

Peripheral nerve stimulator-guided mandibular nerve block: A report of three cases

Sir,

Mandibular nerve block (MNB) is performed extensively in dental surgery where it is blocked intraorally. But in oral malignancy, trismus makes intraoral approach difficult. There is limited information on the peripheral nerve stimulated, extraoral approach for MNB.

We report three patients suffering from intractable oral cancer pain who had excellent pain relief after extraoral, neurolytic, peripheral nerve stimulator-guided MNB.

The extraoral approach consists of identifying the coronoid process of mandible and midpoint of the inferior border of the zygomatic arch. Under all aseptic precautions, local anesthesia was given with 1% lignocaine. The initial current of 1.4 mA was set. A 5 cm 22G stimuplex needle (Stimuplex A, B. Braun, Melsungen, Germany)

was inserted perpendicularly to hit the lateral pterygoid plate. The needle is withdrawn slightly and redirected posterosuperiorly. After achieving a motor response from temporalis and masseter muscles in the form of jaw jerk, the current was reduced to 0.4 mA. The first diagnostic block was performed. After negative aspiration of blood and loss of muscle twitches of initial drug injection, slowly 3 ml of 2% lignocaine was given. Adequate pain relief was confirmed, and then 0.5 ml of absolute alcohol was injected for neurolytic block.

A 40-year-old male with carcinoma left lower alveolus complained of severe pain in the left lower jaw referring to ear (visual analog scale [VAS-9]). A left-sided diagnostic MNB was performed which gave excellent pain relief (VAS-2) [Video 1]. Hence, neurolytic block was performed. The patient had pain relief for 6 weeks.

A 65-year-old male with carcinoma floor of mouth complained of pain in the mouth. The severity of pain was more on the right side (VAS-8). He had trismus and was on nasogastric tube feeding. A right-sided MNB was performed. It significantly reduced the pain (VAS-2). The patient had pain relief for 4 weeks.

A 52-year-old female with carcinoma anterior two-third of tongue complained of severe pain in the right side of her face (VAS-8). A right-sided MNB was performed. It provided pain relief for 8 weeks.

Mandibular nerve is a mixed division of trigeminal ganglion. It leaves cranial cavity through foramen ovale and runs anteriorly to the middle meningeal artery. It divides into small anterior trunk which supplies the muscle of mastication and large posterior trunk which supply sensory innervation to the floor of mouth, anterior two-third of the tongue and lower jaw.

Complications of MNB are hypesthesia, chemical neuritis, sensory loss in mandibular nerve distribution.^[1] Hence, it is necessary to counsel the patients about these side effects. Rarely serious complication like asystole requiring cardiac resuscitation has been reported.^[2] Blood aspiration rate with MNB is as high as 26%.^[3] Hence, meticulous aspiration is necessary before giving drug.

Advantage of extraoral MNB is that it can be done as a daycare, bedside technique. Extraoral approach blocks all sensory branches of the mandibular nerve. Use of nerve stimulator will improve accuracy and may reduce the potential complications seen with blind technique. The endpoint of mandibular nerve stimulation in the form of jaw jerk is easily visible. Use of ultrasound for MNB may not be helpful as it is a deep nerve surrounded by bony structures.

We conclude peripheral nerve stimulated MNB can form a promising analgesic tool for patients suffering from intractable oral cancer pain.

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Conflicts of interest

There are no conflicts of interest.

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