Head-neck paragangliomas: surgery or wait-and-see? A very difficult decision

Canu L, Zanatta L, Santoro R, Zamengo S, Jance B, Martinelli S, D'Amore F, Ercolino T ,Mannelli M, Maggi M, Krausz C, Rapizzi E

Azienda Ospedaliero-Universitaria di Careggi; Centro ENDO-ERN

Abstract

Head and neck paragangliomas (HNPGLs) are rare neural crest derived tumors with benign behavior in most cases.

Paragangliomas can arise as sporadic or as familiar forms. As their size increases, they can compress or infiltrate adjacent neurovascular structures causing neurological symptoms. They are characterized by unpredictable, mostly slow growth. Surgery is a therapeutic option,but might cause neurological deficits. Therefore, the clinical management of affected patients is still controversial.

In a recent study we compared the outcome of surgery versus a wait-and-see approach in 72 patients evaluated between 2000 and 2021 in the Endocrinology Unit of Careggi University Hospital in Florence.

49 patients (Group A: 62 carotid body, 4 jugulo-tympanic, 7 vagal, 1 laryngeal, and 1 unspecified HNPGL) underwent surgery and 23 (Group B: 25 carotid body, 6 jugulo-tympanic, and 1 vagal HNPGL) were followed with a conservative approach. The diagnosis of HNPGLs was made on the basis of lesion characteristics assessed by imaging (CT, MRI and angiography) or by histological examination after tumor removal. All patients also underwent genetic testing for mutations in the susceptibility genes. The presence of functional neurological deficits in speech or swallowing, caused by surgery or by tumor growth in time, was assessed via a dedicated Otolaryngologist visit and by administering three questionnaires evaluating voice (VHI) and swallowing (DHI and MDADI) disability. 32 patients completed also a quality of life questionnaire (EORTC QLQ-H&N35). Mean tumor size did not differ between the two groups. The comparison between group A and group B did not show any significant difference in swallowing as assessed by the MDADI test while a significant difference was observed in the VHI and DHI test, suggesting greater neurological disabilities in patients undergoing surgery, as also assessed at the Otolaryngologist visit.

The results of the EORTC QLQ-H&N35 showed no significant differences between the two groups.

Conclusion. The management of HNPGL patients remains challenging for clinicians. This preliminary study, although conducted on a limited number of patients, seems to suggest that a "wait and see" approach might be sometimes preferable to surgical removal of the tumor especially when the tumor has already grown in size over 34 mm.