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PO-028 - (23993) - CRANIAL NERVE SCHWANNOMAS: ANATOMICAL INSIGHTS AND MRI FINDINGS

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The authors declare no conflicts of interest.

The cranial nerves are primarily responsible for innervating the structures of the head and neck. Their anatomical course is complex and a thorough understanding of this anatomy is essential for detecting lesions affecting these nerves. Schwannomas are benign tumors that originate from the Schwann cells of the nerve sheath and may develop along the course of the cranial nerves. A detailed anatomical knowledge of the cranial nerves anatomy and imaging features of schwannomas is critical for establishing an accurate diagnosis and guiding appropriate management.

We present a comprehensive review of the diagnostic approach to cranial nerve schwannomas, emphasizing their characteristic imaging features. Key anatomical considerations are highlighted through illustrative examples, which aid in correlating radiologic findings with clinical symptoms and in improving diagnostic accuracy

The typical imaging features of cranial nerve schwannomas reflect their indolent behavior as benign neoplasms. These include well-circumscribed margins, displacement rather than invasion of adjacent structures, and smooth expansion of osseous foramina along the involved nerve pathways. Schwannomas typically exhibit low to intermediate signal intensity on T1-weighted images, with avid enhancement following contrast administration. On T2-weighted images, they generally present with heterogeneous high signal intensity. Larger lesions frequently demonstrate cystic degeneration and areas of hemosiderin deposition indicative of prior intratumoral hemorrhage.

A detailed understanding of the anatomical course of the cranial nerves, the diagnostic imaging features of cranial nerve schwannomas, and the correlation of these findings with clinical presentation are essential for accurate diagnosis and effective treatment planning in patients affected by these tumors.

Palavras-chave : Cranial Nerve, Schwannomas, MRI