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## Editorial



# Commentary on “A Prospective, Single-Blinded, Bicentric Study, and Literature Review to Assess the Need of C2-Ganglion Preservation - SAVIOUR’s Criteria”

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See the article “A Prospective, Single-Blinded, Bicentric Study, and Literature Review to Assess the Need of C2-Ganglion Preservation - SAVIOUR’s Criteria” via <https://doi.org/10.14245/ns.2040238.119>.

The authors are commended for this interesting and educational manuscript. This paper provides great insight on occipital-cervical surgery and the benefit of neuronal sparing techniques with preservation of function.<sup>1</sup> The authors are credited for their tremendous expertise and collection of such a large group of patients. One hundred seventy-one patients with the great majority having spastic quadriparesis (96.5%) were enrolled where 88 had C2 ganglionic preservation and 83 had sacrifice of the C2 nerve. However, 12 of the patients with planned C2 nerve preservation had to have a resection of the nerve due to operative issues despite the initial plan to preserve it preoperative.

The authors are commended for this difficult study. However, which each manuscript we must reflect on the study population as well as the expertise of the individuals performing the surgeries. Unfortunately, as in most cases there are some inherent bias. In this study, it should be noted that the surgeons chose whether to sacrifice the nerve or not, preoperatively. The patients were not randomized. These are 2 extremely knowledgeable and skilled technicians therefore used their experience and inherent knowledge to help them decide the optimal treatment for their patients. Therefore, the average surgeon may not be able to discern these differences. Despite this limitation, the overall message of preserving neurologic function if possible does not change.

Another issue which may differentiate this from other Surgeon’s practices. Trauma and tumor patients were specifically excluded. In North America, the C1–2 lateral mass technique is most often employed due to unstable odontoid fractures. This point was brought out by the authors in their discussion of the study of Kang et al.<sup>2</sup> These fracture patients are different than the majority of patients in this population which appears to be congenital. Therefore, preserving the C2 nerve is less of an anatomic challenge with trauma or fracture patients. However, as several authors have noted there does not appear to be as significant an impact in terms of sensation loss with resection of the C2 ganglion in the trauma population.

Overall, this is an excellent article and there are numerous great comments and points concerning optimal surgical technique. The authors have an exceptional operative experience, over 880 patients with occipital-cervical disorders and their SAVIOUR’s Criteria is a



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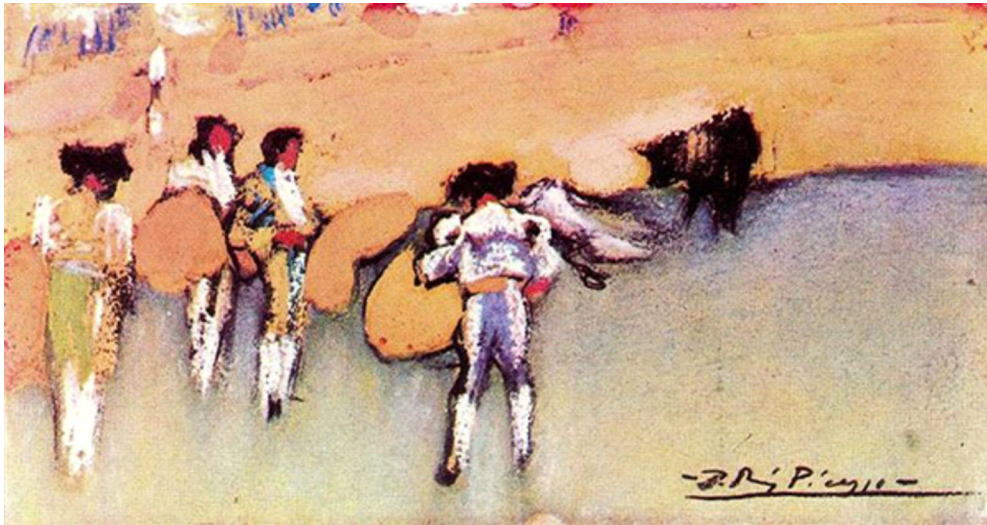
great addition to the literature. I thank the author for sharing with us their wisdom and insight. Their overall message about the need to preserve the C2 ganglion with occipital-cervical plating is another important message due to the possibility of an insensate scalp resulting in pressure ulcerations.

### CONFLICT OF INTEREST

The author has nothing to disclose.

### REFERENCES

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Artist: Pablo Picasso  
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