

Editorial

Controversies in Thoracic Outlet Syndrome

Joseph L. Lukadi

*Thoracic surgery, University Hospital of Amiens, France*** Corresponding author: lulalukadi@gmail.com (J. L. Lukadi). Thoracic surgery, University Hospital of Amiens, France*

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The thoracic outlet is a singular anatomical zone made of critical and sensitive content, a kind of pedicle element for each upper limb within a container that consists of a hard frame (first rib and clavicle), and a soft barrier that involves muscles and ligaments. The eventual anatomical variations and structural modifications consecutive to pathological conditions in this crowded area may generate a thoracic outlet syndrome. This condition implies a heterogeneous symptomatology, variable in nature and intensity, even though some features are commonly found in these patients, they are often young, and they have a relative, strenuous regular activity. The complexity of the thoracic outlet syndrome diagnostic and therapeutic management has been reflected by its poor understanding, its hazardous outcome, and its high rate of postoperative disabling over more than a century. 2013 marked a watershed of this enigmatic syndrome decipherment, it was cleft in arterial TOS (ATOS), venous TOS (VTOS), and neurological TOS (NTOS) constituents [1]. It resulted standardized guidelines, that were streamlined three years later by the Society of Vascular Surgery [2]. Paradigm changes have been further unfolded, breathtaking research including clinical trials published, and bold efforts to popularize the ideal management of TOS were noticed mostly in the United States, these exploits have headed to a lower postoperative complications rate, most importantly, vanishing what was a prevalent cause of medical lawsuit.

However, there is still room for improvement. Outside of the United States, thoracic outlet syndrome care is still a confidential practice, performed only by several hands. Some other challenges need to be addressed, when it is about the NTOS, by far the most prevalent component of the TOS. Besides, the X-ray, other explorations do not have yet a diagnostic value in NTOS syndrome. Electrodiagnostic studies seem to be reliable only in case of traumatic situations, otherwise they are erratic. The duplex ultrasound has about 30 % false positives. Even CT and MRI which can provide valuable information about the thoracic outlet congenital and acquired abnormalities, are not yet up to be considered as gold standard analysis for the NTOS management. The enlargement of NTOS diagnosis tools would significantly improve TOS management, considering that there are a handful of pathologies that may mimic NTOS symptoms, and any mishandling in this region is unforgivable.

The management of the VTOS needs some light; especially, the place of the thrombolysis and the sequence of treatment components have to be more elucidated.

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