Prophylactic Beta-Blocker Therapy

The Revised Cardiac Risk Index (RCRI) indentifies patients at risk for peri-operative morbidity and mortality due to cardiac events

- One point is assigned for each of the following risk factors
  - Thoracic Vascular Procedures
  - Abdominal Vascular Procedures
  - Supra-inguinal Vascular Procedures
  - Coronary Artery Disease
  - Diabetes Mellitus
  - Cerebrovascular Disease

RCRI >= 2 defines the High risk patient

- BB therapy in patients with RCRI scores >= 2 has been associated with reduced risk of peri-operative death
- Pt should receive BB if there are no contraindications to BB therapy

Relative contra-indications to BB therapy

- Allergy to BB
- Steroid-dependent and/or 02-dependent COPD
- De-compensated CHF
- EF < 20 - 30%
- HR < 50 or history of 2nd or 3rd degree HB
- Post-carotid endarterectomy bradyarrhythmia

Peri-operative BB Administration

For patients already on chronic BB therapy

- Continue oral BB on morning of surgery with sip of water

For patients not previously on BB

- Surgeon or primary care physician should administer Lopressor (Metoprolol) 25-50 mg BID on day before surgery
- BB should be held if: HR is < 50 or SBP < 100 torr, Sx of CHF, bronchospasm or 2nd or 3rd degree heart block

Induction of Anesthesia

- If HR > 80 or within 20% of ischemic HR threshold
- Titrate up to 5 mg of metopolol as part of induction

Intra-operative Management

- If HR > 100 or Ischemia noted

- 1st Treat specific underlying cause of tachycardia
- Administer additional metoprolol in 1-2mg increments (maximum dosage 15mg IV)
- If ischemic ST segment changes persist despite BB therapy consider other therapeutic interventions

Emergence hypertension and tachycardia

- 1st Treat specific underlying cause of tachycardia
- Treat with metoprolol or labetolol

Post-operative Management

- Surgeon to order Metoprolol 25-50mg BID until the patient is discharged
- At discharge, patients' internist or cardiologist should determine whether BB therapy is continued