Faculty of Medicine
General Surgery department

RECENT ADVANCES IN MANAGMENT OF CANCER ESOPHAGUS

An essay
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DEDICATION

كلية الطب
قسم الجراحة العامة

الحديــث فى تشخيص وعــلاج سرطـــان المـــرئ

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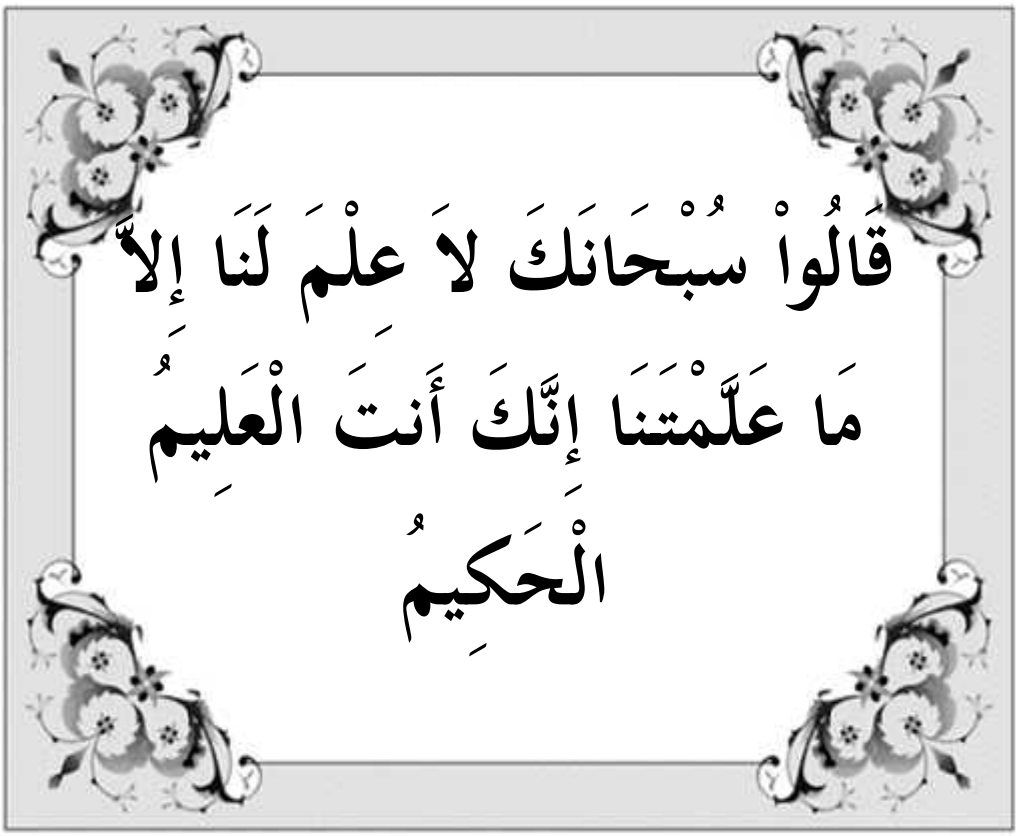
This work is dedicated to my dear family for their ultimate love, care and support.

بسم الله الرحمن الرحيم



صدق الله العظيم

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Mohamed Mohamed Raafat

CONTENTS

LIST OF ABBREVIATIONS

AC	Adenocarcinoma
AJCC	American joint committee on cancer staging system
BE	Barrett's esophagus
BMI	Basal metabolic index
CT	Computed tomography
COX-2	Cyclo-oxygenase-2.
CR	Complete response
DFS	Disease-free survival.
DNA-HPV	Deoxy nucleic acid- Human papilloma virus
EGF-R	Epidermal growth factor receptor.
EMR	Endoscopic mucosal resection.
EUS	Endo-ultrasonography
EUS-FNA	Endoscopic ultrasound guided fine needle aspiration
FDG	Florodeoxyglucose
FEV1	Forced expiratory volume in 1 second
FED-PET	Florodeoxyglucose- positron emission tomography
GERD	Gastroesophageal reflux disease

GY	Gray
HGD	High grade dysplasia
HPV	Human papilloma virus
LES	Lower esophageal sphincter
LGD	Low grade dysplasia
L.N	Lymph node
MIS	Minimally invasive staging
MRI	Magnetic resonance imaging
NSAIDs	Non-steroidal anti-inflammatory drugs
OR	Odds ratio
PET	Positron emission tomography
PLE	Pharyngo-laryngo-esophagectomy
PPI	Proton pump inhibitors
RTOG	Radiation therapy oncology group
SCC	Squamous cell carcinoma
SCC-RA	Squamous cell carcinoma- related antigen.
SES	Socio-economic status
SIREC	Stent or intraluminal radiotherapy for inoperable esophageal carcinoma
SN	Sentinel node
THE	Transhiatal esophagectomy

TTE	Transthoracic esophagectomy
UES	Upper esophageal sphincter
2-FL	Two-field lymphadenectomy
3-FL	Three-field lymphadenectomy

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INTRODUCTION

Esophageal cancer is a highly lethal malignancy, with a relative 5-year survival rate of only (16%) of patients. It is the eighth most common cancer worldwide and represents the seventh cause of cancer death in the world. **(Jemal, et al., 2007)**

Esophageal cancer occurs most commonly during the sixth and seventh decades of life. **(Jemal, et al., 2007)**.

Incidence of esophageal carcinoma can be as high as (30-800) cases per (100,000) persons in particular areas of northern Iran, some areas of southern Russia, and northern China. Unlike in the United States, squamous cell carcinoma is responsible for (95%) of all esophageal cancers worldwide **(Islami, et al. 2009).**

There are various subtypes, primarily adenocarcinoma (approx. 50-80% of all Esophageal cancer) and squamous cell cancer. (**Merry, et al. 2007)**

Squamous cell cancer arises from the cells that line the upper part of the esophagus. Adenocarcinoma arises from glandular cells that are present at the junction of the esophagus and stomach. **(DeMeester, 2005)**.

It remains difficult to address specific risk factors for the development of esophageal cancer, (Chronic inflammation, epithelial hyperplasia, gastroesophageal reflux disease (GERD), Barrett's esophagus, tobacoo smoking, heavy alcohol use and stasis of food) may contribute to malignant transformation**. (Brooks, et al., 2009).**

Gastroesophageal reflux disease (GERD) is the most common predisposing factor for adenocarcinoma of the esophagus,it is estimated that (½ to 1%) of patients with Barrett's esophagus develop adenocarcinoma each year,the interval between the onset of symptoms of achalasia (which is precancerous) and the development of cancer is approximately (15 – 20) years. (**Layke, 2006).**

In over (85%) of patients with esophageal cancer, the presenting symptom is dysphagia, which is initially for solids and later on progress to liquids,other common symptoms are (weight loss, cough, and regurgitation) with associated symptoms, which reveal tumor infiltration such as (pain, hoarseness of voice and respiratory symptoms). (**Layke, 2006).**

The tumors disseminate by direct invasion into surrounding mediastinal structures, through bloodstream by local