Fiberoptic Bronchoscope in Relation to Anesthesia

Essay Submitted for Partial Fulfillment
of Master Degree in Anesthesiology

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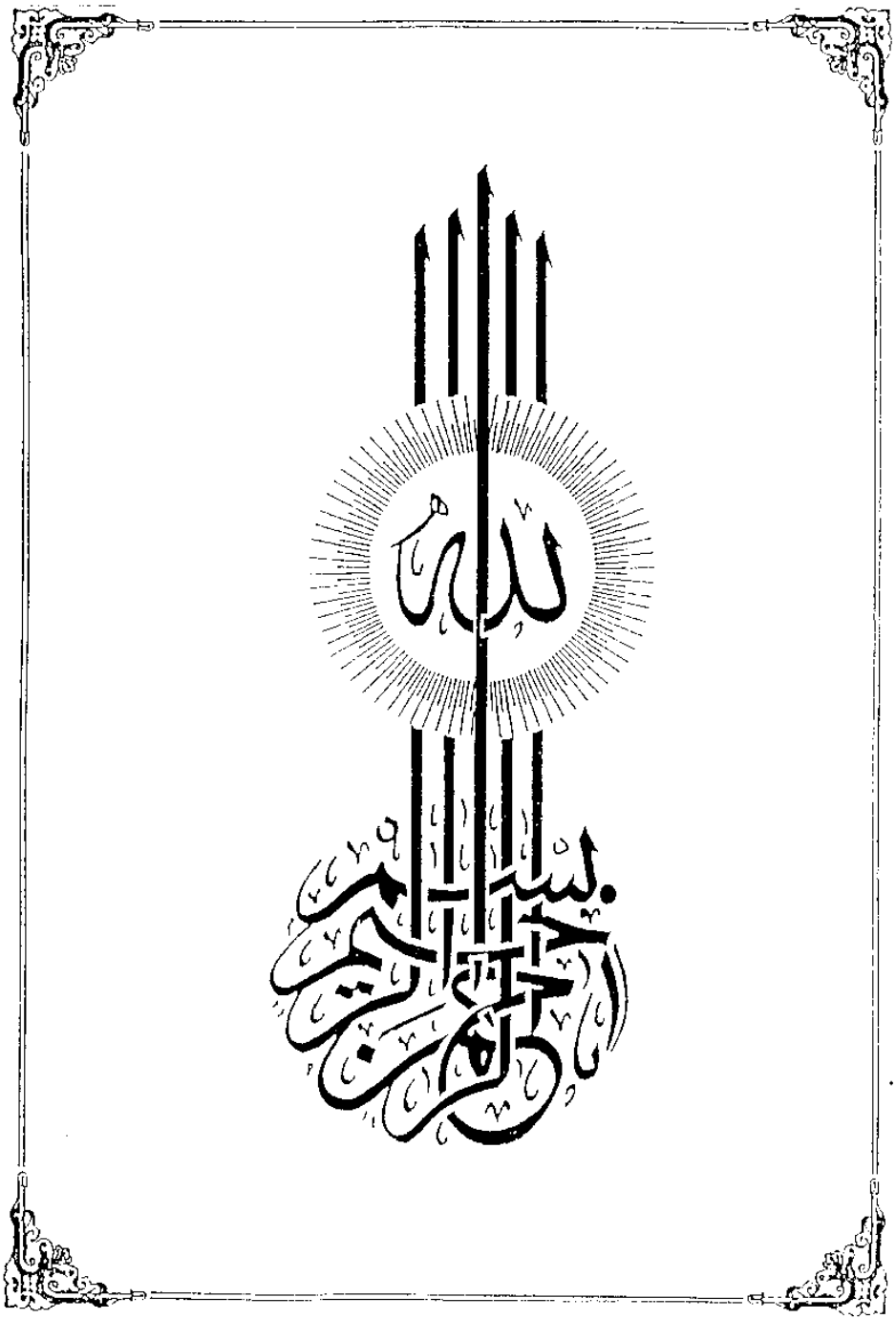
*** 1998 ***



Acknowledgment

First, thanks are all due to **Allah** for blessing this work until it has reached its end, as a part of his generous help throughout my life.

I would like to direct special thanks to **Prof. Dr. Yousry Robeen Ghattas**, Professor of Anesthesia and Intensive Care, Faculty of Medicine, Ain Shams University, for the great support and encouragement he gave me throughout the whole work. It is a great honor to work under his guidance and supervision.

I am greatly honored to express my utmost thanks to **Dr. Amr Essam El-Deen El-Hennami**, Lecturer of Anesthesia and Intensive Care, Faculty of Medicine, Ain Shams University, from whom I received faithful supervision, valuable suggestions, and continuous guidance throughout this work.

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Introduction

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Maintenance of a patent airway and intubation of the trachea depends on a knowledge of the anatomy of the upper airway and appropriate use of equipment and drugs ***(Barash et al., 1990)***.

Direct laryngoscopy as performed with the use of traditional laryngoscope has been a standard technique for tracheal intubation for decades. Using this technique, the vast majority of surgical patients can be intubated rapidly and atraumatically. Patients with abnormal airways, however, frequently present a significant obstacle to direct laryngoscopy and visualization of the glottis. A number of indirect techniques (e.g. blind nasotracheal intubation, retrograde wire insertion) have evolved in order to achieve tracheal intubation in patients with anatomically altered airways. These techniques are often time-consuming, unpredictable, and traumatic ***(Ovassapian and Dykes, 1987)***.

The development of flexible fiberoptic laryngoscopes in the 1970s has provided the anesthesiologist with a tool to manage abnormal airways with predictability and minimal trauma. The flexible fiberoptic laryngoscope is an instrument with which every modern anesthesiologist should be familiar ***(Barlow, 1990)***.

The first report of a successful flexible fiberoptic tracheal intubation was in 1967: a choledocoscope was used as the endoscope for a nasotracheal intubation ***(Murphy, 1967)***. In 1972, a bronchoscope was used for awake tracheal intubations ***(Taylor and Towey, 1972)***.

Fiberoptic intubation is a technique in which every anesthesiologist should be competent. In experienced hands, the technique has been proven to be life-saving when managing patients with compromised airways ***(Delaney and Hesseler, 1988)***.

In this essay, I will discuss the anatomy and physiology of the upper airway, techniques, indications and teaching of fiberoptic intubation and bronchoscopy.