Superficial cervical plexus block for central venous cannulation

Ashwini Sharma, Fortis Hospital, Mohali, India

Superficial cervical plexus block has been widely used for providing anaesthesia in procedures involving the neck region, for example carotid endarterectomy. We have experience of using this block to provide local anaesthesia for insertion of jugular central venous cannulae. It is a simple procedure in which expertise can be gained very quickly.

Anaesthetists are commonly asked to insert central catheters or dialysis catheters. These patients often have a history of repeated cannulations and the standard technique for local infiltration often involves several injections to cover the puncture and subsequent suturing. Apart from requiring multiple injections, distortion of local landmarks may also result. We have started performing these cannulations under superficial cervical plexus block and feel that patient satisfaction has improved compared with the conventional infiltration technique. It is a simple, easily-learnt, safe and reliable block with relatively few complications.

Technique

With the patient's head turned away from the site intended for puncture, clean the skin with chlorhexidine in alcohol. The midpoint of the posterior border of sternomastoid is identified and using a 26G needle 10ml 2% lignocaine is injected for 2-3cm in both cranial and caudal directions along the posterior sternomastoid border. This will result in blockade of neural conduction in the ventral rami of the C1-4 nerve roots.[1]

The area of anaesthesia typically spreads along the distribution of the transverse cervical (over the front of neck), greater auricular, lesser occipital (side of neck) and supraclavicular nerves (around the clavicle).

There are very few complications associated with this block as the injection is subcutaneous just like local infiltration. Avoid puncture of the external jugular vein which overlies this area in some patients. Spread to involve the phrenic, vagus, or glossopharyngeal nerve as well as the sympathetic chain is possible, but this is more frequent with a deep cervical plexus block. The same is true about the possibility of intra-arterial, epidural and intrathecal injection complicating this block.[2]

Because of its simplicity, ease and multiple advantages over conventional infiltration, we advocate that this block be used more often during central venous cannulation especially in patients with a history of multiple cannulations and particularly where a wide bore cannula ('vascath' for renal dialysis) is needed.

REFERENCES

1 Waterhouse P, Plastow S. Internal jugular vein cannulation doesn't have to be a pain in the neck. *Anaesthesia* 2008; **56**: 393.

2. Chauhan S, Baronia AK, Maheshwari A, Pant KC, Kaushik S. Superficial cervical plexus block for internal jugular and subclavian venous cannulation in awake patients. *Reg Anesth* 1995; **20**: 459