Pergamon

Oral Oncol, Eur J Cancer, Vol. 30B, No. 3, pp. 221–222, 1994

0964–1955/94 $7.00 + 0.00

Case Report

Oral Nodular Fasciitis. A Case Report

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A rare case of nodular fasciitis arising in the buccinator muscle sheath in a 76-year-old patient is reported. Nodular fasciitis is a benign proliferation of fibroblasts, often mistaken for a sarcoma because of its rapid growth, rich cellularity and high mitotic activity. Although the cause of nodular fasciitis is unknown, it is likely that the fibroblastic proliferation is due to local injury or an inflammatory process.
Oral Oncol, Eur J Cancer, Vol. 30B, No. 3, pp. 221–222, 1994.

INTRODUCTION

NODULAR FASCIITIS is a tumour-like lesion which, although rare, is often mistaken for a sarcoma, since the lesion is rapidly growing [1]. Nodular fasciitis was first reported by Konvaler *et al.* in 1955 [2]. It is common in subcutaneous fascia, usually of the upper extremity and trunk. Stout in 1961 [3] reported "pseudosarcomatous fasciitis" in parotid gland, trachea and female mammary gland but it is rare in the head and neck region [4]. Nodular fasciitis of the oral soft tissues is very rare [5–8].

Nodular fasciitis presents as a rapidly growing mass or nodule, sometime with pain or tenderness. Usually it is a solitary lesion. Nodular fasciitis is most common in adults between 20 and 50 years of age and it is rare in people older than 60 years [4]. Males and females are equally affected.

Grossly the lesion consists of soft tissue which measures 1.5–3.0 cm at its greatest diameter; a lesion exceeding 5 cm is unlikely to be a nodular fasciitis [1].

Pathologically, it is composed of short irregular bundles and fascicles of fusiform cells which resemble plump fibroblasts with vesicular nuclei. The nuclei show minimal pleomorphism and no hyperchromasia [5]. Mitotic figures may be frequent but they are morphologically normal [4].

CASE REPORT

A 76-year-old woman was admitted in October 1991 with a submucosal mass arising in the inner aspect of the right cheek (Figs 1, 2). She had been aware of the mass for 6 months.

A general physical examination revealed no significant abnormalities. The mass was excised via an intraoral approach

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Received 12 June 1993; provisionally accepted 15 June 1993; revised manuscript received 10 Aug. 1993.

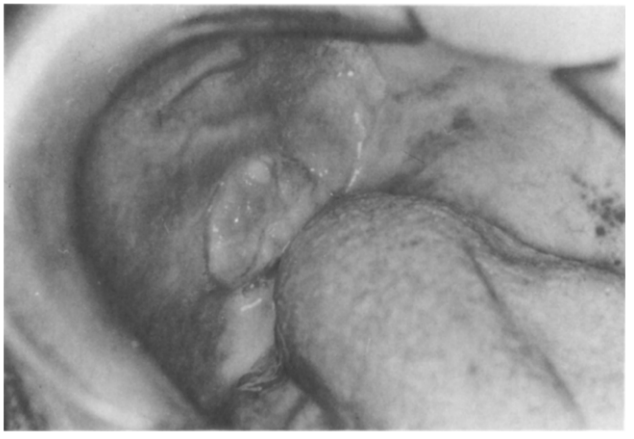

Fig. 1. The neoplasm arising on the right cheek covered by normal mucosa.

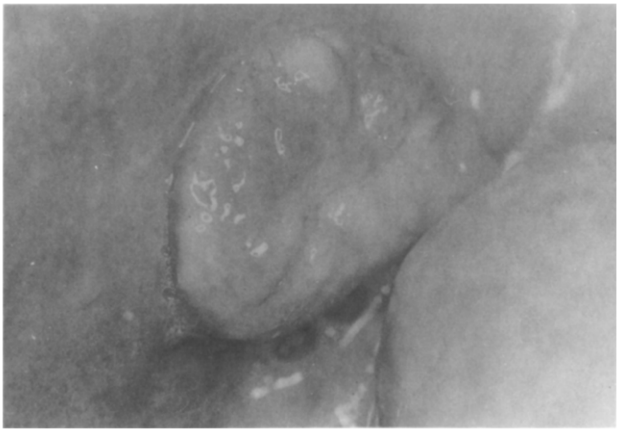

Fig. 2. Close-up view of the neoplasm arising on the right cheek covered by normal mucosa.

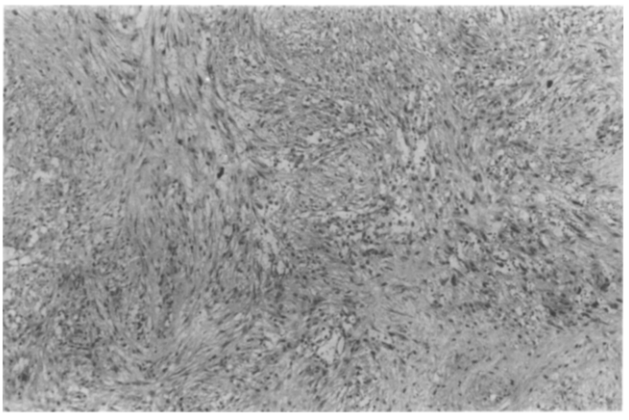

Fig. 3. Lesion showing fascicles. Haematoxylin–eosin (×10).

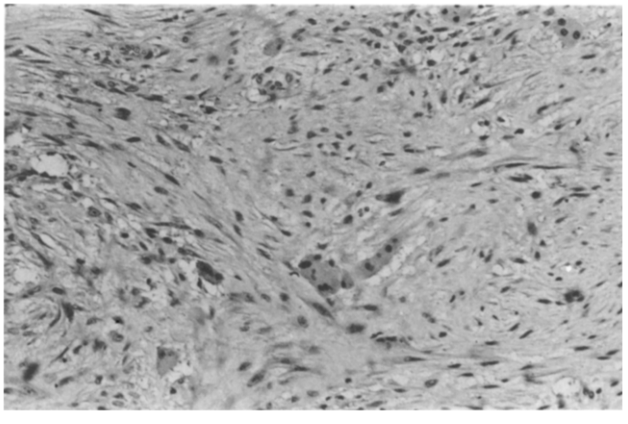

Fig. 4. Mitotic figures may be frequent but are morphologically normal in appearance. Haematoxylin–eosin (×40).

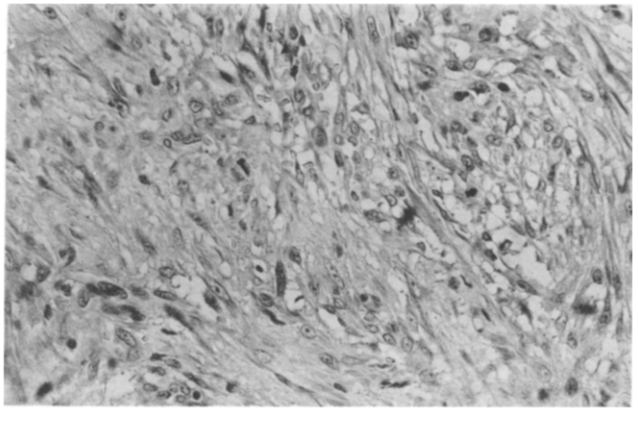

Fig. 5. Dissociating rhabdomyocytes are seen at the periphery of the tumour. Haematoxylin–eosin (×25).

under intravenous sedation and local anaesthesia. The postoperative course was uneventful.

There has been no recurrence during the subsequent 18 months. Grossly, the lesion appeared to be a non-capsulated mass that measured 1.8 cm across its greatest diameter. The cut surface was generally firm and grey–white.

Microscopically, the lesion consisted of bundles of immature appearing fibroblasts with storiform pattern (Fig. 3). The matrix, rich in mucopolysaccharides showed myxoid appearing areas which readily stained with alcian blue.

The cells had vesicular nuclei with prominent nucleoli, and there were occasional mitoses (Fig. 4). Inflammatory cells were sparse and consisted of small groups of lymphoid cells. The lesion infiltrated striated muscle and residual rhabdomyocytes could be found in the peripheral areas (Fig. 5). Microscopically the differential diagnosis included lesions such as undifferentiated carcinoma, pleomorphic adenoma, neurofibroma and neurilemmoma. Immunostaining for cytokeratins and S100 protein were both negative.

DISCUSSION

Nodular fasciitis is rare in oral soft tissues. We have observed only 1 case in our department between 1981 and 1992 and a literature review elicited only 4 cases [5–8].

The rapid growth rate can easily cause suspicion of carcinoma, sarcoma or other malignancy and histologically the infiltration of surrounding tissue, high cellularity and presence of mitotic activity may also be deceptive. Such histological features are particularly striking in young persons with nodular fasciitis.

Allen [9] defined four typical features of nodular fasciitis: (1) spindle-shaped fibroblasts arranged in long fascicles that can be curved or whirled; (2) small clefts that can separate fibroblasts; (3) a few extravasated erythrocytes; (4) mucoid interstitial ground substance.

Immunostaining for cytokeratins and S100 protein, both negative in nodular fasciitis, can be useful in differentiating between a lesion such as an undifferentiated carcinoma, pleomorphic adenoma, neurofibroma and neurilemmoma.

The aetiology of nodular fasciitis is unknown; it could be a reparative response to injury, a possibility supported by the localisation. Local excision is the treatment of choice and no recurrences have been described.

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