 18, and 24 hours. A four-point scale was used to grade nausea and vomiting. Vertigo was assessed using 'yes' or 'no.' If 'yes,' then severity was assessed using a scale of 0–10, where 0 stands for none and 10 stands for maximum vertigo.

Statistical Package for the Social Sciences (SPSS) for Windows, version 22.0 (Armonk, NY: International Business Machines Corporation) was used for analysing the data. The Kolmogorov-Smirnov test was used for estimating the normalcy of data. The Student's t-test was used for continuous, normally distributed data. The Mann-Whitney test, or Wilcoxon signed-rank test, as appropriate, was used for the statistical analysis of skewed data. Repeated analysis of variance (ANOVA) was used when data were analysed repeatedly. Fisher's exact test or Pearson Chi-square test was used as appropriate for categorical data. A p-value < 0.05 was considered statistically significant.

RESULTS

We enroled 49 patients, and out of these, 3 patients were excluded due to refusal of consent for the study [Figure 1]. The demographics of the patients were similar in both groups [Table 1]. The values of the worst Pain Out score during 24 hours

Table 1: Demographics of patients receiving superficial cervical plexus block versus no block in patients undergoing modified radical mastoidectomy surgery

Patient characteristics	Group block (n = 23)	Group control (n = 23)	p-value
Age (years)	30 (21–48)	31 (21–39)	0.32
Gender: Male	11 (47.8)	9 (39.1)	0.38
Gender: Female	12 (52.2)	14 (60.9)	
ASA PS I	17 (73.9)	20 (87.0)	0.46
ASA PS II	6 (26.1)	3 (13.0)	

The data are represented as median and interquartile range (IQR) (Q1–Q3) or n (%). Mann-Whitney test was used for age, Chi-square test was used for gender and ASA PS, diagnosis and side of surgery. P-value < 0.05 is considered statistically significant. ASA PS: American Society of Anesthesiologists physical status, n: Number of cases

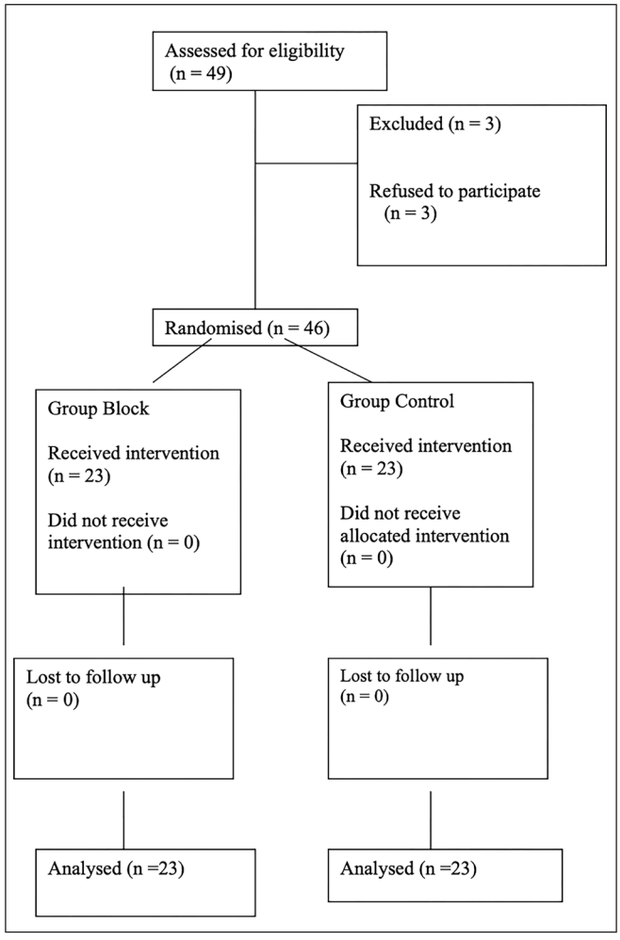

Figure 1: Consolidated Standards of Reporting Trials (CONSORT) diagram

Table 2: PAIN OUT patient outcome questionnaire in patients receiving superficial cervical plexus block versus no block in patients undergoing modified radical mastoidectomy surgery

Questionnaire	Group block (n = 23)	Group control (n = 23)	p-value
P 1:Worst pain since surgery (0–10)	2.52 (0.90) [2.13–2.91 (1.00–5.00)]	3.83 (1.67) [3.10–4.55 (0–6)]	0.001*
P 2: Least pain since surgery (0–10)	0.22 (0.42) [0.04–0.40 (0–1)]	0.65 (0.49) [0.44–0.86 (0–1)]	0.003*
P 3: Percentage of time you experienced severe pain since surgery (0–100%)	17.83 (13.80) [11.86–23.79 (0–60)]	34.35 (21.07) [25.24–43.46 (0–60)]	0.008*
P 4a: Interference of pain with doing activities in bed (0–10)	0.48 (0.59) [0.22–0.73 (0–2)]	2.04 (1.80) [1.27–2.82 (0–6)]	<0.001*
P 4b: Interference of pain with breathing deeply or coughing (0–10)	0.30 (0.56) [0.06–0.55 (0–2)]	1.22 (1.28) [0.66–1.77 (0–5)]	0.002*
P 4c: Interference of pain with sleeping (0–10)	0.09 (0.29) [−0.04 to 0.21 (0–1)]	0.61 (0.941) [0.20–1.02 (0–4)]	0.007*
P 4d: Interference of pain with doing activities out of bed, if yes (0–10)	1.00 (0.00) [1.00–1.00 (1–1)]	0.96 (0.209) [0.87–1.05 (0–1)]	0.317
P 5a: Feeling anxious due to pain (0–10)	0.52 (0.99) [0.09–0.95 (0–4)]	1.52 (1.50) [0.87–2.17 (0–5)]	0.004*
P 5b: Feeling helpless due to pain (0–10)	0.04 (0.21) [−0.05 to 0.13 (0–1)]	0.48 (0.79) [0.14–0.82 (0–3)]	0.009*
P 6a. Nausea (0–10)	0.17 (0.49) [−0.04 to 0.39 (0–2)]	0.78 (1.16) [0.28–1.29 (0–4)]	0.034*
P 6b: Drowsiness (0–10)	0.17 (0.38) [0.01–0.34 (0–1)]	0.78 (1.24) [0.25–1.32 (0–5)]	0.036*
P 6c: Itching (0–10)	0.00 (0.00) [0.00–0.00 (0–0)]	0.00 (0.00) [0.00–0.00 (0–0)]	1.000
P 6d: Dizziness (0–10)	0.43 (0.84) [0.07–0.80 (0–3)]	0.91 (1.08) [0.44–1.38 (0–4)]	0.056
P 7: Pain relief (0–100%)	83.48 (7.75) [80.13–86.83 (70–90)]	66.36 (16.20) [59.18–73.54 (30–100)]	<0.001*
P 10: Participation in decisions about pain treatment options (0–10)	9.65 (0.49) [9.44–9.86 (9–10)]	9.43 (0.59) [9.18–9.69 (8–10)]	0.204
P 11: Satisfaction with pain treatment (0–10)	9.39 (0.66) [9.11–9.68 (8–10)]	8.96 (0.88) [8.58–9.34 (8–10)]	0.084
P 13: Severity of pain before surgery (0–10)	1.61 (2.02) [0.74–2.48 (0–6)]	3.35 (2.08) [2.45–4.25 (0–6)]	0.07

Questions P 1, P 2, P 4 (a–d), P 5 (a, b), P 6 (a–d), P 10, P 11, and P 13 depicted scales (0–10) and data are represented as mean (SD) [95% CI (range)]. P 3 and P 7 depicted 0–100%v, and P 8, P 9, and P 12 had binary options of yes/no. Questions P 8, P 9, and P 12 with options yes/no had non-significant differences between the two groups. P-value < 0.05* is considered statistically significant. SD: Standard deviation, CI: Confidence interval

postoperatively were reduced in patients of group block versus group control with p-value = 0.001 (Question P 1) [Figure 2]. At the end of 24 hours, patients of group block had the lowest pain scores as compared to patients of group control with p-value = 0.003 (Question P 2). Patients of group block experienced a lower percentage of severe pain as compared to group control, p-value = 0.008 (Question P 3). Patients in group block had lower interference in performing other activities in bed due to pain as compared to patients of group control, with a p-value < 0.001 (Question P 4). Anxiety due to pain was lower in patients in group block, p-value = 0.004 (Question P 5a). Helplessness due to pain was lower in patients of group block, p-value = 0.009 (Question P 5b). Patients in group block reported lower incidence of nausea and vomiting than those in group control (Question P 6). It was observed that the patients in group block had greater pain relief (p-value < 0.001) (Question P 7). Satisfaction with pain treatment was found to be non-significant, p-value = 0.08 (Question P 11). 13 patients in group block and 18 patients in group control reported having a persistently painful condition at the site of operation for 3 months or longer, p-value = 0.07 (Question P 13). The pain relief and its related benefits were observed in group block [Table 2].

VAS pain score at rest was reduced in group block at 10 min, 1, 12, and 18 h as compared to group control [Table 3]. VAS score on movement was lower in the group block at 15 min, 4, 12, and 18 h versus the group control [Table 4].

On assessing at 24 hours, it was found that higher diclofenac was consumed by patients in group control versus group block. Of these, only 15 patients in group control and none in group block required any rescue analgesia. The time to

Table 3: Postoperative comparison of VAS score at rest in patients receiving superficial cervical plexus block versus no block in patients undergoing modified radical mastoidectomy surgery

Time interval	Group block (n = 23)	Group control (n = 23)	p-value
5 min	0.00 (0.00) [0.00–0.00 (0–0)]	0.09 (0.29) [0.00–0.21 (0–1)]	0.153
10 min	0.00 (0.00) [0.00–0.00 (0–0)]	0.17 (0.39) [0.01–0.34 (0–1)]	0.038*
15 min	0.13 (0.34) [0.02–0.28 (0–1)]	0.35 (0.57) [0.10–0.60 (0–2)]	0.145
1 h	0.30 (0.47) [0.10–0.51 (0–1)]	0.70 (0.70) [0.39–1.00 (0–2)]	0.046*
4 h	0.70 (0.63) [0.42–0.97 (0–2)]	1.13 (0.92) [0.73–1.53 (0–3)]	0.096
8 h	0.83 (0.78) [0.00–1.16 (0–2)]	1.00 (0.80) [0.66–1.34 (0–3)]	0.485
12 h	0.87 (0.58) [0.63–1.11 (0–2)]	1.39 (0.72) [1.08–1.70 (0–3)]	0.009*
18 h	0.96 (0.64) [0.68–1.23 (0–2)]	1.35 (0.65) [1.07–1.63 (0–2)]	0.044*
24 h	1.13 (0.55) [0.89–1.37 (0–2)]	1.39 (0.72) [1.08–1.70 (0–3)]	0.168

Data are represented as mean (SD) [95% CI]. P-value < 0.05* is considered statistically significant. Mann-Whitney Test was used for the calculation of the VAS score. SD: Standard deviation, CI: Confidence interval, VAS: Visual analogue scale

Table 4: Postoperative comparison of VAS score on movement in patients receiving superficial cervical plexus block versus no block in patients undergoing modified radical mastoidectomy surgery

Time interval	Group block (n = 23)	Group control (n = 23)	p-value
5 min	0.09 (0.29) [−0.04 to 0.21 (0–1)]	0.22 (0.52) [0.00–0.44 (0–2)]	0.37
10 min	0.22 (0.42) [0.04–0.40 (0–1)]	0.57 (0.73) [0.25–0.88 (0–2)]	0.08
15 min	0.43 (0.59) [0.18–0.69 (0–2)]	1.00 (0.85) [0.63–1.37 (0–3)]	0.02*
1 h	1.04 (0.56) [0.80–1.29 (0–2)]	1.48 (0.95) [1.07–1.89 (0–3)]	0.10
4 h	1.43 (0.79) [1.09–1.78 (0–3)]	2.43 (1.62) [1.73–3.13 (0–5)]	0.03*
8 h	1.61 (0.84) [1.25–1.97 (0–3)]	1.96 (1.22) [1.43–2.49 (0–5)]	0.34
12 h	1.65 (0.65) [1.37–1.93 (0–3)]	2.48 (1.27) [1.93–3.03 (0–5)]	0.01*
18 h	1.91 (0.73) [1.60–2.23 (1–3)]	2.52 (1.27) [1.97–3.07 (0–5)]	0.04*
24 h	2.22 (0.60) [1.96–2.48 (1–3)]	2.52 (1.12) [2.04–3.01 (0–5)]	0.14

Data are represented as mean (SD) (95% CI). P-value < 0.05* is considered statistically significant. Mann- Whitney Test was used for the calculation of VAS scores. n: Number of patients, SD: Standard deviation, CI: Confidence interval, VAS: Visual analogue scale

first rescue analgesia was at 4, 12, and 18 hours in patients of group control. Perioperative haemodynamics were within physiological limits in both groups. During the postoperative period, 4 patients had nausea and vomiting in group block versus 8 patients in group control, which was statistically non-significant. In group block, 3 patients complained of vertigo as opposed to 6 patients in the control group up to 24 hours postoperatively. No serious adverse effects were reported in any patient during the entire study.

DISCUSSION

The present study found a reduction in worst pain using the PAIN OUT patient outcome questionnaire at 24 hours postoperatively in patients receiving USG SCPB with lignocaine and dexamethasone following modified radical mastoidectomy. SCPB with local anaesthetic acts on the branches of superficial and intermediate cervical plexuses. The branches of the superficial cervical plexus have sensory supply in the neck and behind the ear.[12] We expected that a 5 ml (2% lignocaine with 4 mg dexamethasone) solution could produce longer duration of analgesia as compared to only local anaesthetic, which was used in our previous study for SCPB administered for postoperative pain relief in modified mastoidectomy.[6] This drug combination was selected as both lignocaine and dexamethasone have anti-inflammatory effects, and dexamethasone as an adjuvant increases the intensity and duration of the sensory analgesic effect of lignocaine.[8,13,14] The present study draws evidence from Hazrati et al., who reported superior analgesia with 3 ml of 2% lignocaine and 1 ml (4 mg) dexamethasone versus 2% lignocaine and 1 ml normal saline in finger trauma.[13] However, the effect of dexamethasone may vary depending on the site it is injected, the indication for administration, and the route of administration. In the present

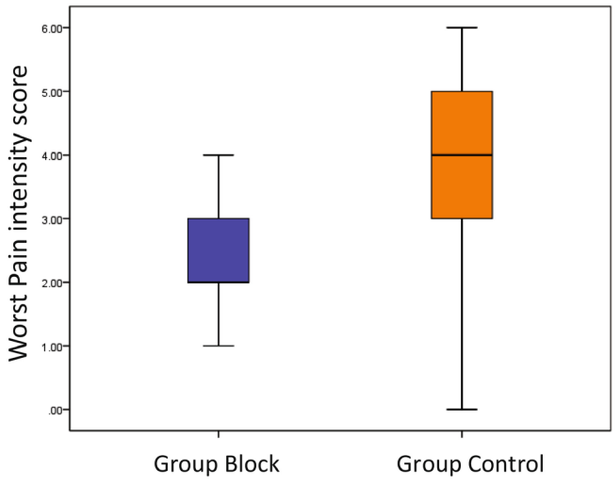

Figure 2: Worst pain intensity score using the PAIN OUT patient outcome questionnaire in patients receiving superficial cervical plexus block versus no block in modified radical mastoidectomy surgery

study, lignocaine and perineural dexamethasone for SCPB were compared with no block for postoperative pain relief in modified mastoidectomy.

We used 5 ml of solution for SCPB and observed no serious side effects. In a study, the researchers used 6 ml of 0.5% ropivacaine following thyroid surgery, and one patient developed left upper limb paresis associated with C5-T1 dermatomes. The patient recovered neurologically after 12 hours. The authors of this study have attributed this to the possibility of obstruction of the nerve roots as a result of an unintentional leak of local anaesthetic into the deep cervical cavity.[15] The other side effects of SCPB are change in voice, Horner's syndrome and diaphragm paralysis, which are usually self-limiting.[12,16] The use of ultrasonography can further prevent injection in the vertebral artery or arteries in the neck and also an inadvertent interscalene block.

There are a few studies that have reported the use of nerve blocks for post-mastoidectomy pain.[17,18] In a study, the researchers used a combination of bupivacaine 0.5% mixed with fentanyl 50/100 µg in a 12 ml solution, which was injected as infiltration at the surgical site just before the start of modified radical mastoidectomy. The authors reported a reduction in VAS score at 4 and 6 hours postoperatively in patients receiving a combination of bupivacaine 0.5% with fentanyl 100 µg.[17] In another study, lower pain and discomfort were reported in patients receiving infiltration anaesthesia with 12 ml of 2% lignocaine with adrenaline and clonidine 30 µg during 6 hours postoperatively in patients undergoing mastoidectomy.[18] GAN block with 5 ml of bupivacaine 0.25% resulted in greater tramadol consumption as compared to patients receiving SCPB with 10 ml of bupivacaine 0.25%. However, following tympanomastoid surgery, SCPB and GAN block were comparable in pain relief.[19] Deepika V et al. used 5 ml of 0.5% ropivacaine for SCPB after mastoidectomy and found that patients receiving SCPB with local anaesthetic needed fewer rescue analgesics and had lower VAS scores.[6]

VAS and NRS are not parallel scales, but using both in a study helps in making pain assessment objective. The NRS with a scale of 0–10, where 0 means no pain and 10 means the worst pain possible, was used for evaluating pain in the PAIN OUT patient outcome questionnaire in the present study to evaluate the effectiveness of postoperative pain management. It outlines variations in postoperative pain severity according to the type of surgery performed and examines the relationship between the conventional process indicators and the outcome-oriented indicators.[11] The PAIN OUT patient outcome questionnaire was separated into sections which addressed many aspects of pain, including its severity, functional limitations, adverse effects of pain medication, and the patient's overall rating.[11,20,21] VAS scores for pain at rest and on movement were also used as a separate measurement in the present study. Nevertheless, the measurement of VAS scores at rest and on movement remains a common practice in the assessment of postoperative pain relief and is considered appropriate in research studies.

Oedema following middle ear surgery, any residual cholesteatoma, the intake of opioids in the perioperative period, and a history of nausea/vomiting and migraine may predispose a patient to vertigo. Vertigo was reported in three patients of group block and six patients of group control in the present study. PAIN OUT patient outcome questionnaire score for dizziness was lower in group block as compared to group control but did not show any statistical significance. In day care ear surgery, it is well established that effective pain management and PONV are crucial for patient discharge and in the prevention of readmissions. We assessed pain, nausea, dizziness, vertigo, and itching using individual assessment as well as part of the PAIN OUT patient outcome questionnaire.[22]

Given this existing knowledge, we intended to determine if good pain management with SCPB with lignocaine and dexamethasone, paracetamol, and diclofenac as rescue analgesics can reduce side effects.

The present study is associated with a few limitations. Firstly, we enroled patients with no significant comorbidities in the study. Secondly, we did not include a group receiving SCPB with only lignocaine. This was because we had compared local anaesthetic with no block in our previous study.[6] Thirdly, a follow-up for chronic pain evaluation was not done. Nevertheless, studies comparing different doses of dexamethasone and those with follow-up for chronic pain can be performed in the future.

CONCLUSION

Postoperative SCPB with lignocaine and perineural dexamethasone provided a superior worst score using the PAIN OUT patient outcome questionnaire during the 24 hours following modified radical mastoidectomy.

Declaration of Patient Consent: The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflict of interest: There are no conflict of interest.

Use of artificial intelligence (AI)-assisted technology for manuscript preparation: The authors confirm that there was no use of artificial intelligence (AI)-assisted technology for assisting in the writing or editing of the manuscript and no images were manipulated using AI.

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