 招 聘 講 演

Diagnostic Problems in Salivary Gland Tumors

(Dept. of Oral and Maxillofacial Pathology,
Armed Forces Institute of Pathology, Wash-
ington, D. C., U. S. A)

Dr. Gary L. Ellis

Diagnostic Problems in Salivary Gland Tumors Polymorphous Low-Grade Adenocarcinoma

Although this is the newest defined salivary gland tumor, investigations indicate that this tumors is the second most common malignant tumor of minor salivary glands. *Lobular carcinoma* and *terminal duct carcinoma* are synonymous terms.

It is essentially limited to minor salivary glands, most commonly in the palate. The palate, lips, and buccal mucosa are involved in about 93% of all cases. Cases have been reported to occur in the major salivary glands as the malignant component of carcinoma ex mixed tumor. This is a slow growing tumor with reported durations ranging from months to as long as 30 years. The size has ranged from 1-6 cm. Most often, a painless swelling is noted that infrequently is associated with bleeding, ulceration, or pain. The tumor most often occurs in the 6th to 8th decades of life. The median age is 60 years. About two-thirds of these cases are in women, which is not much different than the female sex predilection of all salivary gland tumors (61% female, 39% male).

Infiltrative growth, morphologic diversity, and cytologic uniformity characterize them. They often appear well circumscribed, but they are unencapsulated and infiltrate surrounding tissues. The polymorphic nature of these lesions refers to the variety of growth patterns that may be identified within the same lesion and from lesion to lesion, which includes solid, glandular, cribriform, ductal, tubular, trabecular or cystic formations. A single-file pattern commonly occurs at the periphery of the tumor.

Neurotropism (peri-and intraneural) is found in the majority of tumors. Perivascular growth with tumor nests arranged in concentric fashion is typical. Common to all patterns is the uniform, bland appearance of the tumor cells. Mitotic figures and necrosis are rare. The tumor stroma varies from mucoid to hyaline to fibrous.

They frequently recur but only occasionally metastasize to cervical lymph nodes. Wide excision is treatment. They are often misdiagnosed as benign mixed tumor and adenoid cystic carcinoma, which is a critical mistake.

Malignant Transformation in Mixed Tumor

Malignant transformation within mixed tumors of the salivary glands is a well-known phenomenon and is designated *carcinoma ex mixed tumor*. It occurs in about 4.5 percent of all mixed tumors. The likelihood of malignant change in a mixed tumor increases with the duration of the tumor and the age of the patient. It is the fifth most common malignant salivary gland neoplasm.

Signs and symptoms include rapid growth, pain, facial palsy, and fixation to surrounding tissues.

The diagnosis requires the identification of both benign mixed tumor and carcinoma in the same tumor. The most common histologic pattern in these malignant areas is poorly differentiated adenocarcinoma or undifferentiated carcinoma, but tumors with epidermoid carcinoma, mucoepidermoid carcinoma, myoepithelial carcinoma, adenoid cystic carcinoma, clear cell carcinoma, and papillary cystadenocarcinoma occur occasionally. Destructive infiltrative growth is the most reliable histologic criterion for the diagnosis.

Occasionally a circumscribed, encapsulated, noninfiltrative mixed tumor will have such marked cytologic atypia that a diagnosis of malignant transformation seems inescapable. These tumors are best identified as *encapsulated*

or *noninvasive carcinoma ex mixed tumors*. Prognosis is excellent if the capsule remains intact during surgery.

Atypical mixed tumor is a term used to identify mixed tumors that have some particular feature that raises concern about their potential biologic behavior, yet this feature is insufficient, by itself, to attest malignancy. This feature may be capsular penetration, unencapsulation of a tumor in a major gland, intravascular tumor in small vessels in or adjacent to the capsule, or cytologic atypia. Necrosis and increased numbers of normal appearing mitotic figures are worrisome but, by themselves, are not diagnostic of malignancy. A mitotic rate of one or more per three high-magnification fields is very suspicious for malignancy.

Soft, hemorrhagic areas of *infarction* occasionally occur in large, long-standing tumors or in tumors that have been subjected to external trauma or preoperative fine needle aspiration. Atypical epithelial cells may be present adjacent to these areas of infarction or ischemia, but this feature alone is not indicative of malignant change and represents reactive atypia.

Mixed tumors showing extensive stromal hyalinization and fibrosis with or without areas of infarction or ischemic change are cause for concern and should be carefully examined for frank carcinomatous change with multiple tissue blocks. Criteria for malignancy include: invasion, destruction of normal tissues, cellular anaplasia, cellular pleomorphism, atypical mitoses, and abnormal architectural patterns, such as back to back glands, sheets of cells, etc. Destructive, infiltrative growth is the most reliable histologic criterion for the diagnosis of carcinoma ex mixed tumor.

質問 名古屋第一日赤・口外 下郷 和雄

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②最近例で大口蓋孔部の Surgical margin が確かでない例があるのですが、この場合はどうするのがよいと考えられますか。

質問 東京医歯大・2口外 酒井 英紀

As you mentioned the diagnosis of malignant

salivary gland tumor is very difficult clinically, radiographically, or pathologically. I think the molecular diagnosis will be very effective for the diagnosis. Could you please tell me the candidate genes which may possibly be used for molecular diagnosis.