The Journal of Laryngology and Otology
November 1988. Vol. **102.** pp. 1044–1046

Nasal lipoma

J. Mark Preece, Donald B. Kearns, M.D., Jean K. Wickersham, M.D., Andrew R. Grace, F.R.C.S., and C. Martin Bailey, B.Sc., F.R.C.S., (London)

Introduction

Congenital nasal masses are rare entities that may have more serious implications than are readily apparent. Pre-operative evaluation with a CT scan is imperative to rule out any intracranial connection.

We present a patient with separate and distinct nasal and corpus callosum lipomas. Although nasopharyngeal and maxillary antral lipomas have been described, we can find no mention of nasal cavity or nasal septum lipomas in the literature.

Case report

L. C. presented to The Hospital for Sick Children, Great Ormond Street, at one month of age with a mass protruding from the left nostril which had not changed since birth. The mass was skin covered, blocked the nasal airway and arose from the septum. It remained constant in size when the patient cried. Other anomalies noted on admission included mesodermal dysgenesis of the anterior segment of the left eye and a notched upper lip.

A CT scan of the head demonstrated a soft tissue mass of the septum (Fig. 1), and a lipoma of the corpus callosum (Fig. 2), with no connection between the two. An isohexol cisternogram showed no connection between the subarachnoid space and the nasal mass.

Examination of the nose under anaesthesia revealed a large skin covered mass arising from the anterior part of the septum on the left. Excision of the extranasal portion of the mass was interpreted histologically as a lipoma (Fig. 3).

A definitive resection of the septal lipoma was performed through a Weir's incision when the child reached 15 months of age. The mass was dissected complete from the septal mucoperichondrium (Fig. 4). Histopathological examination confirmed the diagnosis of lipoma.

Discussion

Lipomas are benign, slow growing neoplasms composed of adult fat cells grouped in lobules by vascular connective tissue septa. Involvement of the head and neck, despite the general prevalence of lipomas, is relatively low in frequency. In this region, as elsewhere, the lipoma is primarily a neoplasm of the subcutaneum (Batsakis, 1979).

Lipomas of the nasal cavity, paranasal sinuses and nasopharynx are quite rare. This probably reflects the paucity of normal adipose tissue in this area. In a review of 256 non-epithelial tumours of these organs, only two showed fatty tissue differentiation. One of these was a lipoma of the maxillary sinus and the other a liposarcoma of the maxillary antrum (Fu and Perzin, 1977).

Goldstein (1915) and Silbernagel (1938) reported lipomas involving the maxillary antrum. One patient presented with facial pain and the other with nasal blockage.

Four nasopharyngeal lipomas have been described, three in adults and one in a neonate (Chernaivskii, 1967; Puri *et al.*, 1979; Oddie and Applebaum, 1982; Grybauskas and Shugar, 1983). Most presented as polypoid or pedunculated masses, with a paucity of symptoms.

Lipomas within the central nervous system constitute less than 0.1per cent of all intracranial tumours. Most are located in the region of the corpus callosum (Graham, 1985). After being described by von Rokitansky (1856), corpus callosum lipomas continued to be observed incidentally at necropsy. Sosman (1939) was the first to make the diagnosis using plain skull radiographs. A radiolucent region surrounded by curvilinear calcification along the margins is seen in the frontal area and is best demonstrated on a lateral skull film. This calcification is typically punctate in the capsular region but may be atypical and resemble tumour calcification. CT scans demonstrate a shell-like calcification which outlines an area with density coefficients lower than that of cerebrospinal fluid (Nabawi *et al.*, 1981).

The pathogenesis of corpus callosum lipomas continues to be debated. It is frequently reported that they are congenital and are most accurately described as lipomatous hamartomas (Budka, 1974). Zettner and Netsky (1960) believe that callosal lipomas are not due to dysraphism alone, but are the result of maldifferentiation of meningeal tissue. This may be genetically linked to dysraphism.

Corpus callosum lipomas are usually asymptomatic, but can present with seizures, signs of increased intracranial pressure, dementia, hemiparesis or diencephalic disturbances (Tahmouresie *et al.*, 1979; Gerber and Plotkin 1982). Corpus callosum lipomas have not been previously reported with an associated intranasal lipoma. Approximately 48 per cent of callosal lipomas are associated with agenesis of the corpus callosum and multiple intracranial lipomas have been reported (Zettner and Netsky, 1960). Dysraphic anomalies have also been found in patients with callosal lipomas (Tahmouresie *et al.*, 1979; Zettner and Netsky, 1960).

Surgical resection of callosal lipomas has not been gratifying. Technical difficulties have been encountered with the vascularity of the tumour, incorporation of the anterior cerebral arteries into the tumour and adherence of the capsule to the surrounding brain. A shunt procedure may be of benefit if hydrocephalus is present. Seizures, which are the most common symptom, should be treated with anticonvulsants (Kazner *et al.*, 1980).

Lipomas must now be added to the differential diagnosis of congenital nasal masses, which include encephalocoeles, meningocoeles, gliomas, dermoids, dermal sinuses and haemangiomas (Bradley and Singh, 1982). As with all of these lesions, pre-operative radiological assessment is imperative. Complete surgical excision of the nasal lipoma should be curative.

https://doi.org/10.1017/S0022215100107224 Published online by Cambridge University Press

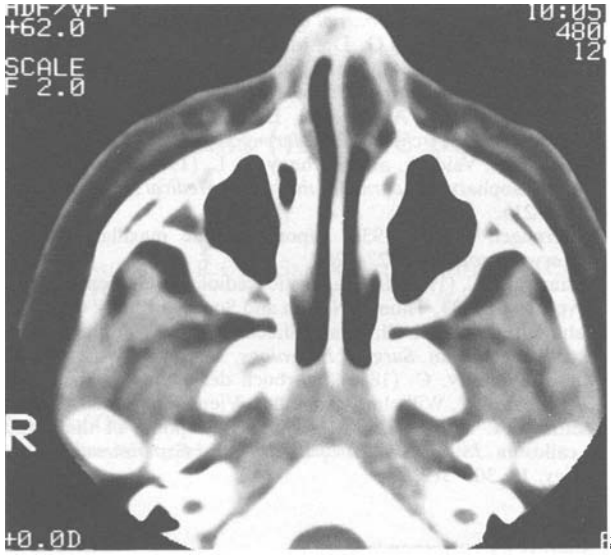


FIG. 1

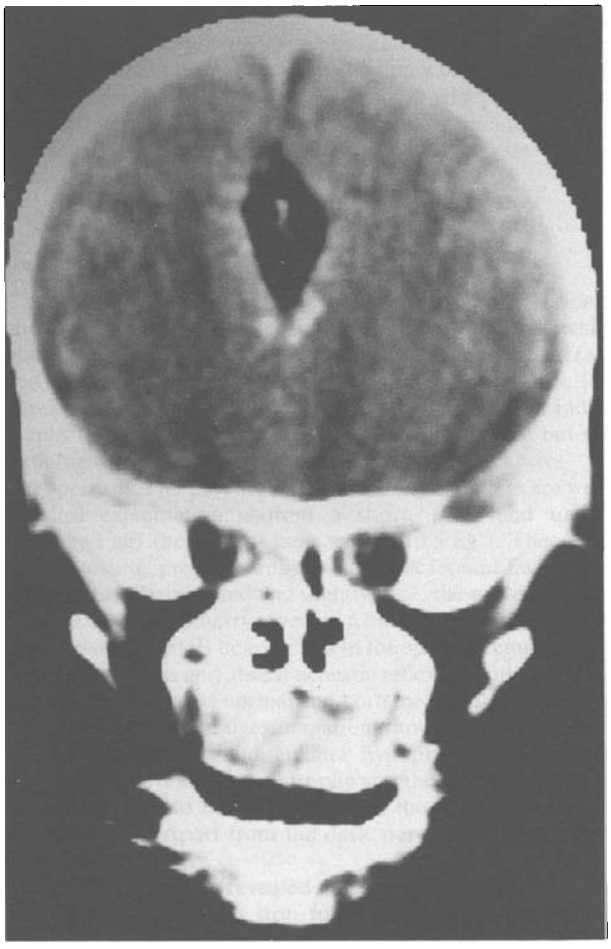


FIG. 2

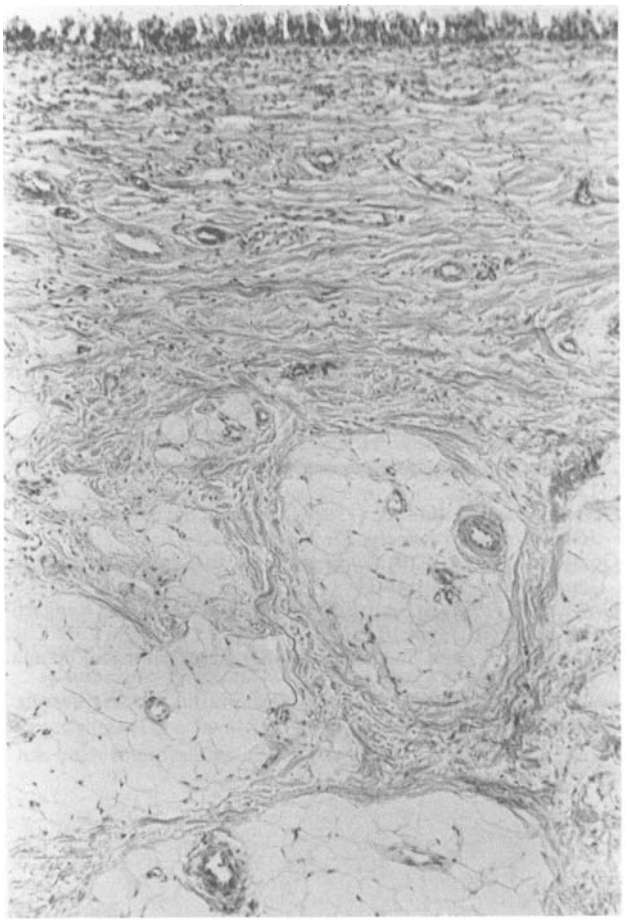


FIG. 3

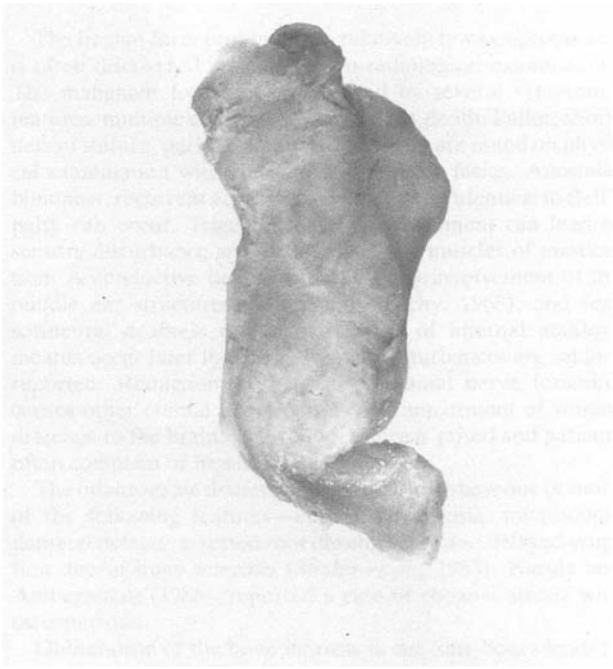


FIG. 4

FIG. 1
Axial CT scan demonstrating a soft tissue mass of the nasal septum.

FIG. 2
Coronal CT scan revealing a corpus callosum lipoma.

FIG. 3
Photomicrograph of the septal lipoma.

FIG. 4
Photograph of the resected lipoma specimen.

https://doi.org/10.1017/S0022215100107224 Published online by Cambridge University Press

Acknowledgements

We would like to thank the Radiology Department at the Hospital for Sick Children for help in the interpretation of the scans.

References

Batsakis, J. G. (1979) Tumors of the Head and Neck, 2nd edn, Williams and Wilkins, Baltimore, pp. 361-362.

Bradley, P. J. and Singh, S. D. (1982) Congenital nasal masses: diagnosis and management. *Clinical Otolaryngology,* **7:** 87–97.

Budka, H. (1974) Intracranial lipomatous hamartomas. *Acta Neuropathologica (Berlin),* **28:** 205–222.

Chernaivskii, G. A. (1967) Lipomatous polyps of the nasopharynx in a 2-day-old infant. *Exerpta Medica 20 (Section 11),* Abstract 262.

Fu, Y. S. and Perzin, K. H. (1977). Non-epithelial tumors of the nasal cavity, paranasal sinuses and nasopharynx. *Cancer,* **40:** 1314–1317.

Gerber, S. and Plotkin, R. (1982) Lipoma of the corpus callosum. *Journal of Neurosurgery,* **57:** 281–285.

Goldstein, M. A. (1915). Lipoma of the maxillary antrum. *Laryngoscope,* **25:** 142-144.

Graham, D. (1985) In Neurosurgery (Wilkins, R. H. and Rengachary, S. S., eds.), pp. 1036–1038, McGraw Hill, New York City.

Grybauskas, V. and Shugar, M. (1983) Nasopharyngeal lipoma. *Laryngoscope,* **93:** 362–363.

Kazner, E., Stochdorph, O., Wende, S. and Grumme, T. (1980). Intracranial lipoma. *Journal of Neurosurgery,* **52:** 234–235.

Nabawi, P., Dobben, G. D., Mafee, M. and Espinosa, G. A. (1981). Diagnosis of lipoma of the corpus callosum by CT in five cases. *Neuroradiology,* **21:** 159-162.

Oddie, J. W. and Applebaum, E. L. (1982). Lipoma of the nasopharynx. *Archives of Otolaryngology,* **108:** 57.

Puri, N. D., Vaid, A. and Sawhney, K. L. (1979) Fibrolipoma of the nasopharynx. *Journal of the Indian Medical Association,* **72:** 215–216.

Silbernagel, C. E. (1938) Lipoma of the maxillary antrum. *Laryngoscope,* **48:** 427–428.

Sosman, M. C. (1939) In Diagnostic Radiology (Golden, R., ed.), vol. 1, page 33, Thomas Nelson and Son, New York City.

Tahmouresie, A., Kroll, G. and Shucart, W. (1979) Lipoma of the corpus callosum. *Surgical Neurology,* **11:** 31–34.

von Rokitansky, C. (1856) Lehrbuch der Pathologischen Anatomie, vol. 2, Wilhelm Braumuller, Vienna, page 468.

Zettner, A. and Netsky, M. G. (1960) Lipoma of the corpus callosum. *Journal of Neuropathology and Experimental Neurology,* **19:** 305–319.

Address for correspondence:
C. Martin Bailey, BSc, FRCS
Department of Otolaryngology,
Hospital for Sick Children,
Great Ormond Street,
London WC1N 3JH.

https://doi.org/10.1017/S0022215100107224 Published online by Cambridge University Press