Upper Gastrointestinal Bleeding in Intensive Care Unit

Thesis

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In ICU

By

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DEDICATION

I would like to dedicate this thesis to my ***Father*** *and my* ***Sunshine Mother****; to them I will never find adequate words to express my gratitude.*

Also my ***beloved family****, especially my* ***wife*** *for dealing so patiently, tactfully during this work and to my lovely kids*

سورة البقرة الآية: ٣٢

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List of Abbreviations

AVMs : Arteriovenous malformations

GAVE : Gastric antral vascular ectasia

GE : Gastero-esophageal

GI : Gastrointestinal

LES : Lower esophageal sphincter

NSAID : Non steroidal anti-inflammatory drugs

UES : Upper esophageal sphincter

UGIB : Upper gastrointestinal bleeding

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Introduction

Acute gastrointestinal (GI) bleeding is a potentially life-threatening abdominal emergency that remains a common cause of hospitalization. Upper gastrointestinal bleeding (UGIB) is defined as bleeding derived from a source proximal to the ligament of Treitz ***(Fallah et al., 2000).***

The diagnosis and therapy for nonvariceal upper gastrointestinal bleeding (UGIB) has evolved since the late 20th century from passive diagnostic esophagogastroduodenoscopy with medical therapy until surgical intervention was needed, to active intervention with endoscopic techniques followed by angiographic and surgical approaches if endoscopic therapy fails ***(Pongprasobchai et al., 2009).***

The underlying mechanisms of nonvariceal bleeding involve either arterial hemorrhage, such as in ulcer disease and mucosal deep tears, or low-pressure venous hemorrhage, as in telangiectasias and angioectasias. In variceal hemorrhage, the underlying pathophysiology is due to elevated portal pressure transmitted to esophageal and gastric varices and resulting in portal gastropathy ***(Straube et al., 2009).***

In North America in patients with UGIB and comorbid illness it was found that comorbid illness, rather than actual bleeding, is the major cause of death. Comorbid illness has been

noted in 50.9% of patients, with similar occurrences in males (48.7%) and females (55.4%).One or more comorbid illnesses have been noted in 98.3% of mortalities in UGIB; in 72.3% of patients, comorbid illnesses have been noted as the primary cause of death ***(Yavorski et al., 2009).***

Significant comorbidities have become more prevalent as the patient population with UGIB has become progressively older. In a retrospective chart review by Yavorski et al, 73.2% of deaths occurred in patients older than 60 years. Rebleeding or continued bleeding is associated with increased mortality; therefore, differentiating the patient with a low probability of rebleeding and little comorbidity from the patient at high risk for rebleeding with serious comorbidities is imperative ***(Yavorski et al., 2009).***

Aim of the Work

To review causes and treatment and ICU manegement of upper GIT bleeding.

Chapter (1)

Anatomy

Anatomy of the Oesophagus

I. GROSS ANATOMY OF THE OESOPHAGUS

The esophagus is a 25-cm long muscular tube that connects the pharynx to the stomach. The length of the esophagus at birth varies between 8 and 10 cm and measures about 19 cm at age 15 years ***(Gray et al., 2008).***

The esophagus extends from the lower border of the cricoid cartilage (at the level of the sixth cervical vertebra) to the cardiac orifice of the stomach at the side of the body of the 11th thoracic vertebra. The upper limit in the newborn infant is found at the level of the fourth or fifth cervical vertebra, and it ends higher, at the level of the ninth thoracic vertebra (fig. 1) (fig.2) ***(Gray et al., 2008).***

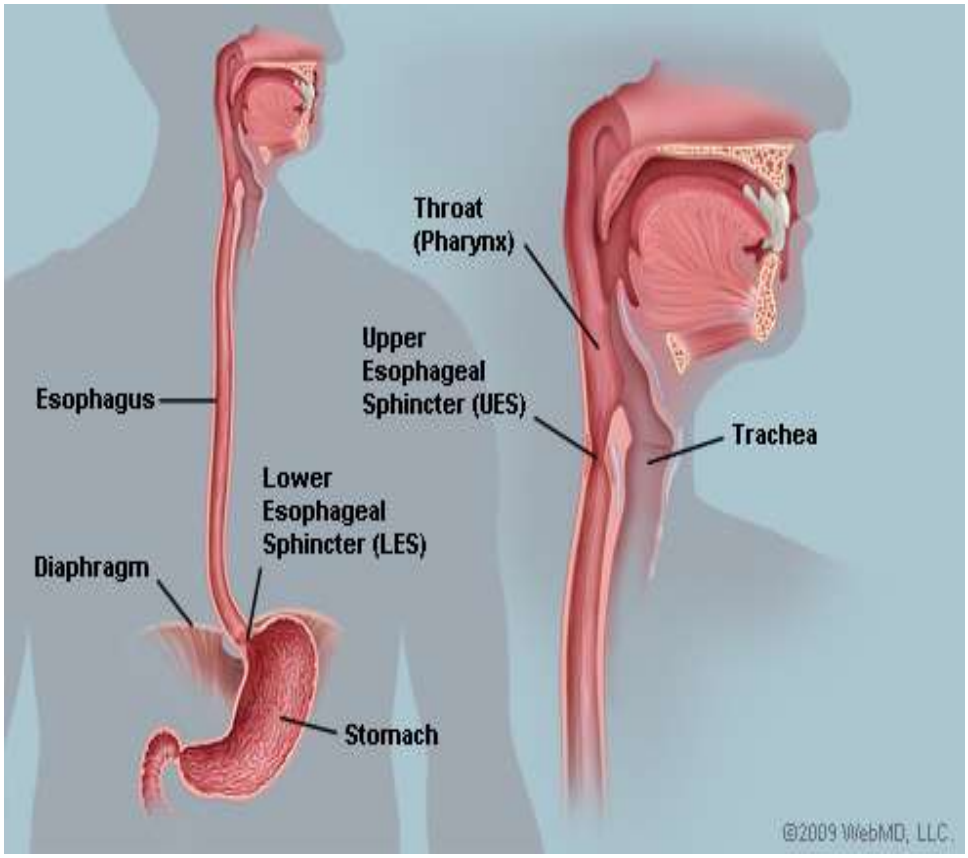

Fig. (1): The oesophagus ***(Gray et al., 2008).***

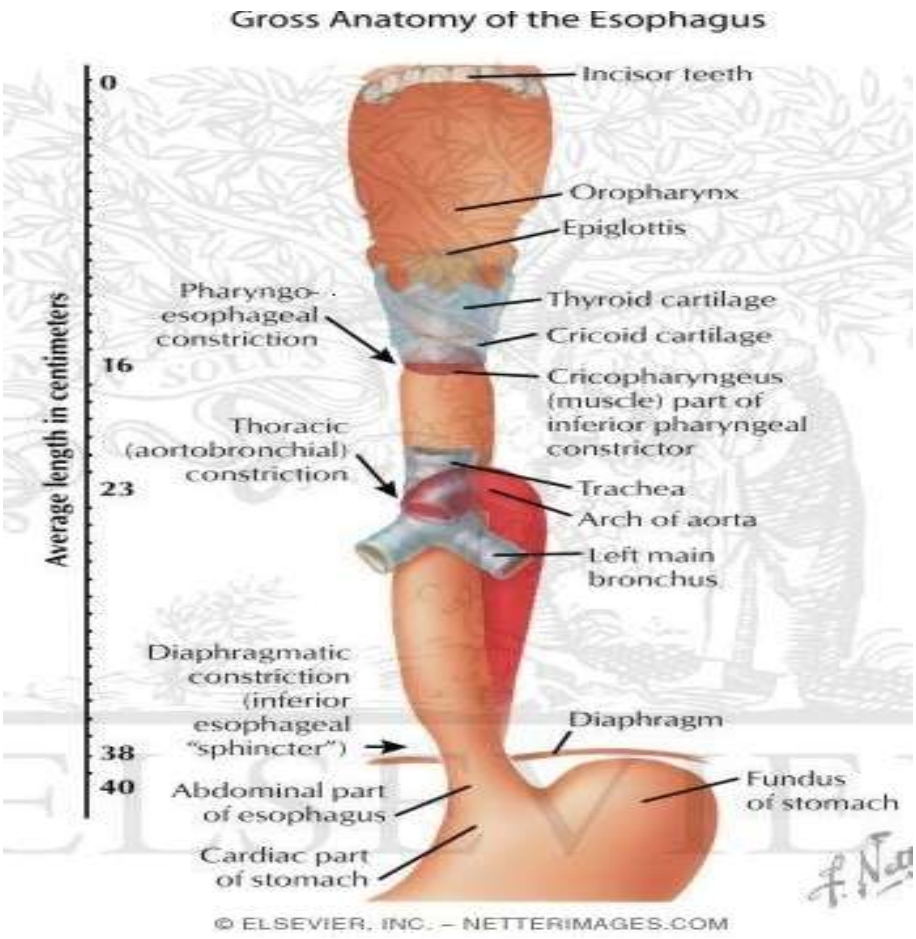

Fig. (2): Gross anatomy of the oesophagus ***(Gray et al., 2008).***

The esophagus has 3 constrictions in its vertical course, as follows:

- The first constriction is at 15 cm from the upper incisor teeth, where the esophagus commences at the cricopharyngeal sphincter; this is the narrowest portion of the esophagus and approximately corresponds to the sixth cervical vertebra