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بسم اللّه الرحمن الرحيم

مركز الشبكات وتكنولوجيا المعلومات

قسم التوثيق الإلكتروني

Salwa Akl

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم باللّه العظيم أن المادة التي تم توثيقها وتسجيلها

علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

Salwa Akl

بعض الوثائق الأصلية تالفة
وبالرسالة صفحات لم ترد بالأصل

NEW ADVANCES IN PROBLEMS ASSOCIATED WITH TRACHEAL EXTUBATION

Submitted for partial fulfillment
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In Anaesthesiology

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INTRODUCTION

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All anaesthetists, at some stage, have experienced problems after tracheal extubation. Indeed, the frequency of such problems propably exceeds those relating to tracheal intubation. Whereas a large volume of the anaesthetic literature addresses problems associated with tracheal intubation, it is unusual to find discussion concerning those following extubation. This essay attempts to redress this imbalance.

Difficulty in removing a tracheal tube at the end of a procedure is a rare, but dangerous and occasionally fatal complication of tracheal intubation.

A lot of reported cases of difficult extubation as well as a case of impossible extubation have been discussed.

It is out of question that tracheal extubation exerts some effects on the cardiovascular system. Different cardiovascular responses to tracheal extubation can occur and still they are variable from one patient to another and from one pathology to another. Cardiac, coronary and hypertensive disorders are important. Type of surgery itself may favour or unfavour certain response as in neurosurgeries. Some anaesthetic techniques and drugs are usually used to control such responses.

Complications after tracheal extubation are many and each of them needs to be discussed thoroughly, to avoid their occurrence and to define their proper management.

As intubation period may extend to the post operative period as well as in the intensive care units, it was necessary to detail parameters for successful extubation after prolonged mechanical ventilation.

Timing of extubation is an art which is only mastered by experienced anaesthetists.

ANATOMY OF THE AIRWAY

ANATOMY OF THE AIR WAY

The airway commences at the mouth and external nares and terminates at the entrance to alveoli.

The Nose

The nose is divided anatomically into the external nose and the nasal cavity :

The external nose is formed by an upper framework of bones, (made up of the nasal bones, the nasal part of the frontal bones and the Frontal processes of the maxillae), a series of cartilages in the lower part , and a small zone of fibro-fatty tissue which forms the lateral margin of the nostril (The ala). The cartilage of the nasal septum represents the central support of the framework.

The cavity of the nose is divided, by nasal septum, into two compartments each opens by nares to the exterior and into nasopharynx by posterior nasal apertures.

The vestibule represents a dilatation within the nares.

Each side of the nose has a roof, a floor, a medial and lateral wall.

The roof first slopes upwards and backwards to form the bridge of the nose (the nasal and frontal bones), then has a horizontal part (the

cribriform plate of ethmoid) and finally a downward sloping segment (the body of sphenoid).

The floor is concave from side to side and slightly so from before backwards. It is formed by the palatine process of the maxilla and the horizontal plate of the palatine bone.

The medial wall is the nasal septum, formed by the septal cartilage, the perpendicular plate of the ethmoid and the vomer. Septal deviation is very common (75% in adult and it is nearly always confined to the anterior part of the septum.

The lateral wall has a bony framework made up principally of the nasal aspect of the ethmoid labyrinth above, the perpendicular plate of the palatine bone behind. This is supplemented by three chonchae (or turbinate bones), each arching over a meatus. The upper and middle chonchae are derived from the medial aspect of the ethmoid labyrinth while the inferier choncha is a separate bone.

The paranasal sinuses open into the lateral wall of the nose.

The nasolacrymal duct drains tears into the anterior end of the inferior meatus.

Blood Supply:

The upper part of nasal cavity receives its arterial supply from the anterior and posterior ethmoidal branches of the ophthalmic artery. The sphenopalatine branch of the maxillary artery is distributed to the lower part of the cavity and links up with the septal branch of the superior labial branch of the facial artery on the anteroinferier part of the septum. (Little's area).

A rich submucous venous plexus drains into the sphenopalatine, facial and ophthalmic veins and through the latter links up with the cavernous sinus.

Nerve Supply:

The olfactery nerve (I) supplies the specialized olfactory zone.

The nasal septum is supplied, mainly by the long sphenopalatine nerve, derived from trigeminal nerve "V" via the sphenopalatine ganglia. Short sphenopalatine (from trigeminal) supplies the posterosuperior corner, meanwhile septal branches of the anterior ethmoidal nerve, (branch of V), supply anterior part of the septum.

Short sphenopalatine nerves, anterior superior dental nerve and anterior ethmoidal branch of the nasociliary nerve contribute to nerve supply of lateral wall of the nose.

The nasal floor is supplied by the anterior superior dental nerve and greater palatine nerve.

Infraorbital branch of the maxillary nerve send its terminal twigs to the vestibule.

THE MOUTH

The mouth is made up of the vestibule and mouth cavity communicating together by mouth aperture

The vestibule is formed by the lips and cheeks from without and by the gums and teeth from within. Opening of the parotid duct is an important feature of the vesibule.

The mouth cavity is bounded by the alveolar arch and teeth infront, the hard and soft palate above, the anterior two thirds of the tongue and the reflection of its mucosa onto the mandible below, and the oropharyngeal isthmus behind. The mucosa of the floor of the mouth between the tongue and mandible bears the median frenulum ligulae, on either side of which are the orifices of the submandibular salivary glands.

The mucous membrane covering the dorsal surface of the tongue is thickened posteriorly forming three folds. In the midline the tongue is attached to the epiglottis by the glossoepiglotic fold. Laterally, the mucous