รายงานผู้ป่วย

Oncocytoma of the parotid gland : A light and electron microscopic study.

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A 51-year-old woman presented with a painless mass of the left parotid gland. Light and electron microscopic studies verified the basic nature of the tumor cells as oncocytoma. The eosinophilic cytoplasmic granularity, and the abundance of mitochondria were pathological characteristic features of this rare tumor.

Key words : *Parotid mass, Oncocytoma, Mitochondria.*

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ผู้ป่วยหญิงไทย อายุ 51 ปี มีก้อนโต ไม่เจ็บ บริเวณต่อมพาโรติด จากการศึกษาก้อนดังกล่าวโดยกล้องจุลทรรศน์ และจุลทรรศน์อิเลคตรอน พบว่าเป็นเนื้องอกชนิดออนโคซัยโตมา ซัยโตพลาสม์ติดสีแดงมีลักษณะแกรนูลาร์ และการพบไมโตคอนเดรียจำนวนมากเป็นลักษณะจำเพาะของเนื้องอกชนิดนี้

Oncocytomas are extremely rare, usually benign tumors which may occur in several organs including kidney, adrenal, thyroid, parathyroid, pituitary, and salivary glands.[1] In western countries, this tumor ranges from 0.1 to 2.3% of all primary epithelial salivary gland neoplasms.[2-5] On the other hand, such lesion is uncommon among Asian patients.[3] We described herein a patient who had a painless parotid mass. The light and electron microscopy demonstrated the specific nature of this lesion.

Case Report

A 51-year-old woman presented to Chulalongkorn Hospital in January, 1994 with a 3-week history of a painless lump in the left parotid region. Examination revealed a 2 cm, movable mass which was not adherent to deep tissues. The cervical nodes were not palpated. There was neither facial nor other cranial nerve palsies. Routine laboratory data and chest roentgenogram were within normal limits. Sonogram of the parotid gland showed a 2 cm well defined mass with internal echo in the superficial lobe of the left gland. The patient underwent a left parotid superficial lobectomy and excision of the cervical nodes. The postoperative course was uneventful. She was discharged 1 week after surgery.

The specimen was a yellow brown firm lobulated salivary gland and measured 4.5 x 4 x 2 cm. Sections revealed a well circumscribed 2 x 1.5 cm. gray white mass toward one edge of the gland. Microscopically, the lesion was composed of oval and polygonal cells organized in alveolar and anastomosing cords. The cytoplasm was eosinophilic and granular (Fig.1) Cells with clear cytoplasm, however, were seen focally throughout the mass. Hyperchromatic nuclei and nuclear irregularity were occasionally found. The cervical nodes showed only lymphoid hyperplasia.

Tissue for electron microscopy (JEOL-1210) was washed and refixed in glutaraldehyde, embedded in epoxy resin. Ultrastructurally, the cytoplasm of tumor cells contained almost exclusively of mitochondria which had abnormal sizes and shapes as well as highly varied pattern of cristae (Fig.2). Other organelles such as ribosome, glycogen were sparse. The basal lamina and desmosomes were also observed.

The final pathological diagnosis was a benign oncocytoma of the left parotid gland.

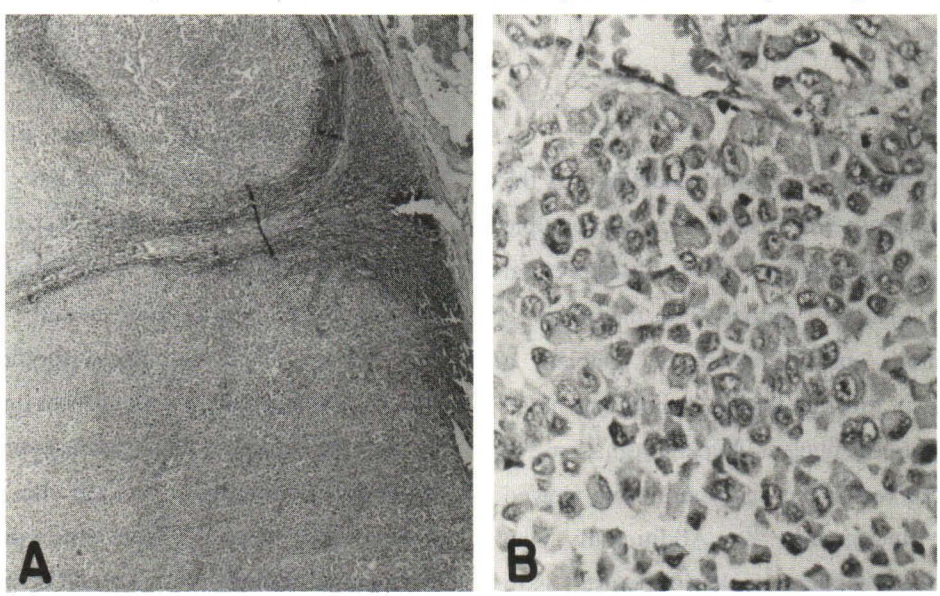

Figure 1A. Photomicrograph showing nodular appearance and sharply demarcated interface between tumor capsule and parenchyma of parotid gland (H&Ex40)

1B. High power view showing large cells with prominent eosinophilic cytoplasmic granularity. Note pleomorphism of nuclei (H&Ex400)

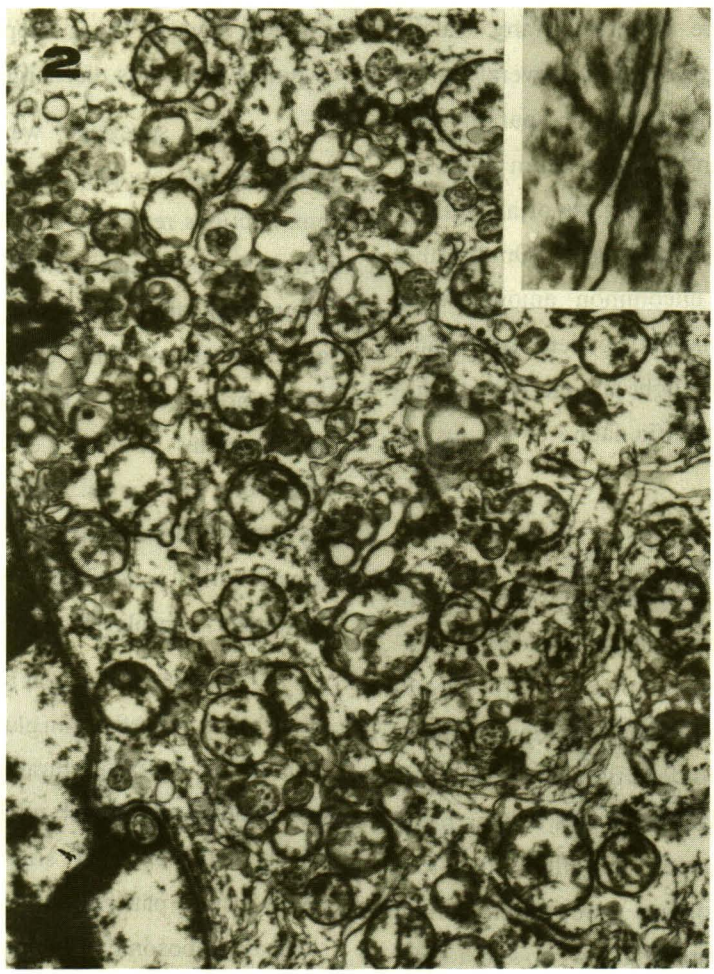

Figure 2. Electron micrograph showing cytoplasm that is filled with numerous mitochondria (x 19,200) Inset showing desmosome (x 100,000)

Discussion

Thepossibility of benign oncocytoma of the parotid gland in this case was suspected on macroscopic and microscopic examination. The ultrastructural findings of abundance of mitochodria, the presence of basal lamina, and desmosomes enabled a precise diagnosis of this rare tumor. It should be noted that some degree of nuclear hyperchromatism or irregularities observed in our case can not be viewed as a basis for malignancy.[3] Additionally, the ultrastructural features alone sould not be used as to whether an oncocytic tumor is malignant or benign because of the ultrastructural similarity between benignity and malignancy.[1,6] Although Johns et al[1] found a high degree of mitochondrial hyperplasia and pleomorphism in malignant oncocytoma, the authors stated that such finding 'has not been shown to be true.'Bizarre mitochondria have been reported in benign lesion as well.[1,3,6] The criteria for the oncocytic carcinoma should include local tissue invasion, distant metastases and large number of mitoses while sudden increase in tumor size or multiple recurrence should be awared with increased suspicion.[1,3] Hence the evalution of either benign or malignant tumor should be based on clinical and or histopathological evidence.

In most series, The tumors occur most often in elderly patients particularly within the sixth

through ninth decades with the average patient age ranging from 60 to 70.4 years.[2-5] Some authors reported a predominant occurrence in woman while other found a nearly equal male to female ratio or male predilection.[2-5] Such conflicting reports are perhaps related to the number of cases which differs from series to series. Based on 88 reported race of the patients, Goode found 90.9% were white, 6.8% were black, and 2.3% were Asian.[3] Our patient appears to be the first reported case of parotid oncocytoma in this country. The parotid gland is the most common site of oncocytoma of the salivary gland. The tumors may occur in the submaxillary gland as well as minor salivary gland including the palatal, buccal mucosa, and the tongue.[7-9]

Clinically, this tumor is indistinguishable from other benign lesions of the salivary gland such as pleomorphic adenoma, Warthin's tumor etc. It usually presents as a single, painless, enlarging mass as observed in our patient.[3] Rarely, the lesion may evoke facial pain or paresthesia when the branches of cranial nerve, particularly, the facial nerve are involved. The accepted treatment of this benign tumor is by superficial parotidectomy with facial nerve preservation possible. Simple enucleation or radiation therapy should be avoided because the lesion may recur after such therapy.[3,10,11]

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