

REGIONAL ANAESTHETIC TECHNIQUES FOR THE GENERAL PRACTITIONER (SURGEON)

Pages with reference to book, From 250 To 252

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INTRODUCTION

The use of Regional Anaesthesia and Nerve Blocks is becoming more popular and recognized as an effective means for providing anaesthesia for minor surgery. When used optimally, Regional Anaesthesia and local blocks can provide ideal operative conditions. Successful outcome of the technique depends on injection of the local anaesthetic solution as near the target nerve as possible. It is therefore essential to know the detailed surface anatomy of the area. It is also important to know the pharmacological actions of the various drugs used. If the general principles and guidelines of Regional Anaesthesia are strictly adhered to, then regional anaesthetic techniques can provide a safe, cheap and effective means of anaesthesia for minor surgery. A few techniques of Regional Anaesthesia are described, which can safely be used by the general physician in an out-patient and day care surgery unit. The skill required to use these local analgesic techniques is not very difficult to learn, but it does need practice.

INFILTRATION ANAESTHESIA

1. Anatomy:

The subcutaneous nerves of the relevant sensory nerves, are present in the cutaneous and subcutaneous tissues.

2. Equipment:

10-20 ml. syringe.

22-23 gauge fine bore needle.

Spinal needles are ideal if large areas are to be infiltrated.

3. Local Anaesthetic Solution Dose:

Dose depends on the size of tumor and extent of the excision.

Dilute solutions are sufficient.

Minor excision: 5-30 ml. Lignocaine 0.25-0.5% with adrenaline 1:200,000.

More extensive excisions:

30-100 ml. Lignocaine 0.25% with Adrenaline 1:200,000.

or

30-50 ml. Lignocaine 0.5% with Adrenaline

1:200,000.

4. Indications:

Minor surgical operations, i.e., excision of small tumors, incision of abscesses, suturing of wounds, etc.

5. Contraindications:

There are no specific contraindications, but infiltration anaesthesia should be avoided in:

- a. Very apprehensive patients.
- b. Patients who have had reaction to Local Anaesthesia in any previous occasion.
- c. In small children.
- d. Injection into infected tissues.

When injecting local anaesthesia in tissues supplied with end arteries i.e., toes, fingers and penis, vaso-

constrictor substances i.e., adrenaline should not be used.

Technique

Patient should be lying in the supine position and as comfortable as possible. Only the area to be operated upon should be exposed. For removal of cutaneous or subcutaneous tumors, local anaesthetics injected from two points A and B, one above and one below the tumor. Injection is given in a fanwise manner on either sides of the tumor. (Figure 1).

Fig. 1

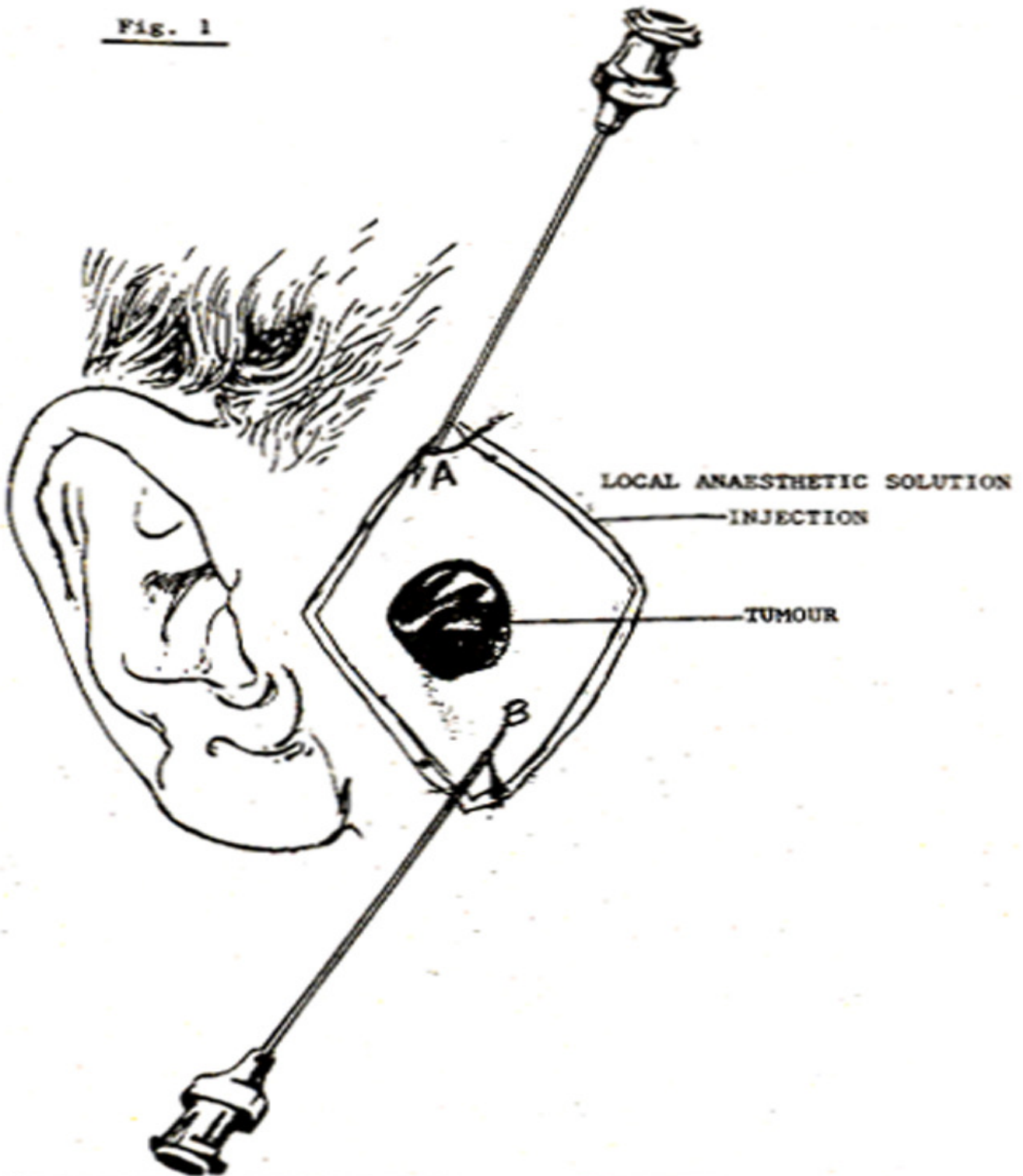


Figure 1. Local Anaesthesia for removal of cutaneous and subcutaneous tumours.

To prevent intravascular injection, aspirate before injecting the local anaesthetic solution. Onset of analgesia is 3-5 minutes.

For Incision of Abscess

Using a 23 G needle inject a small amount 0.5-2 ml of the Local Anaesthetic solution where the abscess

is pointing. Injection should be given slowly to minimize pain. Size of the raised weal should be of sufficient size for a painless incision (Figure 2).

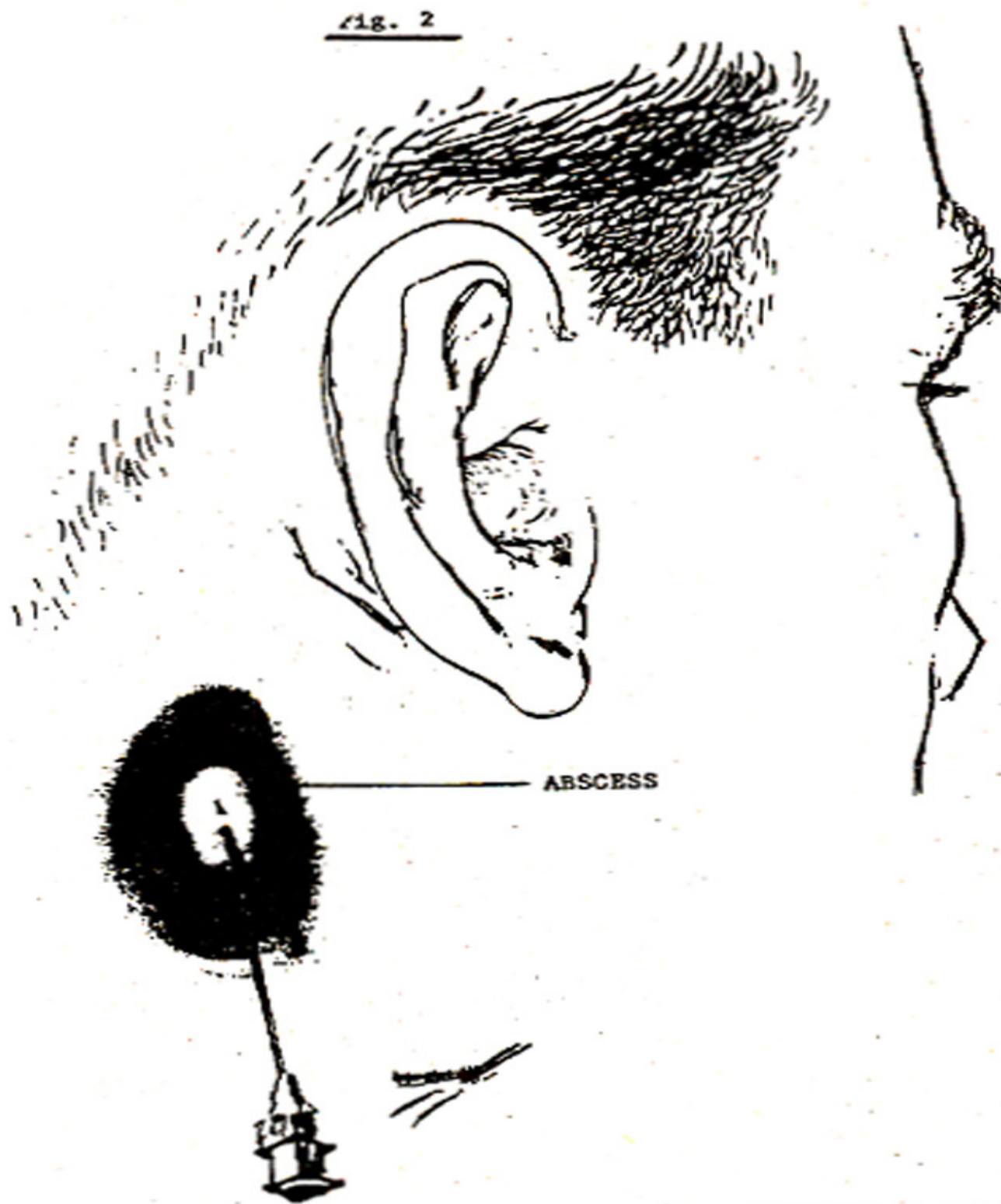


Figure 2. Local Anaesthesia for Inasion of an abscess.

LOCAL ANAESTHESIA OF THE SCALE

1. Anatomy:

Layers of the scalp are as follows:

Skin, subcutaneous tissue, epicranial aponeurosis and epicranium. Bulk of the nerves and vessels are situated above the epicranial aponeurosis.

2. Equipment:

10-20 ml syringe.

22-23 G needle.

For extensive infiltration, spinal needles are used.

3. Local Anaesthetic Solutions

As the scalp is a very vascular area, it is advisable to use vasoconstriction agents i.e., adrenaline with the Local Anaesthetic used. Minor Lesions 5 - 30 ml lignocaine 0.25% with adrenaline 1:200,000. 5 - 15 ml lignocaine 0.5% with adrenaline 1:200,000. Extensive lesions 30-100 ml lignocaine 0.25% with adrenaline 1:200,000. 30-50 ml lignocaine 0.5% with adrenaline 1:200,000.

4. Indications

a. Suturing of lacerations of the scalp.

b. As an adjunct to General Anaesthesia for intracranial operations, especially in patients with Head Injury.

5. Contraindications

Only the general contraindications apply, there is no contraindication for local anaesthesia of the scalp.

Technique

Injections are made on either sides of the lacerations. Needle is placed in the subcutaneous tissue above the epicranial aponeurosis and pushed in horizontally along the length of the laceration. Solution is injected as the needle is slowly withdrawn. A second injection is then made below the epicranial aponeurosis and solution injected in a similar manner (Figure 3). Aspirate before injecting, to prevent intravascular injection. It is important to inject the local anaesthetic solution both above and below the epicranial aponeurosis. If the tissues under the epicranial aponeurosis alone are infiltrated, the analgesia is not satisfactory, and the haemostatic effects of adrenaline are not obtained. Excellent analgesia and haemostasis are obtained if the solution is injected on two layers as described above (Figure 3).

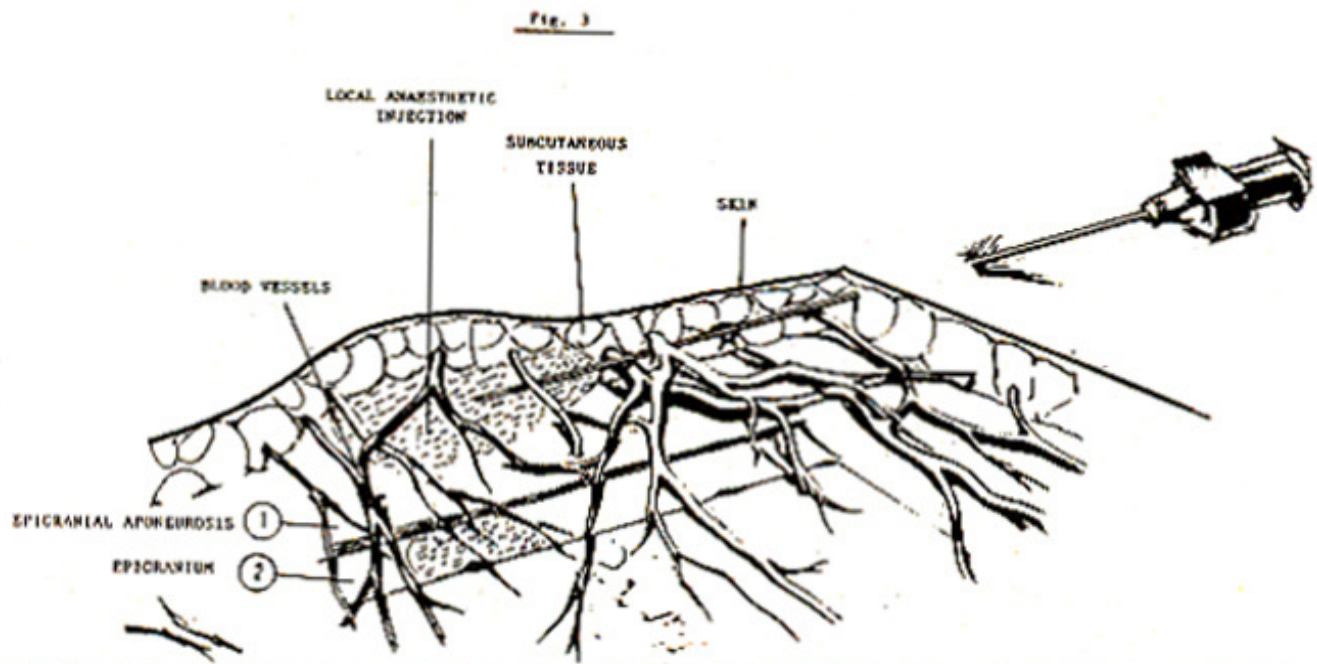


Figure 3. Local anaesthesia for Lesion of Scalp.

