PLEOMORPHIC ADENOMA IN SWEAT GLAND: REPORT OF A CASE

H.M. Hashemi
Department of Oral and Maxillofacial Surgery, School of Dentistry, Tehran University of Medical Sciences, Tehran, Iran

Abstract - A case of pleomorphic adenoma in sweat gland is reported here. The histopathologic report confirmed the diagnosis. Pleomorphic adenoma is most common in salivary glands but very rare in sweat glands. Pleomorphic adenoma in sweat gland and the similar tumors of eccrine sweat gland are described that bear a striking resemblance to pleomorphic adenoma of salivary gland. Upon closer examination, the tumor contained areas of squamous differentiation, secretory activity, and primitive hair follicles indicating cutaneous rather than mucosal origin. One-year follow-up examination revealed no evidence of recurrence.


Key Words: Pleomorphic adenoma, sweat gland tumors, salivary gland tumors, endodonoma

INTRODUCTION

The pleomorphic adenoma or benign mixed tumor is easily the most common salivary neoplasm. It accounts for 33 to 73 percent of salivary tumors, 44 to 62 percent of submandibular tumors, and 38 to 43 percent of minor gland tumors (1).

This tumor is very rare in sweat gland but it is not surprising because secretory epithelial cell and myoepithelial cell are present in sweat gland.

Report of case

A 39-year-old normally developed male came to our clinic for treatment of a 1 × 1 cm firm, well-circumscribed, painless, dermal nodule in his left cheek of 14 months duration (Fig 1A,B).

Under local anesthesia and with rhinoplasty flap the nodule was excised. The nodule was white, firm, and homogeneous, and extended to the deep dermis. The specimen was submitted for microscopic examination. The tumor consisted of variably sized sheets, cords, and islands of epithelial cells, contained within and divided by some of collagenous connective tissue. The epithelial cells formed variably sized cysts, acini, and ducts (Fig. 2). Myoepithelial, myxoid, and edematous muscle and hair follicles are observed (Fig. 3).

DISCUSSION

Sweat glands are first seen in the 12-13 week embryo on their palms and soles (2).

Microscopically the gers are seen as collections of deep hyaline cells in the basal layer of epidermis (3). At 16 weeks of gestation, both intrapigmental and intradermal tubular lumina begin to form (4). At this stage of lamellar formation both the secretory and ductal components consist of a double layer of epithelial cells, interlobular and interfollicular cells (3).

At this stage these two cells layers in the secretory region differentiate into tall columnar luminal secretory cells and myoepithelial cells (3).

Both the eccrine glands approximate adult morphology with nearly equal numbers of clear cells containing glycogen and darker cell containing periodic acid - Schiff positive, diastase resistant neutral mucopolysaccharides (5).

The benign "mixed" tumor of salivary glands has masqueraded under a great variety of names throughout the years (e.g., endodermoma, branchioma, endonomasoma, endodermoma), but the term "pleomorphic adenoma" suggested by Willis characterizes closely the unusual histologic pattern of the lesion (6). It is almost universally agreed that this tumor is not a "mixed" tumor in the true sense of being teratonic derived from more than one primary tissue.

Its morphologic complexity is the result of the differentiation of the tumor cells, and the fibrous hyalinized, myxoid, chondrioid and even osseous areas are the result of tissue changes or are actually products of the tumor cells per se (9). The tumor is composed of a mixture of glandular epithelium and myoepithelial cells within a mesenchymal-like background, the epithelium often forms ducts and cystic structures or may occur as islands or sheets of cells (1). Recurrence must be considered because the tumor cells are inside and outside the lesion.

Myoepithelial cells often make up a large percentage of the tumor cells.
Fig. 1A,B,C. Clinical view of the tumor and surgical approach.

Fig. 2. Tumoral cells, ductal structures and keratin in a variably dense and occasionally hyalinized stroma.
It seems that this lesion has been previously reported with other names, such as sweat gland adenomas of the clear cell type (7), eccrine acrosporoma (8), nodular hidradenoma (3), and clear cell hidradenoma (5). They generally present clinically as firm intradermal nodules covered by intact skin. Due to the histologic similarity, Land considered mixed tumors of the skin to be variants of nodular hidradenoma (9). He also concluded that eccrine tumors of the perioral region could be influenced "tissue factors" of the oral cavity thus displaying some of the histologic components of salivary gland. Pakhor and O'Hara presented one new case and reviewed seven previous cases of "pleomorphic adenomas" arising in the external auditory meatus from ceruminous glands which are apocrine in origin (10).

These tumors are clinically benign in behavior, similar to pleomorphic adenomas derived from apocrine accessory lacrimal glands of the eyelid which have also been described (11). While melanin pigmentation was not included in the early histologic descriptions of eccrine tumors (3), Wilson-Jones confirmed active melanogenesis in five such tumors (12). In general, adenomatous tumors of the skin contain no melanocytes and therefore are not pigmented (3). However, although melanocytes are found in adult sweat gland ducts, they are a component of sweat duct germs in the 14-week embryo (4).

REFERENCES


