

## Is there any clinical reason to administer anticoagulant therapy to patients with the Jugular Vein Nutcracker syndrome?

**Letter to the Editor regarding the paper “Neurosurgical implications of the Jugular Vein Nutcracker (JVN)” by Angelini C. et al., published on *Veins and Lymphatics* 2023;12:11892 (doi:10.4081/vl.2023.11892)**

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Dear Editor,

We have read with great interest the article titled “Neurosurgical implications of the Jugular Vein Nutcracker (JVN)” by Angelini C. et al., published on “*Veins and Lymphatics*”.<sup>1</sup>

The article focuses attention on the Jugular Vein Nutcracker (JVN) syndrome, which is usually underestimated and can be associated with several pathophysiological patterns that have previously been described in the most recent literature. We, therefore,

would like to congratulate the authors for their interesting review of published studies on this condition, which sheds light on the JVN syndrome.

As a matter of fact, in recent years, we assisted to growing scientific interest in the JVN and its different clinical manifestations, some of them also being life-threatening.<sup>2</sup> In particular, venous thrombosis above the level of venous compression seems to be a common complication in these patients. However, rarely JVN is promptly recognized as the primary cause of thrombosis. In many cases, the JVN still remains not diagnosed, or it is disclosed months or years after the thrombotic event. That may lead to recurrent thrombotic phenomena, which are classified as “of unknown origin”. In our opinion, such a recent increasing interest in the JVN syndrome may help clinicians to better clarify the real incidence of this condition, which could be related to different clinical patterns, including cerebral sinuses thrombosis,<sup>3</sup> non-aneurysmal subarachnoid hemorrhage,<sup>4</sup> thrombosis of the subclavian vein,<sup>5</sup> and even pulmonary embolism.<sup>2</sup>

In our opinion, some issues still deserve attention and some discussion, especially regarding potential life-threatening venous thrombosis events:

1. Before surgical treatment of JVN or in case of impossibility of performing the operation (e.g. patient’s refusal to undergo surgery), should the clinicians consider the option of anticoagulant therapy in order to prevent Upper Extremity Deep Vein Thrombosis (UEDVT) or catastrophic events like cerebral sinuses thrombosis or pulmonary embolism?
2. Could in such cases be useful to stratify the risk of UEDVT through the use of specific mi-RNAs as markers of prethrombotic status as recently proposed by Ten Cate V. et al.<sup>6</sup>

We sincerely hope these open questions could stimulate the discussion about the best clinical management of the JVN syndrome patients and reduce the occurrence of JVN-connected life-threatening events, even in cases in which such a condition is highly susceptible but not diagnosed, yet.

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