Things to Consider for the Pre Op, Intra Op, and Post Operative Patient

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Pre Op
History & Physical
Risk Factors
Patients Functional Status
Laboratory Investigations
Concomitant Medical Problems

OPTIMIZE FOR PROCEDURE
★ PROPER CONSULTATION SHOULD NOT BE DONE "IN LAST SECOND FASHION"
DEVELOP APPROPRIATE PREOPERATIVE CARE PLAN
EDUCATION OF PATIENT ABOUT SURGERY
ANESTHESIA INTRA OPERATIVE AND POST OPERATIVE
CARE AND POST OPERATIVE PAIN CONTROL

PRIMARY GOALS

GENERAL HEALTH
ASSESSMENT

HISTORY MOST IMPORTANT
COMPONENT IN PRE OPERATIVE
EVALUATION
INCLUDE CURRENT MEDICAL HISTORY, SURGICAL HISTORY, FAMILY HISTORY, SOCIAL HISTORY, INCLUDE TOBACCO, ETOH AND ILLEGAL DRUG USE

DRUG HISTORY

MEDICATION HISTORY SHOULD BE OBTAINED IN ALL PATIENTS
ALLERGIES INCLUDING CURRENT AND PAST DRUG THERAPY
UNUSUAL REACTIONS OR RESPONSES TO DRUGS AND ANY ADVERSE REACTIONS ASSOCIATED TO ANESTHESIA IN PAST

GENERALLY MOST DRUGS SHOULD BE CONTINUED UP TO AND INCLUDING THE MORNING OF OPERATION ALTHOUGH SOME ADJUSTMENT IN DOSE MAY BE REQUIRED

ORAL CONTRACEPTIVES SHOULD BE WITHDRAWN 6WKS PRIOR SECONDARY TO INCREASED RISK OF DVT DEPENDING TO TYPE OF SURGERY
SOME DRUGS SHOULD BE DISCONTINUED PREOPERATIVELY. MONOAMINE OXIDASE INHIBITORS SHOULD BE WITHDRAWN 2-3 WKS PRE OP SECONDARY TO INTERACTION WITH ANESTHESIA DRUGS

- All patients are requested to stop all herbal supplements 2 weeks prior to surgery.
- Drugs that potentiate bleeding need to be evaluated closely with the risk benefit for each drug and time frame
- Aspirin should be discontinued 7-10 days prior, and Clopidogrel 2 weeks prior.
- There are several new classes of drugs that affect platelet function and are supposed to have very short half lives, these need to be discussed with the Surgeon.

AS ALWAYS A COMPLETE REVIEW OF SYSTEMS TO LOOK FOR UNDIAGNOSED DISEASE OR INADEQUATELY CONTROLLED CHRONIC DISEASE
PHYSICAL EXAMINATION

THE PHYSICAL EXAMINATION IS BUILT ON INFORMATION GATHERED FROM HISTORY. AT A MINIMUM A FOCUSED PRE ANESTHESIA EVALUATION THAT INCLUDES AIRWAY, LUNGS, HEART AND VITAL SIGNS SHOULD BE DONE.

LABORATORY WORK UP

PRE OPERATIVE RISK ASSESSMENT

- American Society of Anesthesiologists
- Classification of Physical Status
- ASA 1: No organic disturbance
- ASA 2: Mild to moderate systemic disorder that may or may not be related to the reason for surgery
- ASA 3: Severe systemic disturbance, heart disease that limits activities, poorly controlled HTN, DM with vascular complications, chronic pulmonary disease, angina, Hx of MI
- ASA 4: Severe systemic disturbance that is life-threatening with or without surgery
- ASA 5: Moribund patient with little chance of survival but is submitted for surgery as last resort
- ASA 6: Declared brain dead whose organs are being removed for donor purpose

**What does an Anesthesiologist look for while doing their pre-op exam?**

- **Neck:** How long?
- **Mouth:** How wide does it open?
- **Teeth:** How many, loose, broken or dentures?
- **Tongue:** How big or wide?
- **Allergies and meds as well as previous anesthesia events**
• Looking at strictly intraoperative problems that can lead to morbidity and mortality.

• Airway issues such as failure to provide adequate ventilation leading to hypoxia, fortunately these problems have been decreasing.

• Surgical complications in one study documented at least one complication in 17% of surgical patients.

• Surgery related morbidity & mortality fall into one of three categories, cardiac, respiratory and infectious complications.

• Overall risk is related to type of surgery and individual factors.

• In addition urgent and emergency procedures constitute higher risk than elective.

• What are pre operative cardiac complications to look out for?
• MI, pulmonary edema, VF or complete heart block are major cardiac complications

• Should Acute MI occur the mortality rate remains at 40-70 %, and may need prompt angioplasty, ASA, Beta blocker & or angiotensin converting enzyme inhibitor

• Previous MI, it appears now that the risk after previous infarction is related less to the age of the MI than to the functional status of the ventricles and the amount of myocardium at risk from further ischemia

• In situations were surgery has to be performed < 3 months post MI studies demonstrate marked benefit of operating under the protection of Beta blocker which should be started days to weeks prior if possible with target HR 50-60 BPM

• Patients risk factors are subdivided into 3 categories
  • Major, intermediate and minor
  • Major predictors have 5 times greater preoperative risk, and only emergent surgical procedures should be considered
  • Intermediate predictors are, proof of well established coronary disease, with DM included due to its frequent association with silent ischemia
  • Minor risk factors are markers of increased probability of coronary artery disease
INTRAOPERATIVE CONSIDERATIONS

- What happens in the operation room?
- Pre-induction, meds (narcotics), line placement, and leads
- Induction, paralytics, and deep anesthesia
- Intubation easy or difficult
- Fluid shifts due to loss of vagal tone
- Vasopressors, tighten or loosen blood vessels, volume replacement
- Incisions and operation start
- Length of operation
- Closure, extubation, and transfer

Other Causes of Inflammatory Response
Filters, Pump Heads and Tubing

Damaged Red Blood Cell
COMMON POST OPERATIVE COMPLICATIONS

- Post operative fever, atelectasis, wound infection, embolism, anemia and DVT
- Highest incidence of complications is between one and three days after surgery.

- Immediate: Primary hemorrhage or reactionary hemorrhage.- replace blood loss and or re explore wound.
- Basal atelectasis
- Shock: blood loss, Acute Myocardial Infarction, pulmonary embolism or septicemia
- Low urine output
• Post operative complications

• Early:- Pain, acute confusion, nausea vomiting, fever, pneumonia, wound or anastamosis dehiscence, DVT, acute urinary retention, post op wound infection, bowel obstruction and paralytic ileus

• Late:- Bowel obstruction, incisional hernia, persistent sinus tract and recurrence of reason for surgery

• Hemorrhage: if large volume of blood have been transfused hemorrhage can be exacerbated by consumption coagulopathy

• Late post op hemorrhage occurs several days after surgery due to infection damaging vessels at op site

• Infectious complications are the main causes of post op morbidity
• Disordered wound healing, factors that may affect healing rates
• Poor blood supply, excess suture tension, long term steroids, immunosuppressive therapy, radiotherapy, severe rheumatoid disease and malnutrition
• Wound dehiscence occurs 7-10 days post op, serious complication with mortality up to 30%, always assume that the defect involves the whole of the wound and is often heralded by serosanguinous discharge from wound

• Surgical injury: unavoidable tissue damage during surgery, also risk of injury while being transported or positioned in OR, these include injuries from falls, damage to diseased bones and joints, nerve palsies, electrocautery burns.

• Respiratory complications: atelectasis, pneumonia, aspiration pneumonia, acute respiratory distress syndrome.
• Thromboembolism; DVT and pulmonary embolism are major causes of death after surgery.
• Urinary problems: urinary retention, UTI, acute kidney injury.
CAUSES OF POST OP FEVER

- Days 0-2
  - Mild fever (temp < 38 degrees): tissue damage and necrosis at wound site, Hematoma
  - Persistent fever (temp > 38 degrees): atelectasis, specific infection related to surgery, UTI and blood transfusion reaction
• Days 3-5: Bronchopneumonia, sepsis, wound infection, deep site infection, abscess formation and DVT
POST OP EXPECTATIONS AND PATIENT AND FAMILY EXPECTATIONS

- Surgeon talks to family about procedure, family talks to bedside nurse and sees patient with possibly tubes and wires being removed.
- Patient still under residual anesthesia and may not understand questions or explanation.
- Depending on type of surgery may be on IV meds, have chest tubes or drains
- May be in ICU or back in patient room
• Re explain to patient surgical outcome with a family member present is best.
• Ambulate PT as soon a possible to prevent DVT
• Examine patient daily labs as necessary and X-rays or scans as needed.
• Daily discuss going home and what to expect, with patient and family.
• Follow up visit in office and with referring MD
• All patients should go home with a med list, and are asked to take list to any office visits and to make notes of medication changes.

• Our expectation of the outcome of the surgery will be different than the view of the patient, as will be different with his family.
• Take the time to explain possible outcomes in the office on the pre op visit.
• Most patients only hear or understand less then 1/3rd of what you will tell them which may lead to difficulties later.
• Try to keep a positive light on their expectations without making false statements
References

THANK YOU

• Pearls
H&P REPRESENT THE BEST METHOD
OF SCREENING FOR THE PRESENCE
OF DISEASE
CONSULTATIONS SHOULD BE
DONE IN A TIMELY MANNER NOT
LAST MINUTE