

O-2-2

Management of congenital cervico-thoracic malformations. Technical aspects

Alfonso González-Menocal¹, Rosa M Egea-Gámez², María Galán-Olleros², Rafael González-Díaz²

¹*Hospital Infanta Elena, Valdemoro, Spain*

²*Hospital Infantil Universitario Niño Jesús, Madrid, Spain*

Tricolumnar osteotomies are used in spinal surgery for the resection of congenital malformations such as hemivertebrae. This intervention is associated with a significant risk of neurological injury.

The objective of this work is to analyze the surgeries performed in our center using tricolumnar osteotomy for congenital cervico-thoracic malformation and describe different technical aspects.

Methods: All patients who underwent hemivertebra resection at the cervico-thoracic level performed in the same hospital center and by the same surgeon were included. Different variables were described.

Results: A total of 10 cases were analyzed. The average age was 6,5 years, 90% were male. More than 60% of the patient have different syndromes. 42% of the patients had a hemivertebra at the level of T1, followed at the level of C7 and T2, in all cases a hemivertebrectomy and short fixation are performed. In all cases, correction of the deformity was achieved through a single posterior approach, neurophysiological control did not present any alteration and functionally the patients were able to return to their baseline.

Discussion: The early management of congenital anomalies in the spine is essential to avoid serious deformities. The location at the cervico-thoracic level should make us think about the concomitant existence of some syndrome. From a surgical point of view, it requires a vascular study and taking into account the brachial plexus. It is important to perform these techniques in expert hands and after a learning curve that minimizes the risk of neurological injury that has such an important impact on our population.

- - Evaluation and Comparison of a Novel Surgical Technique and Hemivertebra Resection to the Correction of Congenital Cervical Scoliosis in Lower Cervical and Cervicothoracic Spine. Neurospine. 2022
- - Outcomes of 360° Osteotomy in the Cervicothoracic Spine (C7-T1) for Congenital Cervicothoracic Kyphoscoliosis in Children. JBJS Am. 2019

Fig. 1



Fig. 2



Fig. 3

