

ACTIVE LEARNING TEMPLATE: Medication

STUDENT NAME Layla Espinola-Keel

MEDICATION Metoprolol (Lopressor, Toprol XL)

REVIEW MODULE CHAPTER _____

CATEGORY CLASS antihypertensive, antihypertensive

25mg
PO
daily

PURPOSE OF MEDICATION

Expected Pharmacological Action

- Beta blocker
- blocks stimulation of beta₁ (myocardial) - adrenergic receptors.
- does not usually affect beta₂ (pulmonary, vascular, uterine)

Therapeutic Use

decreases BP & HR & ↓ freq. attacks of angina pectoris & ↓ CV mortality & hospitalization of pt w/ ♥ failure

Complications

- CV: bradycardia, HF, hypotension
- ENDO: hyper/hypoglycemia
- GI: constipation, diarrhea, nausea, vomit
- GU: erectile dysfunction
- MS: arthralgia
- Neuro: fatigue, weakness
- Resp: bronchospasm, Pulmonary edema

Medication Administration

- PO adults: take apical pulse: < 50 bpm = don't give
- htn/angina: 25-100 mg/day
may be ↑ q 7 days as needed
up to 450 mg/day (ER 400mg/day)
- MI: 25-50 mg (starting 15 min after last IV dose) q 6 hr for 48 hr then 100mg twice daily
- ♥ failure: 12.5-25 mg once daily (ER) can be doubled q 2 weeks up to 200mg daily
- migraine: 50-100 mg 2-4 daily
- IV: MI 5mg q 2 min for 3 doses followed by oral dosing

Contraindications/Precautions

- uncompensated in HF; pulmonary edema, cardiogenic shock; heart block, or sick sinus rhythm (absence of pacemaker)
- caution: renal impairment, hepatic impairment, pulmonary disease, DM or ↓ nutrition intake, Thyrotoxicosis, Hx of severe allergic rxn
- OB: use only if maternal benefit justify infant risk

Nursing Interventions

- BP, ECG & pulse during day & dose changes
- monitor vitals (ECG) q 5-15 min after parental admin
- if HR < 40 bpm & if cardiac output ↓, administer atropine 0.25-0.5 mg IV
- I&O's, daily weights
- assess for HF: dyspnea, rales/crackles, ↑ weight, peripheral edema, jugular venous distention
- Labs: ↑ BUN, serum lipoprotein, ↑ Bgl, ↑ T4, ↑ uric acid, ↑ triglycerides, ↑ AST, ALT

Interactions

- Drug-Drug: general anesthesia, IV phenytoin, & verapamil may ↑ risk of myocardial depression
- ↑ risk of brady cardia w/ digoxin, verapamil, diltiazem, clonidine
- ↑ hypotension if used w/ antihypertensives, alcohol, nitrates
- may alter effectiveness of insulin or oral hypoglycemic agents
- use cautiously within 14 days of MAO inhibitors

Client Education

- abrupt withdraw may = life-threatening arrhythmias, HTN, myocardial ischemia
- how to check pulse, & BP 2x week
- drowsiness or orthostatic hypotension
- medical attention; ↓ pulse, dyspnea, fever, unusual bleeding, bruising, dizziness, cold hands/feet.
- diabetics: monitor bgl
- refer to provider if taking other meds, remedies or herbs

Evaluation of Medication Effectiveness

- ↓ blood pressure, ↓ frequency of angina attacks,
- ↑ activity tolerance, prevention of MI