

# MOCA Keywords

## **PHARMACOLOGY**

Alkalinization of lidocaine  
Anaphylaxis: Therapy  
Antibiotic prophylaxis: PCN reactions  
Benzodiazepine antagonism  
Bupivacaine cardiac toxicity  
Burns: Resistance to NMBs  
Cefazolin administration  
Codeine resistance DDX  
Congenital methemoglobinemia  
Context sens half-time: Opioids  
Desflurane vap.: Heating rationale  
Etomidate: CNS effects  
Etomidate: Physiol effects  
Hemodialysis: End-stage renal disease  
High spinal: Clinical findings  
Inhaled anesthetics: Fluoride  
Intrathecal lidocaine: Side effects  
Intrathecal opioid spread  
Isoflurane effect on HPV  
Isoflurane: Cerebral blood flow  
Ketamine: Physiologic effects  
Ketorolac: Renal function  
Latex allergy: anesH implications  
Local anes: Methemoglobinemia  
MAC: Age-related changes  
Malignant hyperthermia: Presentation  
Methemoglobinemia: Rx  
MH Hx: Anes management  
MH: Dantrolene indications  
MH: Ryanodine receptor  
Muscle relaxants: Histamine release  
Myoclonus: Induction agents  
N<sub>2</sub>O and hematopoiesis  
Neostigmine side effects  
Nerve block: Bicarbonate effect  
Neural blockade: Bicarbonate  
NMB reversal end points  
PCN rash: Antibiotic selection  
Pharmacokinetics: Lidocaine  
Prolonged ventilation: Myoneuropathy  
Protamine reactions: Treatment  
Remifentanil pharmacokinetics  
Seizure provocation: IV anesthetics  
Spinal anes: Transient neurol Sx  
Succinylcholine after neostigmine  
Succinylcholine hyperkalemia risk factors  
Succinylcholine in children  
Succinylcholine: Contraindications for use  
Time to spont vent after tpi/sux  
Vol anes uptake: Determinants  
Volatile anesthetics: Induction

## **PHYSICS, MONITORING, ANES DELIVERY DEVICES**

AICD: Perioperative management  
Airway pressure alarms  
Arterial waveform: Periph vs central  
Bispectral index: Efficacy  
CO<sub>2</sub> absorbent drying: Effects  
Common gas outlet check valve  
Diffusion hypoxia  
Double burst vs. train of four  
E cylinder O<sub>2</sub> volume  
ESU dispersive pad: Purpose  
ETCO<sub>2</sub> – PACO<sub>2</sub> gradient  
ETCO<sub>2</sub> and esophageal intubation  
Etomidate administration  
Evoked potentials: Anes effects  
Fresh gas flow: Insp concentration  
Helium in airway obstruction  
Hypothermia: ABG effects  
Inhalation agents: Resp depression  
Inhalation agents: Wake-up  
Isoflurane wake-up time  
Laminar vs. Turbulent gas flow  
Low pressure leak test  
Mech vent airway press patterns  
Mech vent in asthma: I:E ratios  
Metoprolol: Intravenous administration  
Monitoring for residual NMB  
Monophasic vs. Biphasic defib  
NIBP: Sources of error  
Noninvasive ventilation techniques  
Oscillometric BP meas: Principles  
Oxygen pipeline problems: Dx  
Pacemaker nomenclature  
Pacemaker: Standard nomenclature  
Peak alveolar pressure measurement  
Pressure control vent cycling  
Pulse oximetry artifact: Cause  
Second gas effect  
Sevo: Fire hazard  
Soda lime exhaustion Rx  
TEE: Acute myocardial ischemia  
Turbulent gas flow physics  
Ultrasound physics: Frequency  
Vaporizer function  
Vaporizer safeguards  
Volatile agents: CO toxicity  
Wall O<sub>2</sub> failure: Signs

## ANATOMY

Peroneal N blockade: Popliteal fossa  
Spinal needle: Paresthesia DDx  
Transtracheal jet vent anat  
Ultrasound for IJ: Advantages

## ANESTHESIA PROCEDURES, METHODS, TECHNIQUES

ASA PS classification  
Attempted CSE but no CSF  
Autonomic drugs: Gastric emptying  
Bier block: Early tourniquet release  
Cervical plexus block Cx  
Comp epidural anes: Pneumocephalus  
Cor pulmonale: Preop findings  
Endotracheal tube: Respiratory rate  
Epi + local anes: B-blockade effect  
Epidural anes test dose: Effects  
Epidural hematoma Dx  
Epidural test dose:  $\beta$ -blocker effect  
Head trauma: Anesthetic management  
Hypoxemia in lateral position: Cause  
Interpretation: ABG  
Interscalene block: Phrenic paralysis  
Intravenous regional nerve block: Cardiac effects  
IV vs. epidural morphine  
Laparoscopy hypoxemia DDx  
Lat fem cutan nerve block anatomy  
Local anesthetic reactions: DDx  
Metformin: Contrast dye  
Midazolam: Side effects  
Myocard ischemia: Indicators  
Neurofibromatosis and intubation  
Postdural puncture headache: Parturients  
Preop cardiac eval guidelines  
Preop cardiac risk: Old MI  
Preop cardiac risk: Surg procedure  
Preop cardiac testing: LBBB effect  
Pulmonary fibrosis: Bleomycin therapy  
Recovery from spinal anesthesia  
Retained epidural catheter: Mgmt  
SAB: Neurologic sequelae  
Saphenous nerve distribution  
Scopolamine delirium Rx  
Spinal anes: Bradycardia resusc  
Spinal anesth: PFTs  
Spinal cephalgia: epidemiology  
Spinal spread: Factors influencing  
Spinal-epidural anesthesia  
Spread of LA during SAB: Factors  
Stellate block side effects  
Stellate ganglion blk: Effects  
Subarachnoid space: Injection of air  
Tibial nerve block: Distribution  
Tracheal trauma: Airway mgmt  
Volume vs pressure ventilators in ICU

## ANESTHESIA PROCEDURES, METHODS, TECHNIQUES (cont.)

Airway exch cath advantages  
Alveolar gas equation: Hypercarbia  
ASA Guidelines: Sedation  
Brachial artery cannulation Cx  
Carbon monoxide poisoning  
Double lumen tube: Auscultation  
Effects: Tube in trachea  
Endobronchial intubation: Position change  
Fluid resus: Crystalloid vs colloid  
GA: Heat loss prevention  
Hiatal hernia: Ketorolac  
Intraop hypothermia: Prevention  
Lactated Ringer's: Metabolic effects  
Laryngeal injury: Airway mgmt  
Laryngospasm complications  
Lithotomy position: Nerve injury DDx  
LMA cuff leak Rx  
LMA indications  
MAO inhibitor-pressor interaction  
Monitored anes care: Hypoventilation  
Nasogastric tube  
PCA: Basal infusion effects  
PONS injury: Resp effects  
PONV prophylaxis  
Poor larynx visualization: Diseases  
Position nerve injury: Lower extrem  
Postop hoarseness: Mechanisms  
Postop respiratory distress: Cause  
Pulmonary edema: Rx  
Rheumatoid arthritis: Cx of intubation  
Sedation: ASA guidelines  
Supplemental block: Saphenous  
Thorac epidural: Drug combinations

## HEMATOLOGY

Acute isovolemic hemodilution: Physiol  
Anticoagulants and epidural  
Autologous predonation: Risks  
Autologous vs allogenic blood  
Blood transfusion: Viral Cx  
Citrate toxicity: Rx  
Daunorubicin toxicity  
Doxorubicin: Anesth implications  
Hemolytic transfusion Rxn signs  
LMW heparin characteristics  
Massive blood loss: FFP  
Massive transfusion + coagulation  
Massive transfusion: Coagulopathy  
Transfusion anaphylactoid reaction  
Transfusion avoidance: Periop options  
Transfusion in neonates  
Transfusion: Viral transmission  
Von Willebrand's disease: Perioperative mgmt  
Warfarin: Urgent reversal

## **RESPIRATORY SYSTEM**

Advanced age: Pulm parameters  
Anesthetic management: Lung disease  
Apneic oxygenation physiology  
ARDS: Techniques of ventilation  
ARDS: Ventilation management  
Art O<sub>2</sub> content and VO<sub>2</sub>: Physiology  
Arterial blood gas analysis  
Awake intubation: Airway anesthesia  
Bronchopleural fistula: Mgmt  
Bronchoscopy: Tube placement  
Comb Resp / metab pH disturbance  
Controlled ventilation: Hemodynamics  
COPD: CO diffusion  
Effects of PEEP on pul edema  
Hypoxia: Physiologic responses  
Inadequate O<sub>2</sub> delivery Dx  
Lung function tests: Airway obstr  
Mixed SvO<sub>2</sub> determinants  
Moderate sedation definition  
Multiple rib fractures: Analgesia mgmt  
Myasthenic syndrome: NMB effects  
One-lung vent: Hypoxemia mgmt  
Oxygen physiolo: HGB and CAO<sub>2</sub>/CVO<sub>2</sub>  
PEEP  
Pressure support vent: Mechanism  
Pulmonary embolus physiology  
Scleroderma: PFT changes  
Superior laryng N block effects  
Transcrucoid local anesthetics: Effects  
Ventilation: Airway pressure

## **CARDIOVASCULAR SYSTEM**

Amiodarone: Toxic pulmonary effects  
AV gradient: Determinants  
BP measurement: Site  
CAD: Intraop ischemia mgmt  
CAD: Preoperative evaluation  
Cardiac innervation: Nerve blocks  
Cardiac morbidity: Orthopnea  
Cardiomyopathy: Atenolol  
Cardiopulmonary bypass: Milrinone  
Carotid endarterec: EEG slowing Rx  
Central-to-peripheral art pressure changes  
Cerebral ischemia during carotid endart: Mgmt  
Coagulopathy: Blood component Rx  
Coagulopathy: Platelets  
Coronary anat: Reg wall motion Dx  
Coronary circulation and TEE  
CPB rewarming temperature progression  
CPB venous return  
CPB: Noncoronary collateral flow  
CPB: Renal failure  
Defibrillation: Influencing factors  
Descending thoracic aortic surg: CNS Cx  
Dopamine hemodynamic effects  
ECG interpretation: Delta waves

## **CARDIOVASCULAR SYSTEM (cont.)**

HOCM: Hypotension management  
Hypoxemia during delib hypotension  
IHSS: Rx of hypotension  
Increased SvO<sub>2</sub>: cause  
Inguinal hernia: Preoperative evaluation  
Ischem changes: Intraop ECG settings  
Mediastinoscopy intra-op Cx  
Metabolism of vasodilators  
Mitral regurgitation: Anesthetic drugs  
Mitral stenosis: Anesth mgmt  
Myocard ischemia: Intra-op Rx  
Myocard O<sub>2</sub> supply:demand ratio  
Myocardial ischemia, tachycardia: Rx  
Myocardial ischemia: ECG  
Myocardial ischemia: Physiologic factors  
Neonatal art line: Hypovolemia Dx  
Nicardipine: Hypotension  
Nicardipine: Severe hepatic insufficiency  
Nitroglycerin toxicity  
Nitroprusside toxicity signs  
Norepinephrine hemodynamic effects  
Normovolemic hemodil: CV compensation  
Pacing modes: Stroke volume  
Perioperative cardiac risk modification: Drugs  
Phenylephrine administration  
Phenylephrine: Spectral-edge frequency  
Post-cardiac tpnt autonomic pharmacology  
Predictors of myocardial risk  
Right vent O<sub>2</sub> supply phys  
Sevoflurane anesthesia: Hypovolemia  
Stroke after CPB: Risk factors  
TEE: Hypotension DDx  
Thermodilution CO: Inaccuracy sources  
Vfib: Drug Rx  
WPW: Common dysrhythmias

## **GASTROINTESTINAL/HEPATIC**

Biliary obstruction: Jaundice  
Diarrhea: ABG effects  
Immunosuppressants: Anesth consid  
Liver disease: Synthetic function Dx  
Liver failure: Signs and tests  
Periop coagulopathy mgmt  
Pickwickian syndrome: ABGs  
Postop jaundice: Causes  
TPN: Intraoperative effects

## **CENTRAL AND PERIPHERAL NERVOUS SYSTEMS**

Abnormal ECG: Catecholamines  
Acute mgmt spinal shock  
Air embolization Dx: Devices  
Anesthesia injection: Axillary sheath  
Atropine: Respiratory distress  
Autonomic hyperreflexia hemodynamics  
Autonomic hyperreflexia: Prevention  
Axillary block limitations: Mgmt  
Axillary block: Indications  
Beta blocker side effects  
Brain death: Definition  
Brain death: Dx  
C7-8 spinal injury effects  
Carbon monoxide poisoning: Labs  
Carotid surg: EEG interpretation  
CBF: Clinical determinants  
CBF: Factors influencing  
Central anticholinergic syndrome: Rx  
Cerebral edema: Blood-brain barrier  
Cerebral perfusion pressure determ  
Cerebral vasospasm characteristics  
Cerebral vasospasm mgmt  
Cerebral vasospasm: Rx  
Cerebrospinal fluid: Intracranial pressure  
Cholinergic crisis: Rx  
CNS injury management  
CO poisoning: Hyperbaric O<sub>2</sub>  
CO poisoning: Rx  
Cord transection: Mass reflex  
CPB and temp measurements  
Deliberate hypoten: Isoflurane vs SNP  
Detection of venous air emboli  
Dexmedetomidine: Hemodynamic effects  
EEG burst suppression: Causes  
Epilepsy surgery: Anes drugs  
Evoked potentials: Anesthetics  
Glycopyrrolate effects  
Heat loss during GA  
Heat nociceptors  
Indication: Sup hypogast plexus block  
Intracranial aneurysm hemorrhage  
Intracranial aneurysm rupture: Rebleed DDx  
Intracranial aneurysm: CSF drainage  
Intracranial compliance measurement  
Intracranial pressure: Diuretics  
Lung protect vent: Pressure goal  
Metabolic factors: Neurol outcome  
Metoclopramide: Extrapiram Rxn mgmt  
Pedi hyperkalemic C-arrest: Causes  
Phenylephrine: Cerebral blood flow  
Pontine surgery: Hemodynamic effects  
Post-craniotomy DI: Mgmt  
Pressors and preload  
Regional ansth: Knee replacement  
Signs of autonomic hyperreflexia

## **CENTRAL AND PERIPHERAL NERVOUS SYSTEMS (cont.)**

Spinal cord anatomy  
Spinal shock management  
SSEP latency prolongation: DDx  
SSEP monitoring: Dx/Rx  
SSEPs: Systemic physiol disturbances  
Subarachnoid block: ECG changes  
Superf cervical plexus block anat  
Sux hyperkalemia: Inherited diseases  
T2 spinal: Respiratory arrest mechanism  
Terbutaline side effects  
Vasopressors in sepsis  
Venous air embolism: Ultrasonography

## **RENAL/URINARY**

Acid-base: Complex abnormalities  
COPD: ABG abnormalities  
Head trauma: Hypervent compensation  
Intraoperative oliguria evaluation  
Lithotripsy: Shock wave timing  
Morphine metabolites: Renal failure  
Nicardipine side effects  
Normal saline: Acidosis  
Postoperative acid-base disorders  
Postoperative renal failure  
Renal failure: Opioid admin  
Renal insufficiency: Fluid mgmt  
Turp: Bladder perforation

## **ENDOCRINE/METABOLIC**

Diabetes insipidus: Dx  
Diabetes: Hyperglycemia preop mgmt  
Elective surgery: Preop hyperglycemia mgmt  
Hypercalcemia preop management  
Hypocalcemia after parathyroidectomy  
Hypothyroidism Rx: Occult CAD  
Phenoxybenzamine: Phys effects  
Pre-op extreme hyperglycemia: Type I DM  
Rx: Hypercalcemia  
Thyroidectomy: Post-op Cx  
Trauma: Oliguria DDx  
Type 2 diabetes: Periop mgmt  
Uncontrolled diabetes: Intraop Rx

## **NEUROMUSCULAR DISEASES AND DISORDERS**

Amyotrophic lateral sclerosis: PFTs  
MS: Periop exacerbation  
Myasthenia gravis: Relaxant potency  
Myasthenic crisis Rx  
Myasthenic crisis: Edrophonium  
NM blockers: Drug interactions

## **PAINFUL DISEASE STATES**

Celiac block effects  
Chronic pain: CRPS Sx and signs  
Clonidine: Morphine tolerance  
Complex regional pain syndrome I  
CRPS I early findings  
Fibromyalgia: Dx  
Intrathecal narcotics: Tolerance  
Ketamine analgesic mechanism  
Liposome-encaps morphine: Advantages  
Low back musculoskel pain Rx  
Lumbar radiculopathy: Epid steroids  
Lumbosacral radiculopathy mgmt  
Neuraxial opioids action site  
Neuraxial opioids: Onset  
Neurolytic intercost blk indications  
Pancreatic cancer pain Rx  
Pelvic cancer pain: Mechanism  
Postherpetic neuralgia: Location  
Proximal amputation: Phantom limb pain  
Spinal stim: Indications  
Stellate ganglion block: Signs  
Stellate ganglion nerve block  
Tramadol drug interactions  
Trigeminal neuralgia: Pharmacotherapy

## **OTOLARYNGOLOGY (ENT) ANESTHESIA**

Airway fire: Management  
Inspired gases: Combustibility  
Jet vent: Air entrainment phys  
Laryngotracheal injury: Airway mgmt  
Laser: ETT & fire prevention

## **ANESTHESIA FOR PLASTIC SURGERY,**

### **LIPOSUCTION**

Liposuction complications  
Liposuction: Lidocaine concentration  
Tumescent anes: Lidocaine dose

## **ANESTHESIA FOR LAPAROSCOPIC SURGERY**

Laparoscopy + Tberg: Physiologic effects  
Laparoscopy: Hemodynamic effects  
Laparoscopy: Hypercarbia DDX  
Laparoscopy: Hypotension DDX  
Laparoscopy: Hypoxemia DDX

## **OPHTHALMOLOGIC ANESTHESIA**

Oculocardiac reflex management  
Retrobulbar block complications  
Retrobulbar block Cx  
Retrobulbar block: Complications

## **ORTHOPEDIC ANESTHESIA**

Bone marrow embolus: Hypotension mgmt  
Effects of tourniquet release  
Tourniquet pain prevention: Legs

## **PEDIATRIC ANESTHESIA**

Anes uptake: Infant vs adult  
Calcium chloride  
Caudal block anatomy  
Croup: Radiographic Dx  
Down syndrome: Airway  
Hypovolemia clinical signs  
Infant airway anatomy  
Infant fluid replacement  
Infant: BP and HR during halothane  
Infant: Respiratory physiology  
Lactated Ringer's solution: Fluids  
Masseter rigidity and MH  
Methemoglobinemia: EMLA  
Neonatal persistent fetal circulation  
Neonatal apnea: O<sub>2</sub> desaturation  
Neonatal surgery: Hypothermia prevention  
Neonatal thermoregulation  
Omphalocele repair: Hypovolemia Dx  
Pediatric URI: Elective surgery  
Peds emergence delirium: Risk factors  
Peds PONV Rx  
Peds: Circle system advantages  
Persistent fetal circ: Pathophys  
Pierre-Robin anatomy  
PONV prophylaxis: Children  
Premedication in children: Midazolam  
Premie apnea prevention  
Premie postop apnea risk factors  
Respiratory physiol: Neonates vs. adults  
Succinylcholine: Bradycardia  
Sux hyperkalemia: Dx/Rx  
Systemic-pulmonary artery: Anes consid  
Trisomy 21: Anes implications  
Volatile anes overdose: Infants

## **TRAUMA, BURN MANAGEMENT, MASS CASUALTY,**

### **BIOLOGICAL WARFARE**

Airway burn mgmt  
C-spine injury risk assessment  
Tension pneumothorax: Intraop mgmt

## **ETHICS, PRACTICE MANAGEMENT, MEDICOLEGAL ISSUES**

Ethics: Disclosure  
Maintenance of Cert requirements  
Medication error prevention  
OR management: Time definitions  
Sentinel event definition

## **AMBULATORY SURGERY**

Amb surg: Unplanned admission  
Amb surgery contraindications  
Amb surgery: Pregnancy testing  
Ambulatory surg SAB additives  
Outpatient anesth: Delayed discharge  
Outpt procedures: Pt selection  
PACU Stage I bypass criteria  
Spinal anesthesia: Delayed recovery

## **OBSTETRICAL ANESTHESIA**

Air embolism & cesarean section  
Anes during pregnancy: PCO<sub>2</sub> mgmt  
Aspiration pneumonia mgmt  
C-section GA: Unable to intubate  
Diabetes: Pregnancy Cx  
DM in pregnancy: Cx  
Emerg C-section/asthma: GA mgmt  
Epidural opioids for labor  
Fetal beat-to-beat variability  
Fetal HR monitoring  
FHR tracing: Uteroplacental perfusion  
Hypotensive syndrome: Fetal distress  
Maternal-fetal oxygen transport  
MgSO<sub>4</sub>/eclampsia: Implications  
Neonatal blood gas analysis  
Neonatal resuscitation  
Neonatal resuscitation: Meconium  
Nerve injury: Forceps delivery  
Oxytocin side effects  
Placental transfer: Determinants  
Pregnancy respiratory phys  
Pregnancy: Physiologic changes  
Pregnancy: Spinal anesthesia spread  
Pregnancy: Supine hypotension phys.  
Ritodrine: Side effects  
Rocuronium: Placental pharmacology  
Second stage labor: Analgesia options  
Succinylcholine: Placenta  
Supine hypotension physiologic  
Uterine atony and asthma: Mgmt  
Uterine atony Rx: Asthma  
Uterine atony/bleeding mgmt  
Uterine relaxing agents  
Valvular heart disease: Pregnancy  
Venous air embolism

## **GERIATRIC ANESTHESIA/AGING**

Aging: Cardiac physiology  
Aging: Pharmacodyn: Anes drugs  
Aging: Respiratory effects  
Geriatric periop risk predictors  
Oliguria and PPV DDx/Rx  
Scopolamine patch: Elderly Pt Cx  
Scopolamine: CNS effects

## **CRITICAL CARE**

Septicemia hemodynamics Dx/Rx  
SvO<sub>2</sub>: Septic shock  
Vasopressin in septic shock

## **ELECTROCONVULSIVE THERAPY**

ECT: Physiol changes  
ECT: Slow awakening DDx

## **ORGAN DONORS: PATHOPHYSIOLOGY AND MANAGEMENT**

Brain death: Electrolytes

## **RADIOLOGIC PROCEDURES: ANESTHETIC IMPLICATIONS**

Contrast nephropathy prevention  
Contrast Rxn Rx  
MRI: Anes monitors  
MRI: Monitoring artifacts

## **PHYSICIAN IMPAIRMENT OR DISABILITY**

Chemical dependence signs  
Physician impairment: Referral  
Substance abuse: Relapse risk