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Anesthetic Management for Nasal Surgery

An Essay Submitted For Partial Fulfillment of Master Degree in Anesthesiology

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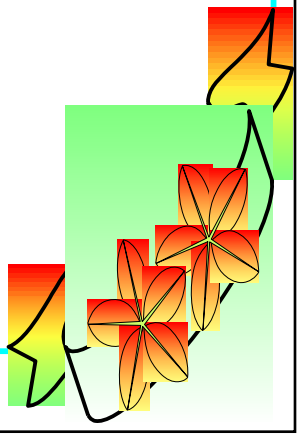

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Walid Ahmed Emam

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List of Abbreviations

AHI	***Apea-hyponea index***
BC	***Before Century***
BUN	***Blood urea nitrogen***
CBF	***Cerebral blood flow***
CHA	***Controlled hypotension anesthesia***
COPD	***Chronic obstructive pulmonary disease***
CPR	***Cardiopulmonary resuscitation***
CSF	***Cerebrospinal fluid***
CTZ	***Chemoreceptor trigger zone***
CT	***Computed Tomography***
CXR	***Chest-x- ray***
ECA	***External Carotid artery***
ECG	***Electrocardiogram***
FESS	***Functional endoscopic sinus surgery***
ICA	***Internal Carotid artery***

IH	***Induced hypotension***
LE	***Lipid emulsion***
LMA	***Laryngeal mask airway***
MAC	***Monitored Anesthesia care***
MAP	***Mean arterial pressure***
MRI	***Magnetic resonance image***
NPPE	***Negative pressure pulmonary edema***
NSAID	***Non- steroidal anti-inflammatory drug***
OSA	***Obstructive Pulmonary Oedema***
OSAS	***Obstructive sleep apnea syndrome***
PFTs	***Pulmonary function tests***
PNP	***Postoperative nasal packing***
PONV	***Postoperative nausea and vomiting***
PSG	***Polysomnography***
SDB	***Sleep- disordered breathing***
SMR	***Sub mucus resection***
TMJ	***Tempromandibular joint***
VPI	***Velopharyngeal incompetence***

INTRODUCTION

Airway problems are the major concern in nose surgery, related both to the underlying clinical problem and the shared air way ***(Keith and Lain, 2008).***

General anesthesia is often preferred for nasal surgery because of the discomfort and incomplete block that may accompany topical anesthesia. Special consideration during induction include using an oral airway during face mask ventilation to mitigate the effects of nasal obstruction, intubation with a reinforced or preformed right-angle endotracheal tube , and tucking the patient's padded arms to the side ***(Morgan et al., 2006).***

Regardless of the anesthetic technique selected for nasal surgery (general anesthesia or conscious sedation), it is likely that local vasoconstriction (topical local anesthetic, cocaine and epinephrine) will be used. A moderate degree of controlled hypotension combined with head elevation to decrease bleeding at surgical site ***(Paul et al., 2009).***

The surgeon and anesthesiologist should plan together to use techniques/ equipment that provide good conditions for surgery whilst maintaining a safe secure air way, regarding other structures around the head which are inaccessible during surgery and need protection-especially the eyes ***(Keith and Lain, 2008).***

Anatomy of the Nose

Nose is the first part of the upper respiratory tract and consists of paired nasal cavities divided from each other sagittally by the nasal septum and housed in a bony and cartilaginous framework that extends anteriorly as the external nose *(Fig.1).* The two halves of the nasal cavity open onto the face through the nares, and are continuous posteriorly with the nasopharynx through the posterior nasal apertures or choanae. The cavity is divisible into three regions, the nasal vestibule anteriorly, the chemosensory olfactory area posterosuperiorly and the respiratory region between them which constitutes the majority of the nasal cavity. The anterior nasal vestibule narrows posteriorly to form the nasal valve (the narrowest portion of the nasal airway). A series of air-filled expansions, the paranasal sinuses, lie within either the lateral walls of the nasal cavities, or in communication with them in adjacent bones ***(Barry, 2005).***