

Internal jugular vein thrombosis caused by invasive pharyngeal cancer: a case report and literature review

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INTRODUCTION: Internal jugular vein (IJV) thrombosis is a potentially life-threatening disease and can occur at any level. Variety of factors can induce thrombosis, but it is most often found following IJV catheterization, neck dissection, injuries, infectious disease, in ovarian hyperstimulation syndrome or in malignant neoplasms. Unlike thyroid cancer, in which thrombosis of the jugular vein have been relatively often described, thrombosis of the internal jugular vein in head and neck squamous cell cancer is extremely rare. **OBJECTIVE:** We report a unique case of a very advanced, locally invasive pharyngeal tumor causing thrombosis of the internal jugular vein. Literature review of the described topic was also conducted. **MATERIAL AND METHODS:** A cross-referenced PubMed and Scopus (EMBASE) search was performed and relevant data were extracted accordingly. The search was performed using the following key-words and Boolean operators: “head and neck cancer AND squamous cell cancer AND internal jugular vein thrombosis”. **RESULTS:** According to PubMed and Scopus search only two similar cases were found. The first patient had supraglottic SCC with N3 lymph node invading IJV. The second patient developed SCC of the thyroid gland with a large IJV thrombosis. Both patients were treated bimodally, but developed recurrences and died soon after the treatment. In our case, patient was treated with radical surgery. Radical dissection of the right side of the neck and selective dissection of the left side of neck levels II-IV were performed. Furthermore, total laryngectomy, subtotal pharyngectomy and total thyroidectomy en bloc were performed. Reconstruction was made with a free fasciocutaneous anterolateral thigh flap. Despite the patient's poor general condition, IJV thrombosis, bulbus and sigmoid sinus thrombosis, and several comorbidities, he was considered for curative therapy and is still alive, in good general shape, 7 months after the surgery. **DISCUSSION:** The choice of treatment for this kind of patients is not standardized due to its rare occurrence. Even though IJV thrombosis carries a high chance of distant metastasis and local recurrence and consequently causing poor survival, the question arises what the best therapeutic option is. More documented cases are undoubtedly required to draw a more solid conclusion.

Key words: Head and neck cancer, Internal jugular vein, Squamous cell cancer, Thrombosis