

REVIEWED

By Chris at 3:05 pm, Dec 02, 2015

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Metoprolol Tartrate/HCTZ (hydrochlorothiazide/metoprolol tartrate)

BOXED WARNING

Exacerbation of angina and, in some cases, myocardial infarction (MI) reported following abrupt discontinuation. When discontinuing therapy, avoid abrupt withdrawal even without overt angina pectoris. Caution patients against interruption of therapy without physician's advice.

COMMON BRAND NAMES

Lopressor HCT, Metoprolol Tartrate/HCTZ

THERAPEUTIC CLASS

Selective beta₁ blocker/thiazide diuretic

DEA CLASS

RX

ADULT DOSAGE & INDICATIONS

Hypertension

If fixed combination represents dose titrated to patient's needs; therapy with combination may be more convenient than with separate components

Combination Therapy:

100-200mg of metoprolol and hydrochlorothiazide (HCTZ) 25-50mg per day given qd or in divided doses

Max HCTZ: 50mg/day

May gradually add another antihypertensive when necessary, beginning with 50% of the usual recommended starting dose

DOSING CONSIDERATIONS

Elderly

Start at lower end of dosing range

ADMINISTRATION

Oral route

HOW SUPPLIED

Tab: (Metoprolol/HCTZ) 50mg/25mg*, 100mg/25mg*, 100mg/50mg*; (Lopressor HCT) 50mg/25mg*, 100mg/25mg* *scored

CONTRAINDICATIONS

Sinus bradycardia, >1st-degree heart block, cardiogenic shock, overt cardiac failure, sick sinus syndrome, severe peripheral arterial circulatory disorders, anuria, hypersensitivity to sulfonamide-derived drugs.

WARNINGS/PRECAUTIONS

Not for initial therapy. Caution with hepatic dysfunction and in elderly. Metoprolol: May cause/precipitate heart failure; d/c if cardiac failure continues despite adequate treatment. Avoid with bronchospastic diseases, but may use with caution if unresponsive to/intolerant of other antihypertensives. Avoid withdrawal of chronically administered therapy prior to major surgery; however, may augment risks of general anesthesia and surgical procedures. Caution with diabetic patients; may mask tachycardia occurring with hypoglycemia. Paradoxical BP increase reported with pheochromocytoma; give in combination with and only after initiating α -blocker therapy. May mask hyperthyroidism. Avoid abrupt withdrawal in suspected thyrotoxicosis; may precipitate thyroid storm. HCTZ: Caution with severe renal disease; may precipitate azotemia. If progressive renal impairment becomes evident, d/c therapy. May precipitate hepatic coma in patients with liver dysfunction/disease. Sensitivity reactions are more likely to occur with history of allergy or bronchial asthma. May exacerbate/activate systemic lupus erythematosus (SLE). May cause idiosyncratic

reaction, resulting in acute transient myopia and acute angle-closure glaucoma; d/c HCTZ as rapidly as possible. Fluid/electrolyte imbalance (eg, hyponatremia, hypochloremic alkalosis, hypokalemia) may develop. May cause hyperuricemia and precipitation of frank gout. Latent diabetes mellitus (DM) may manifest during therapy. Enhanced effects seen in postsympathectomy patients. D/C prior to parathyroid function test. Decreased Ca^{2+} excretion observed. Altered parathyroid gland, with hypercalcemia and hypophosphatemia observed with prolonged therapy. May increase urinary excretion of Mg^{2+} , resulting in hypomagnesemia.

ADVERSE REACTIONS

Fatigue, lethargy, dizziness, vertigo, flu syndrome, drowsiness, somnolence, hypokalemia, headache, bradycardia.

DRUG INTERACTIONS

Metoprolol: May exhibit additive effect with catecholamine-depleting drugs (eg, reserpine). Digitalis glycosides may increase risk of bradycardia. Some inhalation anesthetics may enhance cardiodepressant effect. May be unresponsive to usual doses of epinephrine. Potent CYP2D6 inhibitors (eg, certain antidepressants, antipsychotics, antiarrhythmics, antiretrovirals, antihistamines, antimalarials, antifungals, stomach ulcer drugs) may increase levels. Increased risk for rebound HTN following clonidine withdrawal; d/c metoprolol several days before withdrawing clonidine. Effects can be reversed by β -agonists (eg, dobutamine, isoproterenol). HCTZ: Hypokalemia can sensitize/exaggerate cardiac response to toxic effects of digitalis. Risk of hypokalemia with steroids or adrenocorticotropic hormone. Insulin requirements may change in diabetic patients. May decrease arterial responsiveness to norepinephrine. May increase responsiveness to tubocurarine. May increase risk of lithium toxicity. Rare reports of hemolytic anemia with methyldopa. NSAIDs may reduce diuretic, natriuretic, and antihypertensive effects. Impaired absorption reported with cholestyramine and colestipol. Alcohol, barbiturates, and narcotics may potentiate orthostatic hypotension. May potentiate other antihypertensive drugs (eg, ganglionic or peripheral adrenergic-blocking drugs).

PREGNANCY AND LACTATION

Category C, not for use in nursing.

MECHANISM OF ACTION

Metoprolol: β_1 -adrenergic receptor blocker; not established. Proposed to competitively antagonize catecholamines at peripheral adrenergic-neuron sites, have central effect leading to reduced sympathetic outflow to periphery, and suppress renin activity. HCTZ: Thiazide diuretic; not established. Affects renal tubular mechanism of electrolyte reabsorption and increases excretion of Na^+ and Cl^- .

PHARMACOKINETICS

Absorption: Metoprolol: Rapid and complete. HCTZ: Rapid; T_{max} =1-2.5 hrs. **Distribution:** Found in breast milk. Metoprolol: Plasma protein binding (12%); found in CSF. HCTZ: V_d =3.6-7.8L/kg; plasma protein binding (67.9%); crosses the placenta. **Metabolism:** Metoprolol: Liver (extensive) via CYP2D6 (oxidation). **Elimination:** Metoprolol: Urine (<5%, unchanged); $T_{1/2}$ =2.8 hrs (extensive metabolizers), 7.5 hrs (poor metabolizers). HCTZ: Urine (72-97%); $T_{1/2}$ =10-17 hrs.

ASSESSMENT

Assess for history of heart failure, sulfonamide hypersensitivity, SLE, hyperthyroidism, DM, pheochromocytoma, hepatic/renal impairment, any other conditions where treatment is contraindicated/cautioned, pregnancy/nursing status, and possible drug interactions. Obtain baseline serum electrolytes.

MONITORING

Monitor for signs/symptoms of cardiac failure, hypoglycemia, thyrotoxicosis, electrolyte imbalance, exacerbation/activation of SLE, hyperuricemia or precipitation of gout, hypersensitivity reactions, hepatic/renal dysfunction, myopia, angle-closure glaucoma, and other adverse reactions. Monitor serum electrolytes.

PATIENT COUNSELING

Instruct to take regularly and continuously, ud, with or immediately following meals. If dose is missed, instruct to take next dose at scheduled time (without doubling the dose) and not to d/c without consulting physician. Instruct to avoid driving, operating machinery, or engaging in tasks requiring alertness until response to therapy is determined. Advise to contact physician if difficulty in breathing or other adverse reactions occur, and to inform physician/dentist of drug therapy before undergoing any type of surgery.

STORAGE

(Lopressor HCT) 25°C (77°F); excursions permitted to 15-30°C (59-86°F). (Metoprolol/HCTZ) 20-25°C (68-77°F). Protect from moisture.