---PERIOPERATIVE MANAGEMENT---

Pre op screening

---Cardiac

EKG for men>40, women>50

Alterations in cardiac physiology: catechol surge d/t pain, ↓ cardiac blood flow d/t ↑HR, vasoconstriction

Mild CHF pts have no ↑ in periop MI, but decompensated CHF pts are very high risk

Pts w/ previous MI have 5-10% of periop MI vs 0.5% in pts w/ no h/o MI

This risk declines until 6 mo post MI, when risk plateaus at 5% (thus wait 6 mos post MI to operate)

Pts who have had coronary revasc w/ in 5 years and are Asx, can proceed w/o further tests

---Pulmonary

#1 cz of post op cxs

↑ risk with upper abdom midline incisions

Median sternotomy actually has low incidence of pulm cxs

Gen anesthesia ↓s FRC 10%; ↓resp drive, no cough, ↓mucus clearance, intubation ↑s bact colonization

Within 24 hours, TV ↓s by 20%, RR ↑s 25%

Hi [O2] czs absorption atelectasis (more O2 absorbed, leads to alveolar collapse)

Pts w/ obstructive dz are high risk; anesthetics can cz bronchospasm

Smokers have 2-6x ↑ risk of pulm cxs

Pts w/ FEV1 <1L, PaO2<50, PaCO2>45 have ↑d risk; get PFTs

For pulm operations: pt must be left w/ FEV1>800ml or will be ventilator dependent

If pt can climb 5 flights of stairs, will tolerate pneumonectomy; If 3 flights, will tolerate lobectomy

---Renal

Pre op CRF pts should have K<5, HCO3>18; small ↑in PaCO2 will cz profound acidosis

Monitor for hyperPhos, hyperMg, hypoCa, hypoalb

Do not restrict protein solely b/c pt has CRF

---Hepatic

Intravascular volume depleted; Na and H2O restriction is cornerstone of treatment

Many pts are alcoholics, need benzos to avoid w/d sxs; give thiamine (before glucose), Mg, Phos

Bleeding risk due to poor production of vit K factors.

---Diabetes

Pts should take only ½ morning dose of insulin before op

Continuous infusion of D5 to maintain blood gluc 150-200

Continuous infusion of insulin, 1-3 units/hr

Follow urine ketones as DKA may be mistaken for ileus

Men w/ DM have 2x↑ in cardiac mortality compared to non DM pts; women have 4x↑ risk

Tachycardia common d/t autonomic cardiac neuropathy

Gastroparesis common, may require NGT

↑ risk of infxn, esp in combo with small vessel dz

---Adrenal insufficiency

For minor surgical stress, give 25mg hydrocortisone for 1 day

For moderate stress, 50-75mg over 1-2 days

For severe stress, 100-150mg over 2-3 days

---Pregnancy

↑Blood volume may mask blood loss

↑Thromboembolism risk

Gravid uterus czs ↓ venous return, delayed gastric emptying

Hemorrhoids worsen d/t venous compression by uterus (give laxatives, stool softeners, suppository)

↑Pulmonary cxs

2nd trimester is best time for operation if needed (5% spont abn or early labor w/ abd surg + gen anesth)

Appendicitis and biliary dz are #1 reasons for surg in pregnancy

In preg trauma pts, early fetal monitoring is essential

Hard uterus or large for gest age are signs of abruption (give mom Rhogham if Rh-)

Post op management

NGT: usu used for gastric suction; may occasionally be used for feeding
Nasoenteric tube: usu used for feeding (always check tube position before feeding)
T tube: placed in CBD to drain bile
Gastrostomy tube: for drainage or feeding; called a PEG tube if placed endoscopically
Jejunostomy tube: for long term nutrition
Closed suction drains: JP, hemovac; evacuate fluid collections
Sump suction drains: Davol drains; very large, stiff, w/ continuous suction; for thick, particulate drainage
Penrose drain: no suction used; simply maintain pathway for fluids
Wounds: do not pack wound cavity too tightly, leads to tissue ischemia
DVT prophylaxis
- W/ no prophylaxis, 25% risk of DVT in post op pts
- Monitor platelet count for HIT (transient type and white clot syndrome type)
- UFH effective for most pts; LMWH best for trauma pts

Malignant hyperthermia
- 1/50,000 adults; 1/15,000 children
- d/t disruption of intracellular calcium metabolism (massive release from sarco retic into cell)
- May be triggered by halogenated anesthetics or succinylcholine
- 1^{st} sign = abrupt rise in ETCO2; tachycardia, cyanosis, rigidity follow
- Temp may increase 1-2 degrees every 5 mins
- Rx: d/c triggering agent; start dantrolene 1mg/kg boluses; look for compartment synd

Atelectasis
- All gen anesthetics cz some atelectasis; worse w/ obesity, and hi [O2]
- Pts also have suppressed cough, ↓resp drive (sedation), incisional pain
- Rx: reexpansion (incent spirom), chest PT, pain management, early mobilization
- MIS has significant reduction in atelectasis

Wound failure: spont discharge from wound = sign heralding acute fascial dehiscence
Surgical site infxn: 25% of all nosocomial infxns, tachycardia is usu 1^{st} sign
Nosocomial infxns causing fever: VAP, sinusitis, catheter sepsis, C diff, wound infxn
- UTI rarely czs fever; foley for > 24 hrs, urine will usu have bact + WBC: no abx needed