

PRE-/PERI-/POST-OPERATIVE PERIOD

- **Peri-operative Care**

- Co-morbidities

- Diabetes
- Hypertension
 - Continue procedure typically, if < 180/100 and asymptomatic
 - **Consider deferring** procedure, if > **200/110** and/or symptomatic
- Tobacco
 - Vasoconstriction
 - Decrease O₂ transport
- Immunosuppression
 - Poor wound healing, especially cardiac transplants
 - Risk of NMSC
- Pregnancy
 - Safe to use during pregnancy:
 - Clean with alcohol and chlorhexidine preps
 - Lidocaine without epinephrine
 - Acetaminophen (avoid NSAIDs)
- Implantable Devices
 - Electrocautery safe
 - Bipolar forceps reduce EM interference, if have brain stimulators/neuro-stimulators

- **Cleaning Agents**

- Alcohol

- **Quickest onset**
- Good coverage (bacteria, viruses, fungi), except for spores
 - Not optimum against HIV since needs long contact time (dries quickly)

- **Chlorhexidine**

- **Longest duration**
 - Bacteriostatic at low concentrations and bactericidal at higher concentrations
- Broad coverage, does not need to be dry to be effective
 - Effective against bacteria, viruses including HBV and HIV, and some fungi.
- Toxic to eye (cornea) and ear (middle ear), avoid use in those areas.

- **Povidone-iodine**

- Broadest antimicrobial spectrum.....inactivated by blood
- Needs to dry before effective
- Safe to use around **eyes/ears**
- Application of Betadine on top of gentian violet marker ink at least 30 seconds prior to cleaning field with alcohol or chlorhexidine, will lessen discoloration.

- **Anesthesia**

- **EMLA** cream (2.5% lidocaine and 2.5% prilocaine)

- Prilocaine can induce methemoglobinemia due to ability to oxidize iron in RBC from ferrous to ferric state (impairs hemoglobin transport of oxygen)

- Abrupt sign of hypoxia (cyanosis, dyspnea, fatigue, shock, coma, seizures)
- Risk factors:
 - Age < 1
 - G-6PD deficiency
 - Not a risk factor if have sickle cell anemia
 - Medications (dapsone, acetaminophen, sulfonamides, phenobarbital, hydroxychloroquine, nitrofurantoin, etc.)
- Local Anesthetics Facts:
 - **Amine** group/end of anesthetic = Determine **duration**/onset (“A-min-ute”)
 - **Aromatic** ring = Determine **potency** (“Aroma” smell potent)
 - Intermediate chain linkage = determine class (amide vs. ester)
 - Loss of sensation order = Pain > Touch > Pressure > Vibration > Motor function
- **Amide anesthetics:** contain “-i-“ before “-caine” in name
 - Metabolized in liver by CYP450 enzyme system (excreted by kidneys)
 - Care in patients with liver issues
 - Types:
 - Lidocaine
 - Allergies usually due to paraben preservatives
 - Beta-blockers (e.g., propranolol) and calcium channel blockers (e.g., diltiazem) may *increase* lidocaine levels
 - Toxicity
 - Tongue and perioral numbness
 - Visual disturbances
 - Twitching
 - Max recommended dosing
 - 1% lido without epinephrine = 4mg/kg (30-60 minutes)
 - **1% lido with epi = 7mg/kg**
 - Example: 50kg (110#) = 35ml or 350mg (10mg lidocaine/1ml)
 - **Tumescent = 55mg/kg**
 - **Infant/child (about ½ as adults)**
 - Lidocaine with epi = 3-4 mg/kg
 - **Maximum Lidocaine, regardless weight**
 - **Adult = 500mg with epi** (child = 100-150mg)
 - 300mg without epi
 - Bupivacaine
 - **One of longest acting** local anesthetics
 - Risk of **cardiac toxicity** (often avoid use in tumescent liposuction)