Case Report

Internal Carotid Artery Aneurysm with Prominent Calcification : Report of a Case

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A case of internal carotid artery aneurysm with prominent calcification is presented. A 73-year-old woman came to Okayama University Hospital afflicted to Dental School complaining of dry mouth. The panoramic radiograph and the lateral view showed an oval radiopaque body with a smooth margin at the posterior border of the right mandibular ramus. The CT scan showed a spherically-shaped calcification about 3 cm in diameter with liquid content lying medial to the right parotid gland and posterior to the right maxillary bone. Follicular adenoma of thyroid was also found by the CT examination. But the correlation between the calcified body and the tumor was denied by the laboratory data and the histology of the tumor. When the results of the 3D-CT view, the patient's advanced age and the history of renal disease were considered together, the calcified body was thought to be the calcified aneurysm of the internal carotid artery induced by arteriosclerosis. Though it is quite rare for the image of a calcified aneurysm to appear on the radiograph incidental to routine dental radiographic examination, the possibility of a calcified aneurysm also should be taken into consideration whenever localized calcifications are detected.

Introduction

Pathologic calcifications and ossifications of the soft tissues in the maxillo-facial region generally have been represented by salivary calculus (sialolithiasis), phleboliths, calcified lymphnodes, cysticercosis, myositis
ossificans, calcified acne lesions, multiple miliary osteoma of the skin and calcification of arteries\(^1\). Though it is not unusual for the image of salivary calculus to appear on the radiograph incidental to a routine dental radiographic examination, the occurrence of calcification of arteries is very rare.

A case of internal carotid artery aneurysm with prominent calcification is presented and the usefulness of CT, especially 3D-CT is emphasized to confirm the relationship between the internal carotid artery and the calcified mass.

**Case Report**

A 73-year-old woman visited Okayama University Hospital afflicted to Dental School on September, 9th, 1989, with the chief complaint of dry mouth. There was no other symptom at the neck region. She had suffered from cholecystic disease 30 years ago and renal disease one year ago.

The panoramic radiograph and the lateral view showed an oval radiopaque body with a smooth margin and with a heterogeneously radiolucent center at the posterior border of the right mandibular ramus area (Fig.1). Exact examination by occlusal radiographs showed many small radiopaque bodies measuring 1-3 mm in diameter at the skin of both cheek areas and these were considered as multiple miliary osteomas of the skin (Fig.2). Further CT examination showed that the egg-shell like calcification with radiolucent center measured about 3 cm in diameter at the mandibular ramus region, medial to the right parotid gland and posterior to the right maxillary bone. The CT number of the calcified body was about 500 HU and the radiolucent center was about 15 HU suggesting the liquid content (Fig.3). The 3D-CT view showed the spherical calcified body with some defects (Fig.4). Furthermore, a contrast enhanced CT scan was performed and 3D images of the enhanced blood vessels were reconstructed to examine the relationship between the calcified body and the internal carotid artery. The 3D images revealed that the calcified body was continuously linked to the right internal carotid artery (Fig.5). CT findings also demonstrated the other calcified areas at both internal carotid arteries with normal diameter (Fig.6).

![Fig. 1 Panoramic radiograph (A). Lateral view (B). An oval radiopaque body at the posterior margin of the right mandibular ramus (arrow heads).](image-url)