

# Clinical experiences with ultrasound-guided suprazygomatic maxillary nerve block in zygomatic implants surgery: a new indication

Molins G. MD, MSc.<sup>1</sup>

Valls-Onañón A. MD, MSc, DMD, PhD.<sup>2</sup>

Masiá J. MD.<sup>2</sup>

De Nadal M. MD, PhD.<sup>3</sup>

Hernández-Alfaro F. MD, DMD, PhD.<sup>2</sup>

(1) Anestalia - Centro Médico Teknon. Barcelona. Spain

(2) Instituto Maxilofacial - Centro Médico Teknon. Barcelona. Spain

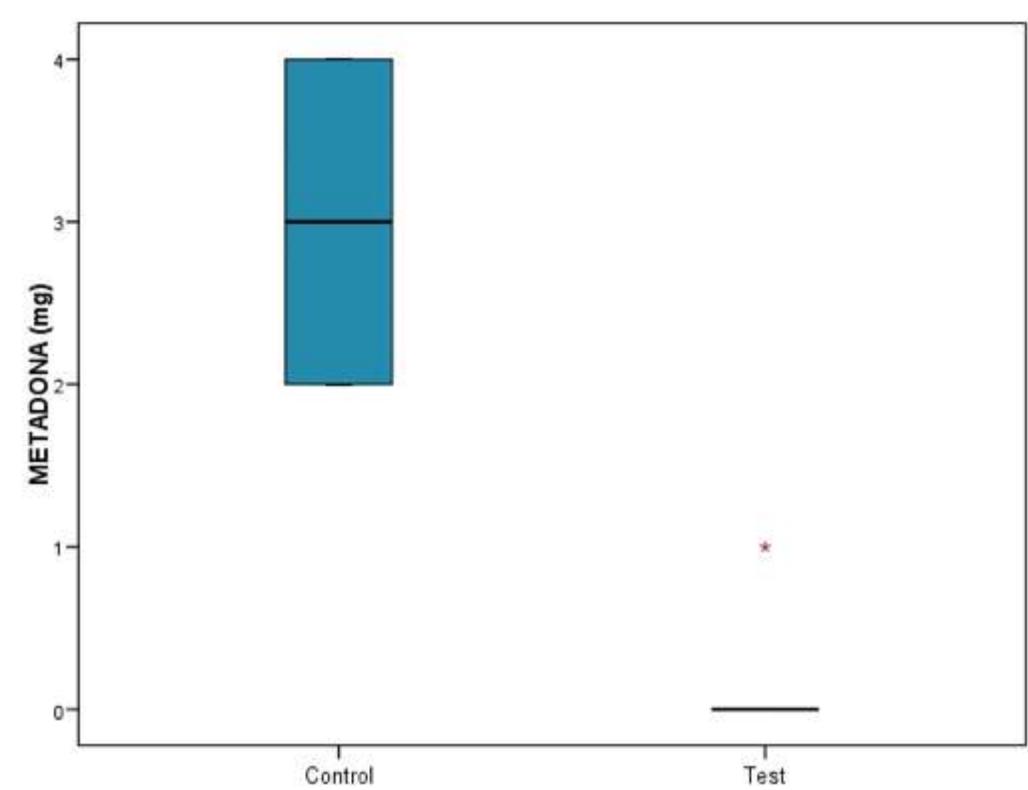
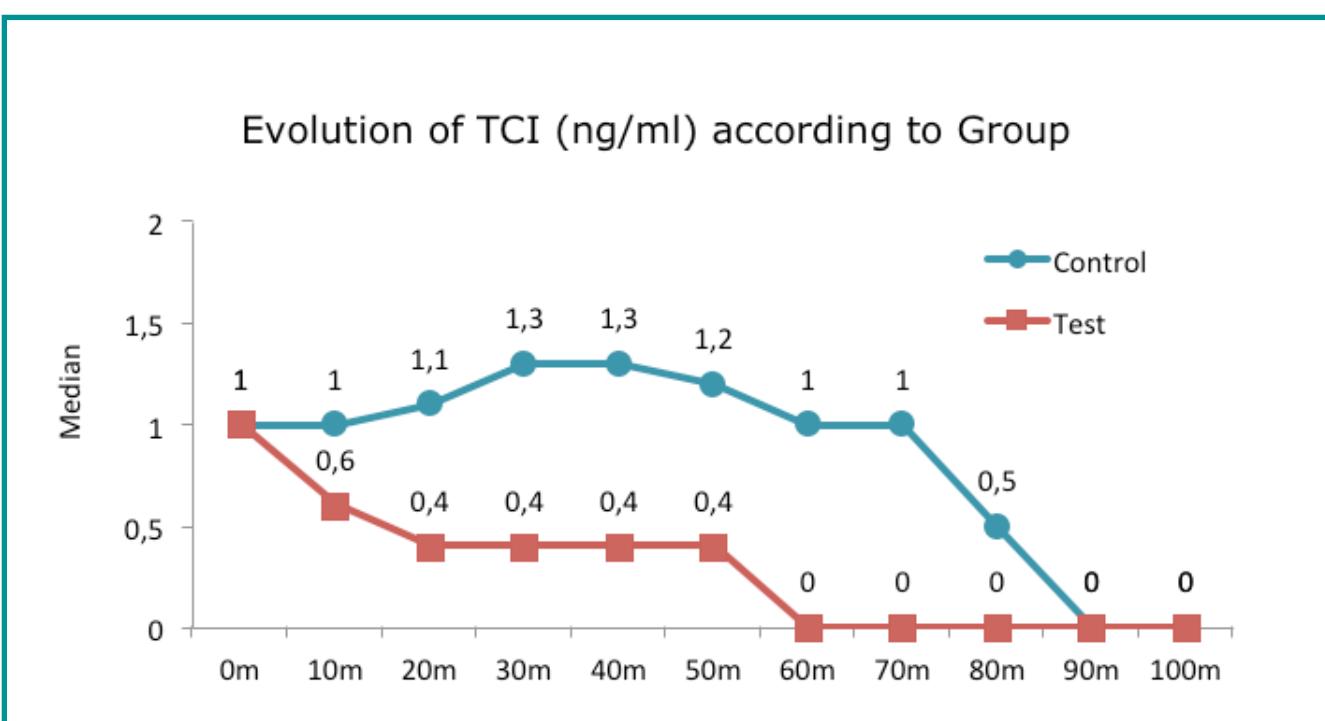
(3) Hospital Vall d'Hebrón. Barcelona. Spain



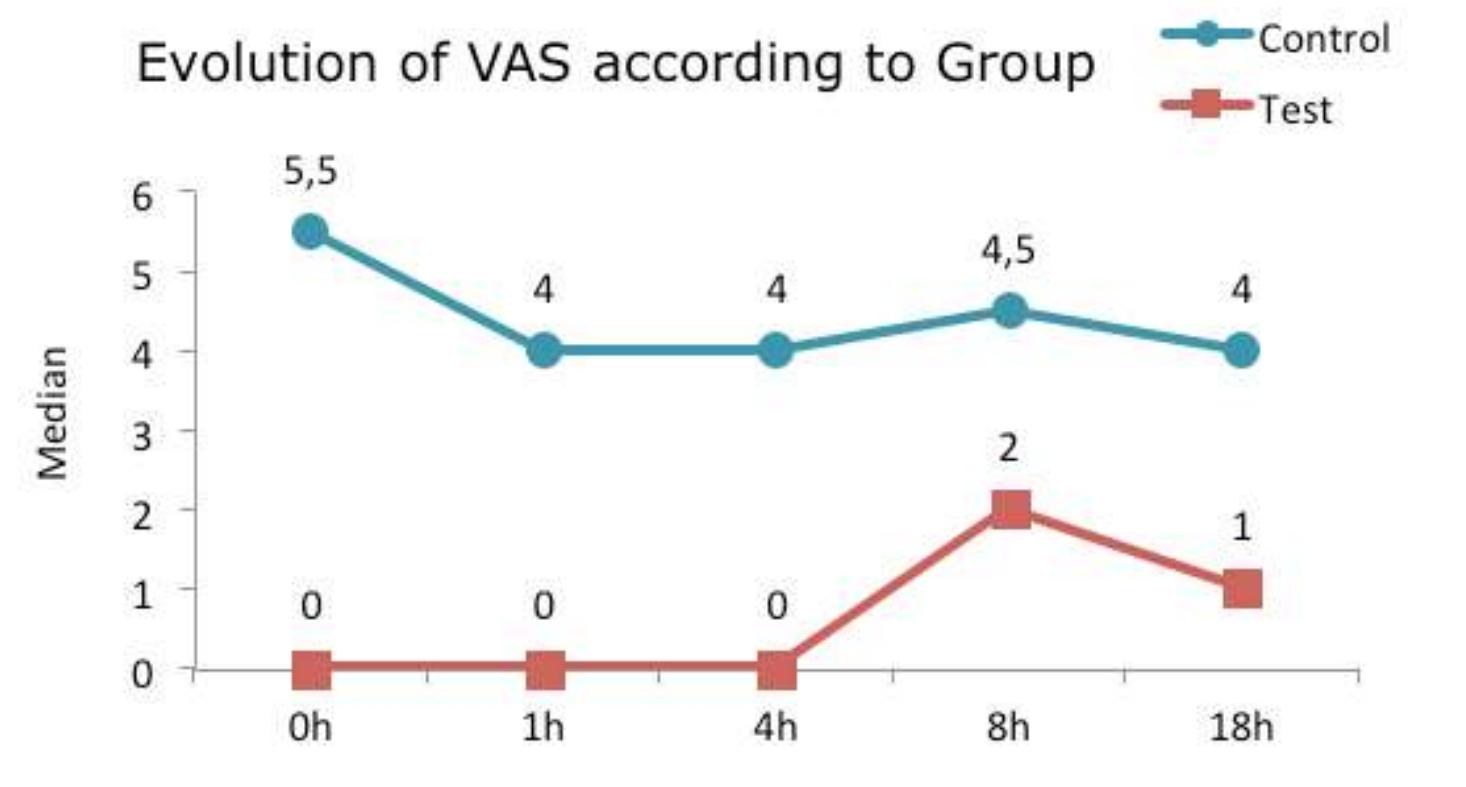
Zygomatic implant surgery (ZIS) is indicated for the rehabilitation of the severe atrophic maxilla. Anesthetic management of these patients is a challenge. For pain control, a multimodal approach is recommended, and loco-regional-anesthesia techniques (LRAT) are an essential pillar. Researchers propose bilateral blockade of the maxillary nerve (BBMN) by ultrasound-guided suprazygomatic-route for ZIS for better pain control. In this clinical trial, after ethical committee approval patients were randomly assigned to 2 groups to receive (study group) or not (control group) the BBMN (4ml Ropivacaine 0.5%) together with local infiltration with Lidocaine (10ml Lidocaine 2%) and general anesthesia. The main objective was the consumption of opioids. Pain, postoperative nausea-vomiting (PONV) and complications derived from BBMN were also recorded. The researchers present the preliminary results of 9 patients. Patients who received BBMN presented better results in terms of: lower intraoperative opioids consumption ( $p=0.016$ ), lower rate of patients who demanded methadone (100% control vs 20% study,  $p=0.048$ ) and lower dose of methadone administered (3mg control vs 0mg study,  $p=0.016$ ) at 2 hours postoperatively, lower level of pain at any time of the first 8 hours postoperatively ( $p=0.016$ ), and lower incidence of PONV (75% control vs 0% study,  $p=0.048$ ).

No complications derived from the BBMN were reported.

The results obtained suggest that the BBMN is a promising LRAT to decrease opioid consumption and greater patient comfort for ZIS. The small size of the sample prevents generalization, and may involve risks of overinterpretation and publication bias. Larger studies need to be conducted to corroborate the efficacy of this new indication.



	Control	Test	p-valor
Rate (%)	100 %	20 %	0,048*
Dose (mg)	3,0 (2-4)	0,0 (0-1)	0,016*



## REFERENCES:

- Chiono J, Raux O, Bringuer S, Pharm D, Sola C, Bigorre M, Capdevila X, Dadure C. Bilateral Suprazygomatic Maxillary Nerve Block for Cleft Palate Repair in Children. *Anesthesiology* 2014;120:1362-9.
- Bouzinac A, Tournier J-J, Delbos A. Ultrasound-guided maxillary nerve block in adults: feasibility and efficiency for postoperative analgesia after maxillary osteotomy. *Minerva Anest* 2014;80(7):860-1.
- Echaniz G, De Miguel M, Merritt G, Sierra P, Bora P, Borah N, Ciarallo C, de Nadal M, Ing RJ, Bosenberg A. Bilateral suprazygomatic maxillary nerve blocks vs. infraorbital and palatine nerve blocks in cleft lip and palate repair: A double-blind, randomised study. *Eur J Anaesthesiol*. 2019;36(1):40-47.