

EPIDEMIOLOGICAL STUDY OF PLEOMORPHIC ADENOMA IN IRAQ

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ABSTRACT : Pleomorphic adenoma (PA) as a common salivary tumor is a benign mixed tumor with two-third of all salivary gland neoplasms located in submandibular glands (5%), minor salivary glands (10%) and parotid glands (85%). Tumors are originated in superficial lobe, however, mightily involve deep lobe of parotid gland and parapharyngeal space. Minor salivary gland tumors are occasionally seen on palate followed by lip, cheek, tongue and floor of mouth. PA is normally manifested as a slow-progress asymptomatic and as parotid gland swelling with no facial nerve involvement and with the best treatment by a highly safe local excision and follow-up for at least 3–4 years. The current study has measured PA frequency based on sex and age, indicating PA with a high percentage compared to all other histological salivary gland tumors (66.3%). PA has a gender ratio, equal to 69.6/63.4, therefore, the most affected age group of PA is 25-39 years old with 241 cases.

Key words : Pleomorphic adenoma, epidemiology, Iraq.

INTRODUCTION

Salivary gland tumors are rarely occurred, including lower than 3% of all neoplasms of head and neck region (Van der Wal *et al*, 1998). Pleomorphic adenoma represents 40% to 60% of the submandibular, 60% to 73% of parotid gland tumors and minor salivary glands tumors (Eveson and Cawson, 1985; Ito FA *et al*, 2005). It is a benign neoplasm composed of myoepithelial and epithelial cells set in a vast diversity of morphological pattern(s) with mesenchymal differentiation areas. Epithelial cells form duct-like structure(s) relate to non-ductal cells in different forms. The stromal element shows different ranges of cartilaginous, hyaline, myxoid, or osseous differentiation (Ellis and Auclair, 1996). This research has explained the histopathological features of 189 PA cases by refereeing to the morphology of epithelial cells and stromal components. Morphological variation is the most visible feature of this neoplasm. Thus, from the histological point of view, its appearance is greatly changeable even inside the individual tumors, so it is characterized and biphasic by an admixture of spindle-shaped myoepithelial elements and polygonal epithelial in a changeable background stroma as myxoid, mucoid, hyaline, or cartilaginous. Epithelial elements might be set in duct-like structure(s), sheets, clumps or interlacing strands, including polygonal, spindle or stellate-shaped cells. The areas of epithelial pearls and squamous metaplasia might be presented. Thereafter, tumor is not enveloped, in contrast, it is surrounded by different

thicknesses of fibrous pseudocapsule. Also, tumor is extended by the normal glandular parenchyma as a finger like pseudopodia, but not as a malignant transformation. Often, tumor shows few features as chromosomal translocations between chromosomes #3 and #8, making PLAG gene to be compared with beta catenin gene, activating the catenin pathway and leading to inappropriate cell divisions. Diagnosing of salivary gland tumors has used radiographic studies and tissue sampling, including fine needle aspiration (FNA) and core needle biopsy. Both processes could be performed in an outpatient setting. Additionally, diagnostic imaging technique(s) for salivary gland tumors consist of magnetic resonance imaging (MRI), and ultrasound and computer tomography (CT). FNA determines tumor as malignant with a sensitivity of 90% (Cohen *et al*, 2004; Batsakis *et al*, 1992). It's also could distinguish the initial salivary tumor from metastatic disease. Core needle biopsy is conducted in outpatient setting, more invasive, but more accurate than FNA with a diagnostic accuracy of more than 97% (Wan YL *et al*, 2004). Regarding the imaging studies, ultrasound could delineate the superficial parotid tumors. Particular salivary gland tumors have specified sonographic features on ultrasound (Bia³ek *et al*, 2003). In other words, ultrasound is also normally applied to guide core needle biopsy or FNA. CT permits a direct and mutual observation of salivary gland tumor, providing data about the tissue's invasion and whole dimension, additionally, it is used in bone invasion demonstration.