Orthopaedics & Traumatology: Surgery & Research 105 (2019) 1217

Contents lists available at ScienceDirect

Orthopaedics & Traumatology: Surgery & Research

journal homepage: www.elsevier.com

Letter to the Editor

## Response to the letter by Sen Yang, Weimin Jiang

Firstly, the authors would like to thank Dr Jiang and Dr Yang for his interest in our study and their interesting presentation of a rare case. We agree with the authors about the possibility of taking into account different operative techniques for the management of OTAL and C1 hypoplasia, and confirm the need of an individualized surgical choice as the result of the combination of both clinical examination and imaging.

In the case presented by the authors, we agree with the chosen surgical technique. The patient is a 72-year-old male with no signs of instability at radiological exams, and also at CT scan are visible sign of ossification in the lower cervical spine, these make the risk of iatrogenic instability lower than in other cases.

The association between OTAL and C1 posterior arch hypoplasia could be treated with C1 posterior laminectomy to obtain adequate decompression and neurological recovery with lower risk of complication and satisfactory results at mid and long term follow-up [1,2].

In our case, a decompressive laminectomy was associated with a C1-C2 fixation with polyaxial screws in C1 and translaminar screw in C2. The patient was a 53 year-old female, a young patient, with signs of local instability at the cervical junction, a normal mobile lower cervical spine and clinically she presents a huge cervical pain in association with chronic suboccipital headache. Taking into account all these factors, we decided to perform also a fixation of the index level after the decompression. We considered this patient at higher risk to increase her upper cervical spine instability after decompression alone, the young age and the absence of further ossification contributed to such a surgical decision.

We agree with the authors about the need of achieve satisfactory results at minimum cost for the patients, especially in such a complex and rare pathology, but we believe also that is crucial to achieve long-term satisfactory results especially in relatively young patients with long-life expectation, avoiding future iatrogenic injuries and need for adjunctive surgery. Otherwise, the mechanically stability is an adjunctive factor to allow a better and faster neurological recovery as shown in medical literature [3,4].

## Funding

No funds were received in support of this work.

## Disclosure of interest

The authors declare that they have no competing interest.

## References

[1] Perera S, Davis CHG, Gupta RC. Spinal cord compression caused by ossification of the transverse ligament of the atlas. Br J Neurosurg 1995;9:787–8.
[2] Tsuruta W, Yanaka K, Okazaki M, et al. Cervical myelopathy caused by hypoplasia of the atlas and ossification of the transverse ligament, case report. Neurol Med Chir (Tokyo) 2003;43:55–9.
[3] Yue JK, Winkler EA, Rick JW, Deng H, Partow CP, Upadhyayula PS, et al. Update on critical care for acute spinal cord injury in the setting of polytrauma. Neurosurg Focus 2017;43:E19.
[4] Prabhat V, Boruah T, Lal H, Kumar R, Dagar A, Sahu H. Management of post-traumatic neglected cervical facet dislocation. J Clin Orthop Trauma 2017;8:125–30.

Luca Proietti [a,e,*]
Laura Scaramuzzo [b]
Sergio Sessa [c]
Giuseppe Rosario Schirò [d]
Carlo Ambrogio Logroscino [a,e]
[a] *Fondazione Policlinico Universitario "Agostino Gemelli" I.R.C.C.S., Rome, Italy*
[b] *I.R.C.C.S. Orthopedic Institute Galeazzi, Spine Surgery Division 1, Milan, Italy*
[c] *Orthopedic Institure "Bambin Gesù" Palidoro, Rome, Italy*
[d] *Orthopedic Institute Niguarda Hospital, Milan, Italy*
[e] *Division of Spinal Surgery, Catholic University of Sacred Heart, Rome, Italy*

* Corresponding author. Fondazione Policlinico Universitario "Agostino Gemelli" I.R.C.C.S., Rome, Italy
*E-mail address:* proiettil@yahoo.it (L. Proietti)

DOIs of original articles:https://doi.org/10.1016/j.otsr.2019.06.004, https://doi.org/10.1016/j.otsr.2011.10.014

https://doi.org/10.1016/j.otsr.2019.07.002