CASE REPORT

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Nodular fasciitis of the infraorbital rim in an adult patient*

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SUMMARY

Statement of the problem: *Nodular fasciitis is a fibroblastic proliferation in which nodules develop rapidly. It most commonly affects the extremities followed by the trunk and occasionally the head and neck.*

Materials & methods: *Case report.*

Results: *A 32-year-old male was seen with a 4-month history of a painless infraorbital mass. On examination, a swelling was palpable anterior to the left infraorbital rim. There was some depression of the left corner of his mouth. Computerized tomography showed soft tissue swelling anterior to the left maxillary antrum which, also, appeared to be diseased. The mass was thought to be malignant owing to the short history, associated facial asymmetry and maxillary sinus opacity. Excisional biopsy was performed. Histology proved it to be nodular fasciitis.*

Conclusions: *The importance of otolaryngologists being aware of this entity is stressed. Simple excision, as tissue sparing as possible, is the treatment of choice.*

Key words: nodular fasciitis, head, neck, face

INTRODUCTION

Nodular fasciitis (NF) is a common, benign proliferation of fibroblastic cells, many of which are myofibroblasts that develop in soft tissue (Enzinger et al., 1995). This idiopathic condition is often mistaken for a malignant neoplasm, notably fibrosarcoma, because of its rapid growth, rich cellularity and mitotic activity. NF affects all age groups with equal incidence in males and females. The lesion most commonly presents as a solitary nodule that grows rapidly for one or two weeks and then stabilises reaching a final diameter of 2 cm or less. It is not uncommon to find the nodule in the face in any age group (Enzinger et al., 1995). We are presenting this case because of its peculiarity and the relationship to the maxillary antrum, as indicated on the CT scan.

CASE REPORT

A 32-year-old male presented to the Ear Nose and Throat Out Patient Department with a 4-month history of a painless, left infraorbital rim swelling. There was no history of trauma or insect bite. The swelling was starting to interfere with the vision in his left eye. Examination revealed a non-tender 1x2cm firm immobile swelling anterior to the left infraorbital rim. There was some deviation of the left side of his nose and also some depression of the left corner of his mouth. There was no lymphadenopathy and no infraorbital paraesthesia or anaesthesia. Nasendoscopy showed a purulent discharge in the middle meatus but otherwise no abnormality of the lateral wall of the nose on the left side. Fine needle aspiration of the lesion was inconclusive. A CT Scan demonstrated soft tissue swelling anterior to the left maxillary antrum with no bony exostosis (Figure 1). There was sinus disease in the left maxillary and ethmoid sinuses with extension into the nasal cavity (Figure2).

A preoperative clinical diagnosis of fibrosarcoma or adenocystic carcinoma was made and the lesion was excised through a left sublabial incision. The skin of the cheek was tunnelled to gain full access to the infraorbital rim and the hard irregular mass sharp-dissected entire, from between the corium of the skin and the periosteum of the zygoma. A biopsy was also taken from the left maxillary antrum via a caldwell-luc approach, and a clear sinus washout was obtained. Histopathology of the sinus aspirate was normal. There was no

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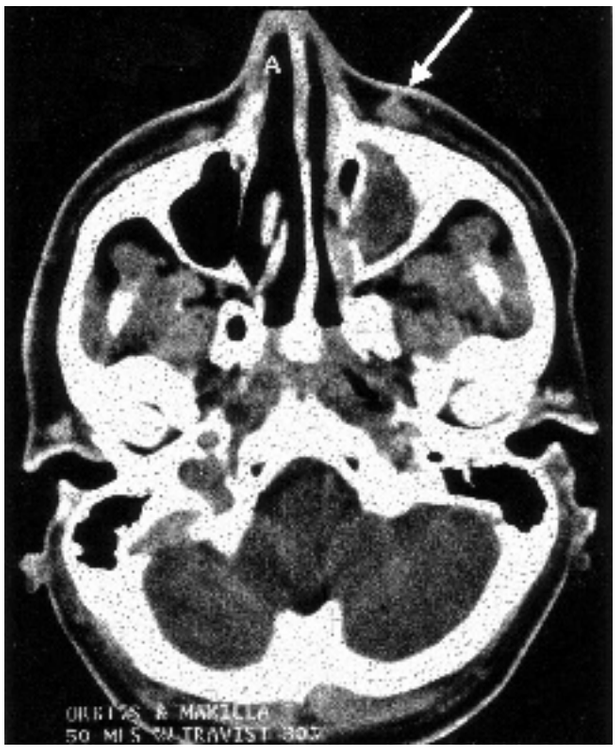

Figure 1. CT scan of the orbits and maxillary sinuses showing a 1x1cm soft tissue swelling anterior to the left maxillary antrum.

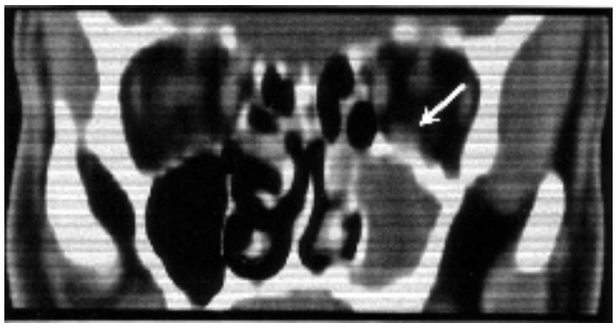

Figure 2. CT scan sinuses (coronal view). White arrow demonstrates swelling on the left infraorbital rim. The left maxillary antrum also appeared to be diseased.

extension of the mass into the maxillary antrum, nasal cavity or infraorbital floor. There were no post-operative complications.

The portions of the surgical specimen were soft and grey, the largest measured 0.5cm in its maximum dimension. Microscopically, the lesion was moderately cellular and consisted of short irregular bundles and fascicles of fibroblasts which appeared spindle shaped like plump immature cells with minimal variation in size and shape, amid scattered clefts (Figure 3). The cells had oval hyperchromatic nuclei with one or more small nucleoli. Mitotic figures were absent. Focal

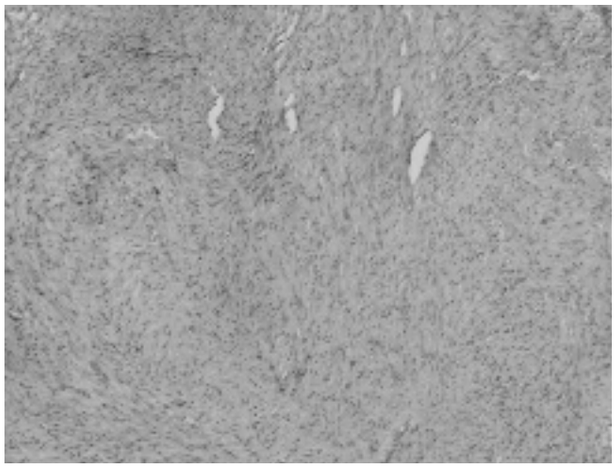

Figure 3. Nodular fasciitis: fascicles of cells with occasional clefts; x 20.

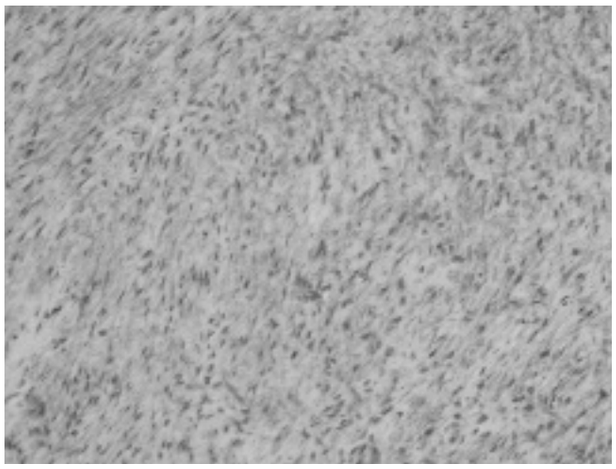

Figure 4. Nodular fasciitis: Wavy spindle cell proliferation with hypo and hypercellular areas on a myxoid background; x 160.

myxomatous stromal changes, typical of nodular fasciitis, were also present (Figure 4). The lesion infiltrated the adjacent skeletal muscle bundles and fat. Most of the proliferating spindle cells were positive for Alpha smooth muscle actin and Vimentin. S100 protein and Desmin were negative. Six months after review, the skin of the infraorbital rim healed without pucker or blemish.

DISCUSSION

NF is a pathologic entity defined by the World health Organization as a benign and probably reactive fibroblastic growth extending as a solitary nodule from superficial fascia into subcutaneous tissue (Carr et al., 1998). This case caused clinical and radiological concern because, firstly, of the asymmetry of the mouth and the nose, assumed to be due to paresis of the levator labii superioris alaeque nasi muscle, and, secondly, the opacity of the left maxillary antrum on the CT Scan. However, the histopathological findings of the biopsy

described above showed the lesion to be NF. This condition was initially recognised as a distinct entity by Konwaler et al. (1955). It is one of the commonest soft tissue lesions and has occasionally been recorded in the ENT literature to highlight the risk of it being confused with malignancy (Majudmar, 1983). Soule first used the term proliferative fasciitis as a synonym for nodular fasciitis (Soule, 1962). Most cases present as tender, rapidly growing nodules arising from subcutaneous fascial structures on the trunk and upper extremities. The terms "pseudosarcomatous fasciitis" and "pseudosarcomatous fibromatosis" sometimes applied to this lesion allude to the alarming clinical presentation and histological appearance of this spindle cell lesion. The term spindle cell lesion or tumor (sarcomatoid carcinomas, nodular fasciitis, and fibrosarcoma) is a purely descriptive one and if applied without further information is useless as a guide to therapy and prognosis (Batsakis et al., 1982). In a retrospective review of all tumours reported as "soft tissue sarcoma" in Sweden between 1958 and 1963, Dahl and Angervall found that 10% of all tumours should have been classified as "pseudosarcomas", the majority of these being cases of NF (Dahl et al., 1977). NF is often suitable for fine needle aspiration (FNA), but few reports of NF diagnosed cytologically have been published (Matusic et al., 2002). Numerous cases of overly aggressive or radical treatment arising from mis-diagnosis were noted. A similar benign lesion of the connective tissue that can be highly suspicious on clinical presentation is solitary xanthoma (Swanston et al., 1986). The exact cause of this proliferative process is unknown. There is little doubt that it is a self-limiting reactive process, rather than a true neoplasm. Although excisional biopsy is curative, the nodules will often resolve spontaneously. However, the histologic appearance of a pleomorphic spindle cell neoplasm with frequent mitotic figures may raise concern of a more malignant neoplasm and lead to unnecessary and aggressive treatment (Meffert et al., 1996). Multiple pathologic reviews are frequently conducted in an attempt to distinguish nodular fasciitis from other lesions (DiNardo et al., 1991).

When NF occurs in an unusual location, such as on the head and neck, it can often pose diagnostic problems. FNA and modern imaging techniques may help in the diagnosis and prevent unnecessary surgery for a self-limited condition (Meffert et al., 1996). The importance of otolaryngologists being aware of this entity is stressed. Simple excision, as tissue sparing as possible, is therefore the treatment of choice (Dahl et al., 1980).

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