

Thyroidectomy

Database Study

**For partial fulfillment of Master Degree
In Otorhinolaryngology**

By
Radwa Helmy Salah
M.B.B.Ch., Ain Shams University

Supervised by

Prof. Dr. Mohamed Abd Al Raouf Masoud
Professor of Otorhinolaryngology
Faculty of Medicine – Ain Shams University

Prof. Dr. Samer Ahmed Ibrahim
Professor of Otorhinolaryngology
Faculty of Medicine – Ain Shams University

Prof. Dr. Ahmed Adly Mohamed
Professor of Otorhinolaryngology
Faculty of Medicine – Ain Shams University

Faculty of Medicine
Ain Shams University
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Abbreviations

ATA	American thyroid association
DTC.....	Differentiated thyroid carcinoma
EBRT	External beam radiotherapy
FNA.....	Fine needle aspiration
FNAC.....	Fine needle aspiration and cytology
ITA.....	inferior thyroid artery
IV.....	Intravenous
LN	Lymph nodes
MNG.....	Multinodular goiter
MTC.....	Medullary thyroid carcinoma
PEI	Percutaneous ethanol injection
PLA	Percutaneous laser thermal ablation
RLN	recurrent laryngeal nerve
SLN.....	superior laryngeal nerve
T3	Triiodothyronine hormone
T4.....	thyroxine
TSH.....	thyroid stimulating hormone
US.....	Ultrasonography
VF	vocal folds
WHO	World health organization

Introduction

Although thyroid disease has been recognized since the earliest recorded history, consistent techniques of surgery on the thyroid gland, with a few exceptions, date back only 100 years. Kocher in 1895 reported 900 cases of thyroidectomy for benign goiter with an operative mortality rate of just higher than 1 %.(**Kaplan et al, 2010**)

The age and sex of the patient are very important in decision making because benign nodules tend to be more prevalent in women in the 20- to 40-year-old age group. In this group, the risk of cancer is approximately 5% to 10%. However, a mass in the thyroid gland in males, in patients younger than 20 years, in those older than 40 years, or in those of advanced years associated with an increased incidence of cancer. Although symptoms such as difficulty swallowing, stridor, and hoarseness suggest cancer, patients with a large goiter or sub sternal thyroid may also have difficulty swallowing and respiratory obstruction. Hoarseness is almost invariably associated with cancer

Among head and neck surgical procedures, thyroid surgery is very safe. Mortality rates are extremely low and morbidity is relatively low, serious complication occur in less than 2% of all thyroid cases. (**Myers, 2008**)

Aim of the work

The study is a Database study which was performed to provide actual data and figures regarding cases of thyroidectomy at Otolaryngology department, Faculty of medicine, Ain Shams University from July 2010 till July 2011.

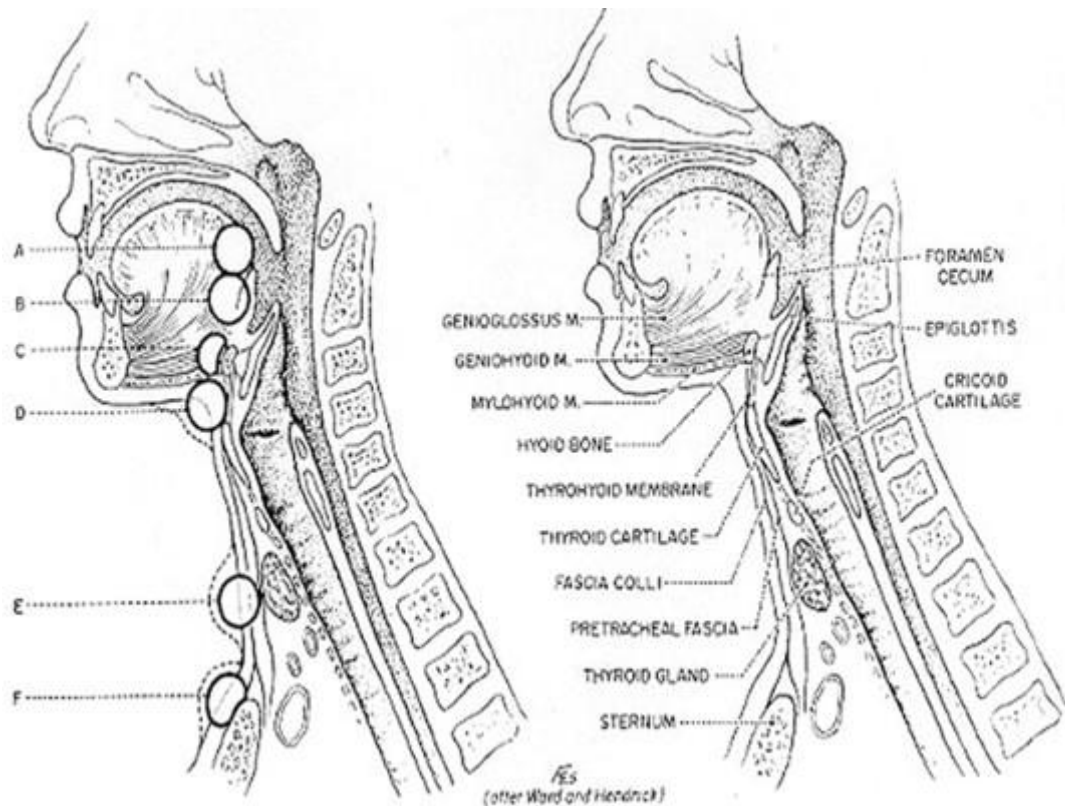
Database is a set of information that is structured primarily to allow calculations and analysis to be undertaken; integrated data files organized and stored electronically in a uniform file structure that allows data elements to be manipulated, correlated, or extracted to satisfy diverse analytical and reporting needs.

Review of literature

Surgical Anatomy and Embryology

The thyroid medial anlage derives from the ventral diverticulum of the endoderm from the first and second pharyngeal pouches at the foramen cecum. The diverticulum descends from the base of the tongue to its adult pretracheal position through a midline anterior path during weeks 4 to 7 of gestation. The proximal portion of this structure retracts and degenerates into a solid, fibrous stalk; persistence of this tract can lead to the development of a thyroglossal duct cyst. The lateral thyroid primordia arise from the fourth and fifth pharyngeal pouches and descend to join the central component. Parafollicular C cells arise from the neural crest of the fourth pharyngeal pouch as ultimobranchial bodies and infiltrate the upper portion of the thyroid lobes. The thyroid gland is composed of two lateral lobes connected by a central isthmus, weighing 15 to 25 g in adults. A thyroid lobe usually measures about 4 cm in height, 1.5 cm in width, and 2 cm in depth. The superior pole lies posterior to the sternothyroid muscle and lateral to the inferior constrictor muscle and the posterior thyroid lamina. The inferior pole can extend to the level of the sixth tracheal ring. Approximately 40% of patients have a pyramidal lobe that extends superiorly. **(Phillip et al., 2010)**

Figure (1): Diagram of the course of the thyroglossal tract.(From The thyroglossal cyst. Head Neck Surg 5:134–146, 1982).



Blood supply:

It involves two pairs of arteries, three pairs of veins, and a dense system of connecting vessels within the thyroid capsule. The inferior thyroid artery arises as a branch of the thyrocervical trunk.

It descends medially to the thyroid gland. Abnormally, a right ITA originated from a descending branch of thyrocervical trunk. **(Tang et al., 2012)**

The superior thyroid artery is a branch of the external carotid artery and courses along the inferior constrictor muscle with the superior thyroid vein posterolateral to the external branch of the superior laryngeal nerve (SLN). **(SEER program 2006).**