

Local anesthesia for parotidectomy — a new technique

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Abstract

This article describes a hitherto undescribed technique of administering local anesthesia to undertake a superficial parotidectomy. The technique is based on precise nerve blocks keeping in mind the regional nerve supply and the facial dermatomes. The advantages of such an anesthesia are, a conscious patient allows identification of the facial nerve and testing the integrity of its branches without the use of a nerve stimulator, the small dose of local anesthetic agent required minimises drug toxicity and it promotes the concept of out-patient parotidectomy. Copyright © 1996 Elsevier Science B.V.

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1. Introduction

Superficial parotidectomy is a common procedure for most surgically correctable lesions of the parotid. Hypotensive general anesthesia is ideal. Certain patients may be considered to be at risk or deemed unfit for general anesthesia. In developing countries where backup facilities are either unavailable or heavily burdened, local anesthesia can be used equally effectively. A method of obtaining an effective nerve block is outlined below.

2. Materials and methods

Eleven patients presented to this hospital with parotid tumors clinically involving the superficial lobe. Nine patients were chronic smokers, hypertensive and had severe chronic obstructive lung disease. Bronchodilator therapy for upward of 2 weeks failed to produce the desired improvement. The other 2 patients had suffered a cerebrovascular accident a few months earlier with minimal residual effects. All were considered to be a high risk for general anesthesia. Therefore,

superficial parotidectomy was done using local anesthesia.

The nerves blocked were maxillary, mandibular and the greater auricular nerve. The technique used for these nerve blocks was that as described by Katz [1] (Fig. 1). The agent used was 0.50% bupivacaine. The patients were also sedated with a combination of pentazocine and promethazine. The surgical procedure took on average 2 h. Anesthetic supplementation was required only in one case when traction was applied to the anterior flap to complete excision of the gland.

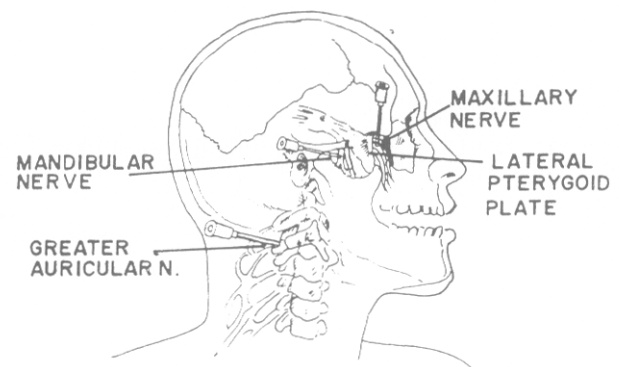


Fig. 1. Site of localising nerves to be blocked.

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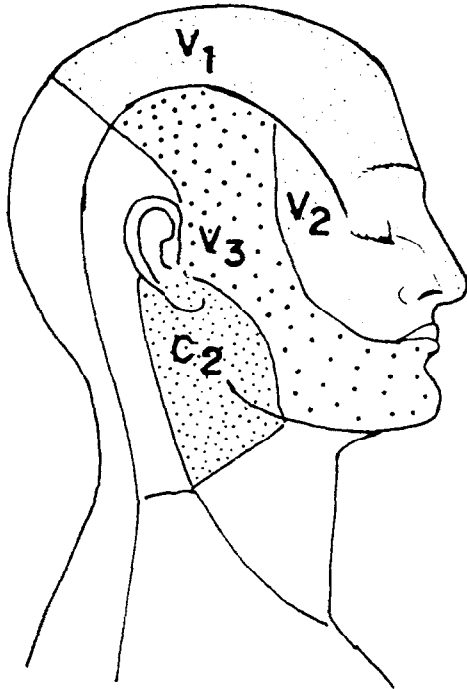


Fig. 2. Dermatomes of \bar{V} nerve and C_2 .

3. Discussion

Local anesthesia has long been used for head and neck surgery. This has been mostly in the form of a field block or infiltration anesthesia. The disadvantages of such methods are:

- (1) A large amount of fluid is needed for infiltration. This results in either drug toxicity or ineffective anesthesia due to excessive dilution.
- (2) Severe postoperative edema of the facial tissues can occur, especially in areas where the skin is lax.

Thorek [2] described a technique 'blocking the auriculotemporal, auricular and anterior branch of the facial nerve'. With our present knowledge we know this block

cannot be effective. The auriculotemporal nerve supplies secretomotor fibres to the parotid and does not contribute to cutaneous supply to the area of interest. The sensory root of the facial nerve (nervus intermedius) contains taste fibres and a few somatic afferents to the auricular concha [3]. The fact that the block was effective was probably due to a mandibular block rather than an auriculotemporal block and generous supplementation by infiltration anesthesia Fig. 1. The technique described in this article is based on a thorough knowledge of the regional nerve supply Fig. 2. A block which is correctly given permits the surgeon to complete the procedure comfortably.

The advantages of a parotidectomy using local anesthesia are:

- (1) No muscle relaxants are required as the surgery is conducted in a relatively superficial plane. This allows for easy testing of the integrity of the facial nerve.
- (2) Various manoeuvres for identifying the facial nerve, such as use of a nerve stimulator or injecting a dye into the parotid duct are rendered superfluous.
- (3) Chances of drug overdose are minimised as not more than 20–25 ml of 0.50% of bupivacaine are required.
- (4) The present day concept of out-patient parotidectomy [4] is promoted, as a procedure under local anesthesia facilitates early discharge.

References

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