

## Cellular Leiomyoma of the Nasal Cavity: Report of a Case and Review of Literature

Satoshi Horie, Kensaku Hasegawa\* and Tadashi Terada

*Second Department of Pathology, Tottori University Faculty of Medicine, Yonago 683-0826 Japan and \*Clinic of Otolaryngology, Public Yoka Hospital, Yoka 667-8555 Japan*

**We report a rare case of cellular leiomyoma in the nasal cavity. A 72-year-old Japanese woman was admitted to a hospital. A tumoral lesion was revealed in the left nasal cavity. Angiography showed tumor staining, and the tumor was endoscopically resected after the embolization of the feeding artery. At gross inspection, the tumor measured  $1.0 \times 1.5 \times 2.0$  cm. Microscopically, the tumor consisted of many spindled cells with blunt ended nuclei. Immunohistochemical examination revealed that the tumor cells were positive for vimentin, alpha smooth muscle actin. We diagnosed this case as cellular leiomyoma. To the best of our knowledge, there have been only 23 reported cases of nasal leiomyoma in English medical literature. We made a brief literature review of the occurrence of this tumor in the nasal cavity.**

**Key words:** cellular leiomyoma; nasal cavity

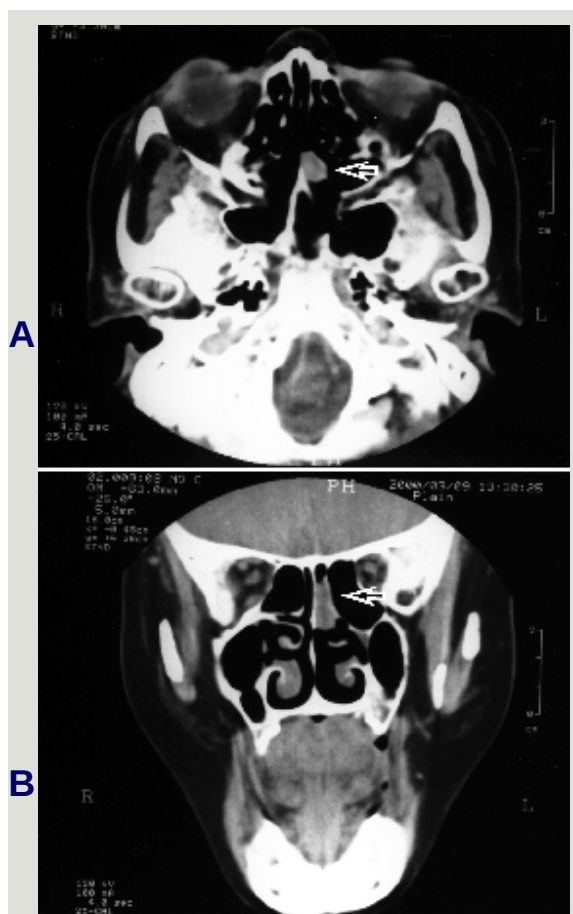
Leiomyoma is a benign smooth muscle tumor found mainly in the uterus, skin, gastrointestinal tract, deep soft tissues, peritoneum and other sites. Enzinger and Weiss (1995) reported that 95% of leiomyoma (7,748 cases) were located in the female genitalia, 3% in the skin and the remainder in other sites. They are quite unusual in the nasal cavity and paranasal sinuses, and a search of the literature revealed only 23 reports (Maesaka et al., 1966; Ram, 1971; Kotaka and Furiya, 1973; Schwartzman and Schwartzman, 1973; Timirgaleev, 1973; Wholfowitz and Schuman, 1973; Fu and Perzin, 1975; Nall et al., 1997; MacCallley et al., 1978; Papavasiliou and Micheals, 1981; Lijovetzky et al., 1985; Daisley, 1987; Hanna et al., 1988; Harcourt and Gallimore, 1988; Tang and Tse, 1988; Nam et al., 1989; Barr et al., 1990; Ragbeer and Stone, 1990; Sawada, 1990; Van Ingen et al., 1991; Khan et al., 1994; Ardekian et al., 1996; Llorente et al., 1996).

We report the clinical and histological features of a rare case of the intranasal leiomyoma including its immunohistochemistry.

### Patient report

#### Clinical Summary

A 72-year-old Japanese woman was admitted to a hospital with a history of temporal epistaxis. She had no other symptoms such as headache, pain, nasal discharge or anosmia. Her past medical history showed only bronchial asthma. On initial physical examination, a mass measuring  $1.0 \times 2.0$  cm was located on the nasal septum of the left nasal cavity. A computed tomography scan of the head showed a solid mass measuring  $0.8 \times 1.0 \times 2.0$  cm in the left nasal cavity (Fig. 1). Angiography revealed tumor stainings (Fig. 2). Selective embolization of the feeding artery was performed. Resection of the tumor by endoscopic nasal surgery was performed. Postoperative recovery was uneventful with the exception of slight bleeding. She was discharged from the hospital, and there has been no recurrence since.



**Fig. 1.** Computerized tomography sections of axial (A) and coronal (B) views of the tumor (arrows) seen in the left nasal cavity.



**Fig. 2.** Preoperative angiography showing tumor stainings (arrow) from a left internal maxillary artery.

### Pathologic Findings

On gross examination, the resected specimen consisted of a grayish-pink tissue measuring  $1.0 \times 1.5 \times 2.0$  cm. Microscopically, the mass consisted of spindle cells which lay in the submucosa and was partially covered by non-keratinizing stratified squamous epithelium. The cellularity of the tumor was high. The cells had blunt-ended oval nuclei and minimal nuclear pleomorphism (Fig. 3). No mitotic figures were observed.

For confirmation, an immunohistochemical study was performed. The tumor cells were negative for epithelial membrane antigen, cytokeratin, and S-100, but positive for vimentin and alpha smooth muscle actin (Fig. 4).

### Discussion

We diagnosed this case as cellular leiomyoma because of its histology and the strongly positive myogenic marker (alpha smooth muscle actin). Differential diagnosis included angiofibroma, epithelioid leiomyoma, hemangiopericytoma and schwannoma. Immunohistochemically, angiofibroma and schwannoma were not probable. Because most of the tumor cells had a spindle shape, showing a fascicular pattern, leiomyoma was probable rather than epithelioid leiomyoma or hemangiopericytoma.

To the best of our knowledge, there have been previously only 23 reported cases of leiomyoma involving the nasal cavity and paranasal sinuses (Table 1) (Maesaka et al., 1966; Ram, 1971; Kotaka and Furuya, 1973; Schwartzman and Schwartzman, 1973; Timirgaleev, 1973; Wholfowitz and Schmaman, 1973; Fu and Perzin, 1975; Nall et al., 1997; MaCaffley et al., 1978; Papavasiliou and Micheaels, 1981; Lijovetzky et al., 1985; Daisley, 1987; Hanna et al., 1988; Harcourt and Gallimore, 1988; Tang and Tse, 1988; Nam