Giant nasal schwannoma with intracranial extension

Case illustration

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Neoplasms of Schwann cell origin may develop in almost any part of the body; however, only rarely do they involve the nasal cavity, paranasal sinuses, or nasopharynx. Approximately 40 cases of nasal and paranasal schwannomas have been reported, only three of which have been associated with intracranial extension.1,2,5 We present an additional case of an intranasal schwannoma with extension into the anterior cranial fossa and describe its successful removal by a less invasive approach than those previously reported.

This 50-year-old woman presented with a 3-year history of frontal headaches, anosmia, and gradual bilateral visual deterioration. Six months prior to admission, she also developed swelling of the bridge of her nose and intermittent clear nasal discharge. Clinical findings included bilateral anosmia, a visual acuity of 3/60 unaided in the right eye and 2/60 unaided in the left eye, as well as bilateral optic nerve atrophy. Magnetic resonance (MR) imaging revealed an anterior fossa lesion filling the entire nasal complex and extending inferiorly to the hard palate. The tumor was successfully excised via a standard bifrontal craniotomy without the need for a transfacial approach. The histological diagnosis of the lesion was a benign nasal schwannoma.

Nasal and paranasal schwannomas present with nasal obstruction, nasal swelling, anosmia, and proptosis; a computerized tomography (CT) or MR image may show no further specificity with regard to the diagnosis other than features of a benign, slowly growing tumor of greater signal intensity than polyps or mucoceles. The differential diagnosis includes papilloma, sarcoma, carcinoma, and lymphoma.1 Intranasal lesions are often found at biopsy without prior CT or MR imaging, particularly if nasal polyps are suspected. Although schwannomas rarely occur in the nasal cavity and even more rarely extend intracranially, this differential diagnosis should certainly be considered and CT or, preferably, MR imaging is advisable before undertaking a biopsy procedure.

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References


Fig. 1. Diethylenetriamine pentaacetic acid–enhanced T1-weighted parasagittal image revealing a well-demarcated enhancing mass filling the nasal cavity with significant intracranial extension into the anterior cranial fossa. Anteriorly, the involvement of the nasal bridge can be seen. Coincidentally, a partially empty sella is noted.

Fig. 2. Photomicrograph showing resected tumor consisting of compact fascicles of spindle-shaped cells alternating with myxoid foci that contain loosely arranged stellate cells. Aggregates of lymphocytes are present next to some of the blood vessels. H & E, original magnification × 250.