CLINICAL PRESENTATIONS, PATHOLOGY AND MANAGEMENT OF SALIVARY TUMOURS

AN ESSAY

Submitted For Partial Fulfillment Of

The Master Degree In General Surgery

BY

REFAAT ABD EL HAFEZ ABD EL RADY

[M.B.,B.Ch.]

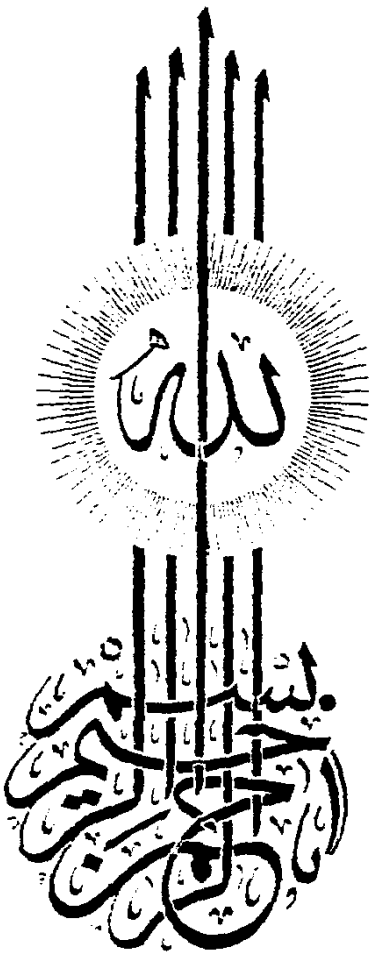
Supervised By

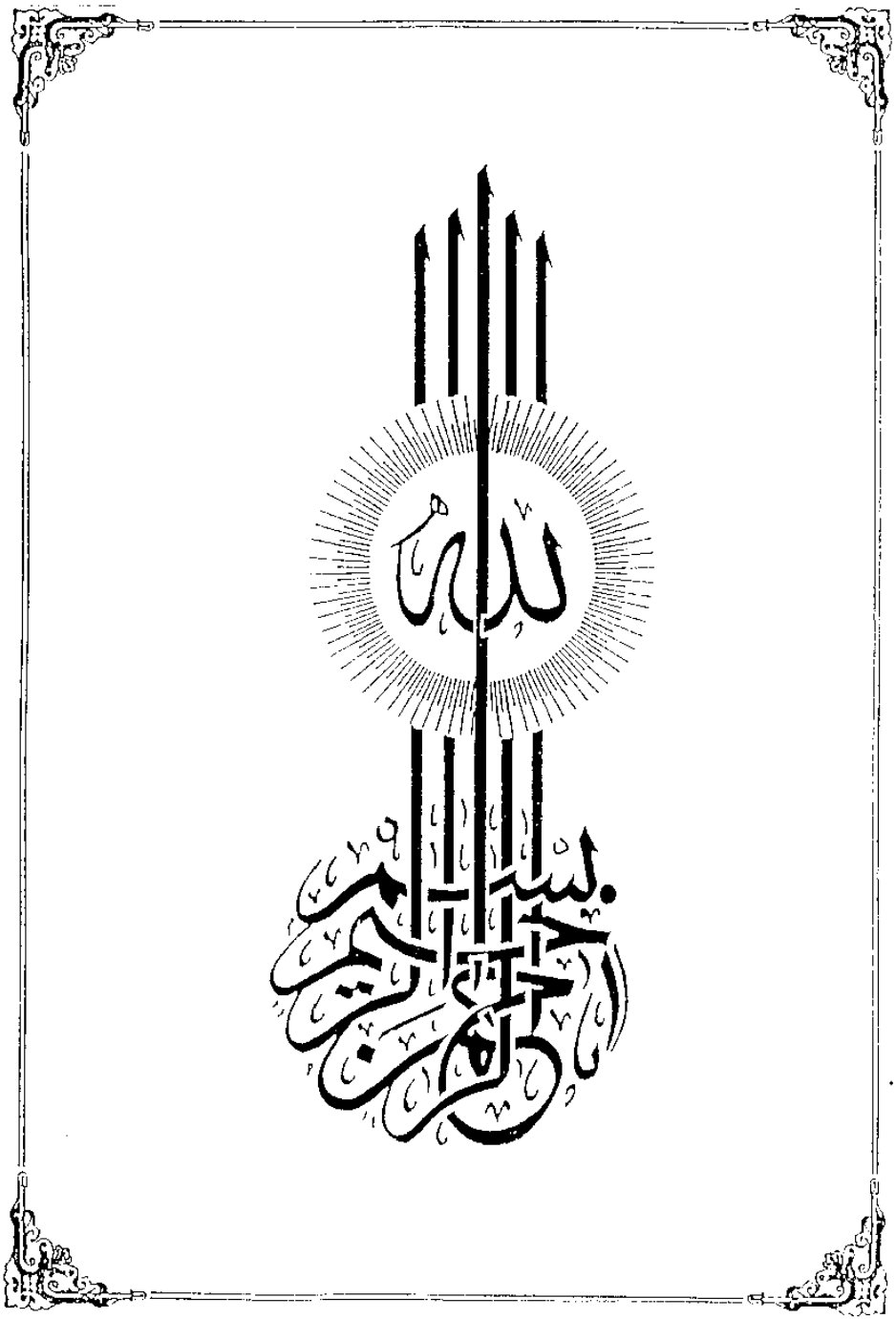
DR. AHMED SEDKEY

Assist. Prof. General Surgery
FACULTY OF MEDICINE
AIN SHAMS UNIVERSITY

FACULTY OF MEDICINE
AIN SHAMS UNIVERSITY

1986





ACKNOWLEDGMENT

I would like to express my deep thanks to all those who participated in giving their golden knowledge, to those who hounoured me and gave glints of light on my way to knowledge.

I am grateful to PROF. DR. AHMED SEDKY ., Prof. of General Surgery, Ain Shams University, for his valuable suggestion and guidance throughout the Preparation of this work, as well as his fatherly attitude and moral support.

It is, as well, with great pleasure to take such opportunity to record my sincere gratitude to my parents and my wife, who tried always to pave my way and for their tolerance and inspiration.

Refaat Abd El-Hafez
1986

C O N T E N T S

* * *

INTRODUCTION

INTRODUCTION

There has been an increasing emphysis on salivary glands disorders over the past decade.

One of the most important of these disorders are Salivary Tumours .

Neoplasms may arise not only from the major salivary glands [parotid, submandibular, sublingual] but also from any of the numerous, diffuse intraoral accessory salivary glands in the lip, palate, tongue buccal mucosa, floor of the mouth, retromolar area.

Up till now little is known about the eatiological factors responsible for the salivary neoplasm.

Aboul Nasr [1961] stated that there is no known factors can account for the occurance of tumours in salivary glands.

The classifications of the salivary tumours are many ranging from simpilifed categorization of "Benign" or "malignant" to complicated and detailed [Beahrs et al.,1978].

Beahrs et al., stated that all meaningful classifications of salivary gland tumours are based on histopathology. We consider any classification to be valid if it has

consistent practicality for pathologic diagnosis and if the diagnosis are of clinical usefullness to the surgeon.

As any other neoplastic disease in the body, the early detection and rapid and proper management gives the best prognosis.

The aim of this work is to clarify the clinico pathological study of the different types of salivary tumours and it also attempts to be of partical value in early detection and proper management of salivary tumours.

* * *

ANATOMY OF SALIVARY GLANDS

The salivary glands comprise three large paried masses the parotid, submandibular and sublingual glands-also the anterior lingual glands and numerous small glands in the mucous membrane of the tongue and numerous small labial, buccal and palatal glands in relation to the mucous membrane of the lips, cheek and roof of the mouth respectively. [Gray's anatomy 1973]

PAROTID GLANDS

It is the largest of major salivary glands. It has an average weight of about 25 gm. It assumes avery irregular shape in order to accommodate itself to it's surrounding. It lies below the external acoustic meatus between the mandible and the sternomastoid, it progects forward on to the surface of the masseter where a small part of it usually more or less detached lies between the zygomatic arch above and the parotid duct below, this detached portion is named the accessory part of the gland. [Gray's anatomy 1973]

The gland has acapsule continous with deep cervical fascia, the superficial layer being dense and closely united with gland [parotideomasseteric fascia]. Between the

styloid process and angle of mandible this fascia forms the stylomandibular ligment which seperate parotid from submandibular gland [Ben Pansky 1984].

The gland has two poles and three surfaces and anumber of important structure in addition to the facial nerve are embedded within it. The upper pole is in contact with the cartilaginous part of the external acoustic meatus and the capsule of temporomandibular Joint.

The lower pole overlaps the posterior belly of the digastric muscle, below and behind the angle of the mandible.

The superficial [lateral] surface is flat and subcutaneous.

The anteromedial surface is shaped like a [c] lying flat with the opeining forwards, the prongs of the [c] embrace the ramus of the mandible which is covered laterally by the masseter and medially by the medial pterygoid. The posteromedial surface is irregular being grooved by the mastoid process, the sternomastoid and posterior belly of digastric. The external carotid artery also grooves this surface low down befor entering the substance of the gland. This surface related also to the styloid process with its

three attached muscles [stylohyoid] styloglossus and stylopharyngens] and two ligaments [stylohyoid and stylomandibular]. The process seperates the gland from the internal carotid artery and internal Jegular vein.

STRUCTURES EMBEDDED WITHIN THE GLANDS;-

1. The facial nerve [the most superficial of the embedded structures] forming aplexus befor dividing into it's five branches, that fan out from the gland like the digits of an outstreched hand to supply all the muscles of the facial expression including buccinator.
2. The retromandibular vein formed by the union within the gland of the maxillary and superficial temporal veins emerging behind the lower pole to unite with the posterior auricular to form the external jegular vein. An anterior branch of the retromandibular vein passes forwards to gain the facial vein outside the gland.
3. The external carotid artery dividing into it's two terminal branches the maxillary and superficial temporal .
4. Lymphoid nodules which may be within the gland substance as well as simphy within the capsule.
5. Branches of the auriculotemporal nerve which winds round the neck of the mandible from behind. Some small branches lie within the capsule and enter the gland. Secretomotor fibres derived from cells of the otic ganglion reach

the gland by this nerve. [RMH MC MINN 1974]

PAROTID DUCT

Is a thick walled tube formed within the gland by the union of the ductules that remove the secretion of it's lobules and it is one of the structures that appear at the anterior border of the gland. At the level of the lobule of the ear the duct runs forwards across the masseter, below the accessory parotid gland and in company with branches of the facial nerve. At the anterior border of the masseter where it can be felt through the skin.

It turns sharply in amedial direction and pierces the buccal pad of fat, the bucco-pharngeal fascia, the buccinator muscle and the mucous membrane of the cheek to open into the vestibule of the mouth on the apex of alittle papille apposite the second upper molar tooth. [Cunnin Cham's manual of practical anatomy].

BLOOD SUPPLY

The arterial supply are derived from the external carotid artery and from the branches given off by that vesseles in or near the gland.

The veins empty themselves into external jegular vein through some of it's tributaries.

The lymph vesseles end in the superficial and deep cervical lymph nodes interrupted in their course by two or three lymph nodes on the surface and in the substance of the parotid gland.

NERVE SUPPLY

The stimulus for parotid secretion comes from the inferior salivary nucleus in the pons via the glossopharngeal nerve and it's tympanic branch and plexus which gives off the lesser petrosal nerve through which impulses pass to the otic ganglia.

Here there are synapses and impulses leave the ganglion by branches that join the auriculotemporal nerve and so reach the gland.

Sympathetic fibres which enter the gland with it's blood vessels are vasoconstrictor and so help to depress secretion.

SUBMANDIBULAR GLAND

Is one of the large salivary glands and is about half the size of the parotid gland. IT lies in the digastric triangle overlapping it's boundiries. It consists of a large superficial part and a small deep part which are continous together around the posterior border of the mylohyoid.

[Gray's anatomy 1973]

The superficial part has three surface inferior, lateral and medial. The inferior surface is subcatenious ccvered by platysma and crossed by the facial vien and the cervical branch of the facial nerve. The marginal mandibular branch of the facial nerve may also lie near this surface for in 20% of cases, it extends below the level of the lower border of the body of the mandible befor passing upwards out the face, for this reason inscions to expose the gland are made at least [1] cm below the body of the mandible to avoid damage to this nerve.

The lateral surface is in contact with the submandibular fossa on the inner surface of the body of the mandible and with the insertion of the medial pterygoid muscle.

The medial surface is in contact with the posterior

belly of the digastric and the stylohyoid and with part of the myelohyoid, styloglossus and hyoglossus mnscle. The lingual nerve, the submandibular ganglion and the hypoglossal nerve with it's accompyaning vein are superficial to the hypoglossus and therefore between it and the gland. The facial artery grooves the posterior and the superficial part and then lies above it befor appearing at the lower border of the mandible 2.5 cm in front of it's angle.

The small deep part of the gland lies between mylohyoid [below and laterally] and hyoglossus and styloglossus [Mediallу]. The lingnal nerve lies above it and hypoglossal nerve with it's accompanying vein below it.

SUBMANDIBULAR DUCT [wharton's duct]

Is about 2 inch's long [5cm] begins as numerous branches in the superficial region of the gland and emerging from the middle of the deep surface of that part of the gland. It rnus through the deep part of the gland passing at first upwards and slightly backwards for [4-5] mm and then turns forwards to run between the mylohyoid and hyoglossus. It then passes between the sublingual gland and the genioglossus and opens by anarrow orifice in the floor of the mouth on the summit of the sublingual papilla at the side of the frenulum of the tongue. As it passes through