

## LETTER TO THE EDITOR



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### Supraorbital and supratrochlear nerves block for oncologic surgery of the anterior scalp and forehead in the elderly

*Sir:*

Surgical management of larger oncologic lesions of the scalp is often in elderly patients with comorbid illness. In many of these cases, general anesthesia as well as only local infiltration is not always recommended<sup>1</sup>. Scalp block technique has described by Girvin in 1986 for use during awake craniotomy<sup>2</sup> but the technique did not gain its due popularity for several more years, until the demonstration that blocking is safe and reproducibly successful in maintaining hemodynamic stability and in improving perioperative management of patients undergoing craniotomy<sup>3</sup>.

Actually, this technique has used in neurosurgery. We believe that an important potential application is major oncologic scalp surgery, according to Finco et al. that reported greater occipital nerve block for surgical resection of lesions of the posterior scalp, assessing good results in managing intra and post-operative pain.<sup>1</sup> In cases with anterior scalp location, we would like to report

our clinical experience on the use of supraorbital and supratrochlear nerves block

systematically for major oncologic surgery. This two nerve branches supply sensory innervation to forehead and anterior scalp, between the superior orbital rim and the coronal suture (Fig. 1 A). The supraorbital nerve emerges from the orbit at the level of its upper margin; the supratrochlear nerve from the superiomedial angle of the orbit<sup>3,4</sup>.

We analyze our experience of the last 5 years. 122 patients (93 male, 29 female) underwent supraorbital and supratrochlear nerves block for excision of skin tumor located in the frontal region and the anterior scalp (Fig. 1 B). All of them were over 65 years, 63 were class III and 59 were class II of the American Association Anesthesiologists. The technique for performing the block is easy because the nerves can be blocked as they emerge. We palpate the supraorbital notch, beneath the eyebrow in the mid pupillary line, and we insert a 27-Gauge needle along the upper orbital margin (Fig. 1 C) to block the supraorbital nerve, and then move medially, towards the tip of the nose, in order to include the supratrochlear territory. Nerves block was done with 4 to 8 ml of naropin 7.5 mg/ml, a long

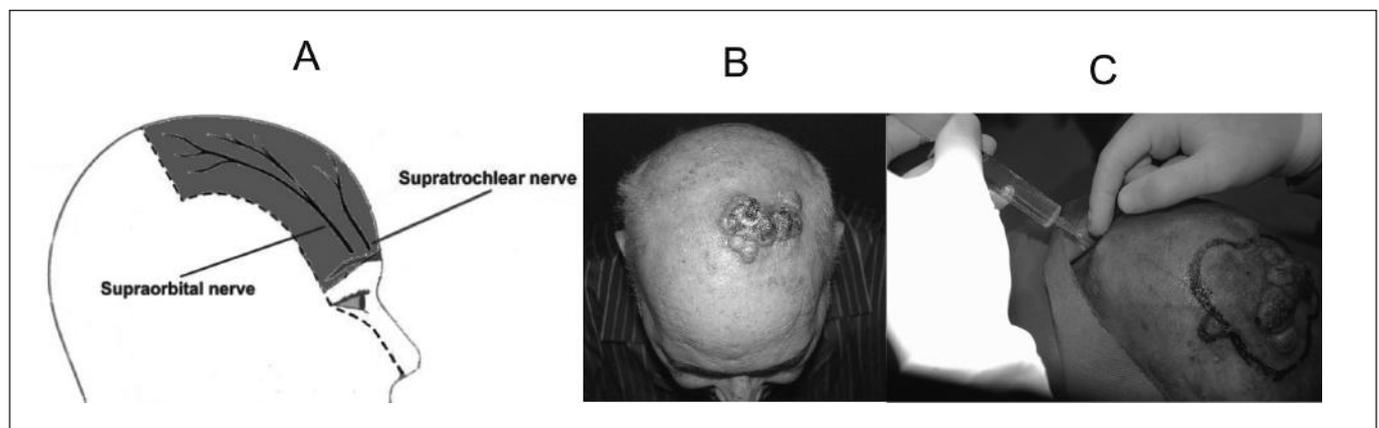


Fig. 1: A) Innervation of the anterior scalp and forehead; B) Oncologic Lesions of the Anterior Scalp; C) Supraorbital and Supratrochlear Nerves Block.

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acting local anesthetic, possibly associated to mepivacaine 2% with epinephrine 1:100000 infused to the margin of resection of oncologic lesions.

In 93.9 % of the cases, we did not record major discomfort or pain during the entire surgical procedure; in 6.1 % of the cases we performed a light sedation by intravenous controlled infusion of Propofol (0.7 mg/kg). The analgesic level was measured by use of two-point test.

Surgical resections and reconstruction were performed with success in every patient without any postoperative complications. The main time of surgery was 50 minutes and in all patients the postoperative pain was well tolerated.

After surgery, a questionnaire with 3 possible answers (very low, medium, high satisfaction) was administered to quantify the discomfort during the anesthesia. We recorded high satisfaction for the anesthetic management in 95.08 % of the cases, and medium satisfaction in 4.91 %.

In our experience, the supraorbital and supratrochlear nerves block is a safe technique with a fast learning curve and easy to perform. It maintains the patient awake and cooperative and providing analgesia for a considerable period of time with postoperative effect, minimizing the need for postoperative pain medicine. A deep knowledge

of scalp anatomy and innervations as well as a correct choice of anesthetic agent is to be considered basic requirements.

#### Disclosure

The authors have no financial interest to declare in relation to the content of this manuscript.

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