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## One Year Follow up of Head and Neck Paragangliomas: A Single Center Experience

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Abstract: Background: Head and neck paragangliomas are a rare group of tumors with a large spectrum of clinical manifestations. The approach to evaluate and treat these lesions has evolved over the last years. Surgery was the standard for the approach of these patients, but nowadays new techniques of imaging and radiation therapy changed that paradigm. Despite advances in treating, the growth potential and clinical outcome of individual cases remain largely unpredictable. Objectives: Characterization of our institutional experience with clinical management of these tumors. Methods: This was a cross-sectional study of patients followed in our institution between 01 January and 31 December 2017 with paragangliomas of the head and neck and cranial base. Data on tumor location, catecholamine levels, and specific imaging modalities employed in diagnostic workup, treatment modality, tumor control and recurrence, complications of treatment and hereditary status were collected and summarized. Results: A total of four female patients were followed between 01 January and 31 December 2017 in our institution. The mean age of our cohort was 53 (± 16.1) years. The primary locations were at the level of the tympanic jug (n=2, 50%) and carotid body (n=2, 50%), and only one of the tumors of the carotid body presented pulmonary metastasis at the time of diagnosis. None of the lesions were catecholamine-secreting. Two patients underwent genetic testing, with no mutations identified. The initial clinical presentation was variable highlighting the decrease of visual acuity and headache as symptoms present in all patients. In one of the cases, loss of all teeth of the lower jaw was the presenting symptomatology. Observation with serial imaging, surgical extirpation, radiation, and stereotactic radiosurgery were employed as treatment approaches according to anatomical location and resectability of lesions. As post-therapeutic sequels the persistence of tinnitus and disabling pain stands out, presenting one of the patients neuralgia of the glossopharyngeal. Currently, all patients are under regular surveillance with a median follow up of 10 months. Conclusion: Ultimately, clinical management of these tumors remains challenging owing to heterogeneity in clinical presentation, the existence of multiple treatment alternatives, and potential to cause serious detriment to critical functions and consequently interference with the quality of life of the patients.

Keywords: clinical outcomes, head and neck, management, paragangliomas

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