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Short communication

Benign fibrous histiocytoma in the condylar process of the mandible: Case report

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Abstract

A 48-year-old man was referred for investigation of an asymptomatic radiolucent lesion in the mandible. The margin was partly irregular, and there was no peripheral sclerosis. The tumour was composed of histiocytic cells, spindle cells, and fibrous tissue. Immunohistochemical analysis showed that the tumour cells stained for CD68 and vimentin, and not for cytokeratin, smooth muscle actin, S-100 protein, or CD34. The tumour was therefore diagnosed as a benign fibrous histiocytoma.

Keywords: Benign fibrous histiocytoma (BFH); Bone; Mandible; Condylar process

Benign fibrous histiocytoma is a mesenchymal tumour that occurs predominantly on the skin of extremities,[1] as well as in bone including femur, tibia, and ilium.[2,3] However, it is rare in the jaw.[4–8] We report a patient with one in the condylar process of the mandible.

Case report

A 48-year-old man had a radiograph before a tooth extraction, and a unilocular radiolucent lesion with a partly irregular margin at the right condylar process was found (Fig. 1A). No symptoms had been noted before. A computed tomogram (CT) showed expansion of the condylar process and thinning of the cortical bone (Fig. 1B). However, the fluorodeoxyglucose positron tomograph (FDG-PET) showed no specific uptake in the body.

He was operated on under general anaesthesia, and the cortical bone of condylar process was found to be perforated; the tumour was excised after removal of the cortical bone. The tumour was a single solid mass 14 mm × 11 mm × 8 mm with no fibrous capsule. Histological examination of frozen sections showed proliferating histiocytic cells with no malignant findings. Additional curettage of the irregular bone showed that the tumour was composed of foamy histiocytic cells, spindle cells, and fibrous tissue with hyalinisation (Fig. 2). Immunohistochemical staining showed that the tumour cells stained for CD68 (Fig. 3) and vimentin, but not for cytokeratin, smooth muscle actin, S-100 protein, and CD34.

Discussion

Benign fibrous histiocytoma in the jawbone is uncommon and one has been recorded in the maxilla and four in the mandible, to our knowledge.[4–8] Buccal swelling was the prominent sign in the mandible and a multilocular or soap-bubble-like radiolucent lesion involving the ramus.[5–8] In contrast, our case had no symptoms and the tumour was identified incidentally from radiographs. However, as the lesion had an irregular margin, it was thought to be a metastatic or primary mali-

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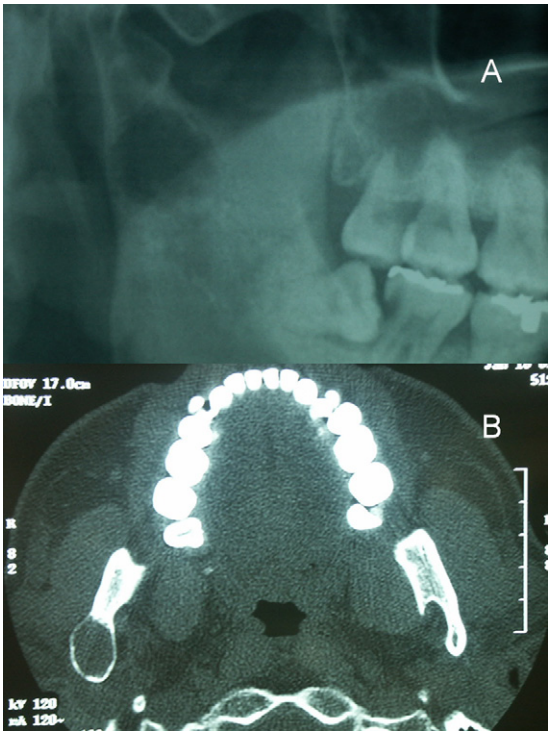

Fig. 1. (A) Panoramic radiograph showing a unilocular radiolucent lesion in the right mandibular condyle. (B) Computed tomogram showing buccolingual expansion of the thinning cortical bone.

gnant lesion, and the finding of the FDG-PET and the frozen section diagnosis excluded malignancy.

Non-ossifying fibroma is an important tumour to be differentiated from ours, because it is indistinguishable histologically.[4] In our case, proliferation of histiocytic cells, shown both histologically and immunohistochemically, was

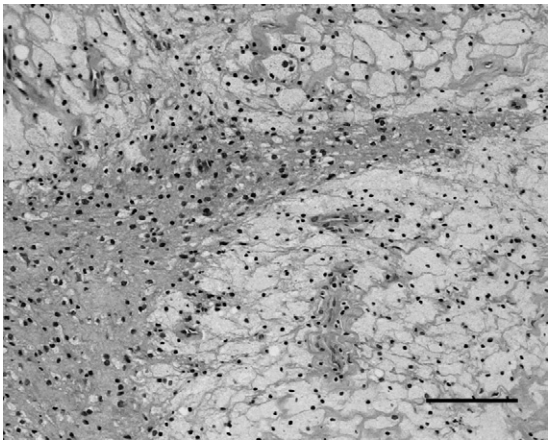

Fig. 2. Histological findings showing proliferated foamy histiocytic cells and fibrous tissue (haematoxylin and eosin, bar: 100 μm).

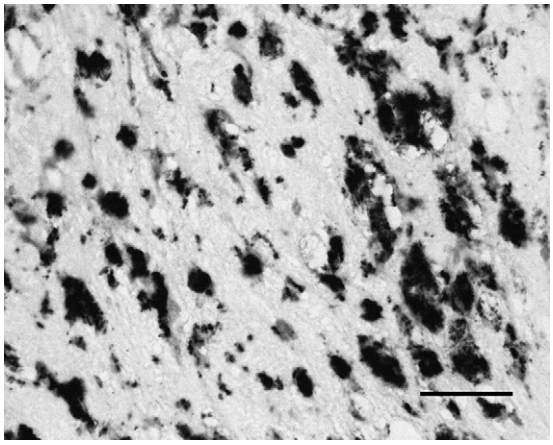

Fig. 3. Immunohistochemical analysis showing the tumour cells stained for CD68 (bar: 200 μm).

a predominant feature in differentiating the tumour from a non-ossifying fibroma. Radiographic examination showed no well-defined margin of the tumour, so we reached our diagnosis even though we did not see a typical striform pattern with spindle cells.

As no fibrous encapsulation was generated, complete removal of the tumour was essential to prevent recurrence.[9] No recurrence has been found after a year, but a long-term follow-up is essential.

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