METOP®

मेटप

GENERIC NAME: Metoprolol

PHARMACOLOGICAL CLASS: Beta Blockers, Beta 1 selective (Cardio-selective beta-1 receptor blocker)

THERAPEUTIC CATEGORY: Antihypertensive

COMPOSITION AND PRESENTATION:

METOP 25:

Composition: Each film coated tablet contains: Metoprolol Tartrate BP 25 mg.

Presentation: 30 tablets X 5 blisters

METOP 50:

Composition: Each film coated tablet contains: Metoprolol Tartrate BP 50 mg

Presentation: 30 tablets X 5 blisters

METOP 25 XR

Composition: Each film coated extended release tablet contains Metoprolol Succinate USP 25 mg.

Presentation: 30 tablets X 5 blisters

METOP 50 XR

Composition: Each film coated extended release tablet contains Metoprolol Succinate USP 50 mg.

Presentation: 30 tablets X 5 blisters

MECHANISM OF ACTION:

Metoprolol is a beta-adrenergic blocking agent. Metoprolol blocks the action of the sympathetic nervous system, a portion of the involuntary nervous system. The sympathetic nervous system stimulates the pace of the heart beat. By blocking the action of these nerves, metoprolol reduces the heart rate and is useful in treating abnormally rapid heart rhythms. Metoprolol also reduces the force of heart muscle contraction and lowers blood pressure. By reducing the heart rate and the force of muscle contraction, metoprolol reduces heart muscle oxygen demand. Since angina occurs when oxygen demand of the heart exceeds supply, metoprolol is helpful in treating angina. Metoprolol also blocks renal beta1 receptors and blocks the release of rennin.

INDICATION:

- Hypertension
- Angina pectoris
- Cardiac arrhythmia
- Post myocardial infarction patients
- Adjunctive management of thyrotoxicosis
- Prophylaxis of migraine

OTHER USES:

Metoprolol is also used sometimes to prevent migraine headaches and to treat irregular heartbeat and movement disorders caused by medications for mental illness and sometimes in anxiety.

DOSAGE:

Always take Metoprolol tablets exactly as your doctor has told you. You should check with your doctor or pharmacist if you are not sure.

Recommended dose: Recommended dose should not exceed 400 mg/day in any of below mentioned conditions.

1. Hypertension: Metoprolol is usually used in conjunction with other antihypertensive agents, particularly a thiazide diuretic, but it can be used alone also. Metop is initiated with dose of 12.5 mg b.i.d. If an adequate response is not seen after 1week, the dosage may be increased at weekly (or longer) intervals until optimum blood pressure reduction is achieved. The dosage can be increased to 25mg-100mg b.i.d. The usual maintenance dose is within the range is 100-200mg per day.

*2. Angina Pectoris:*The recommended dosage is 100 to 400mg per day in divided doses. Initially Metop 50 should be given b.i.d. for the first week. If the response is not adequate, the daily dose should be increased by 100mg for the next week. The usual maintenance dose is 200mg per day. The need for the further increases should be closely monitored at weekly intervals with the dosage increased in 100mg increments to a maximum of 400mg per day in 2 or 3 divided doses. The dose of 400mg per should not be exceeded.

Irregular heart beats: 50mg metoprolol two or three times daily. The dose may be increased to 300mg daily in divided doses.

Heart attack: 50mg metoprolol every six hours. The usual maintenance dose is 200mg daily in divided doses. The medicine should be taken for at least 3 months.

Prevention of migraine: 100 to 200 mg metoprolol daily in divided doses(in the morning and evening).

Overactive thyroid gland (thyrotoxicosis): 50mg metoprolol four times daily.

Children: Not recommended.

Patients with impaired kidney or liver function: In such cases the dose should be adjusted. Always follow your doctor's advice. Swallow the tablet whole. The score line is only there to help you break the tablet if you have difficulty swallowing it whole

PHARMACOKINETICS:

Absorption: Absorption is good and rapid. Ingestion with food may raise the systemic availability of an oral dose by approximately 20 to 40%.

Bioavailability: 40-5-% (Immediate release), 65-77% (Extended release)

Duration: 3-6hr (PO); duration is dose-related; 24hr (ER)

Distribution: Peak plasma concentrations are attained after approximately 1.5 to 2 hours of administration (Immediate release) and 3.3 hour (Extended release). Protein bound 10% and Vd 3.2-5.6 L/Kg.

Metabolism: It is metabolized extremely in body and shows first pass metabolism in liver by CYP2D6 to inactive metabolite. It has short plasma half life averages 3.5hrs (range is 1-9hrs).

Excretion: Its elimination half life is 3-7hrs. Less than 5% of an oral dose of metoprolol is recovered unchanged in the urine; the rest is excreted by the kidneys as metabolites that appear to have no clinical significance. (Excretion by urine-95%).

ADVERSE EFFECT:

Bradycardia, lassitude, cold extremities, pruritus, sleep disturbances, skin rashes, dry eyes, headache, dizziness, nausea, vomiting, diarrhea, hypotension and inhibition of lipolysis therefore gain in weight resulted.

SPECIAL PRECAUTIONS:

- Patients receiving diabetes treatment should use the drug with caution as it masks the early warning symptoms of hypoglycemia.
- Patients with history of congestive heart failure should use this drug with caution.
- Safe use of Metoprolol during pregnancy has not been established. So, it should be avoided during pregnancy.
- Metoprolol passes into breast milk in small amounts and may affect a nursing baby. So, it should be taken after consulting the doctors.
- In children Metoprolol is not recommended.

PREGNANCY AND BREAST FEEDING:

If you are pregnant or breast-feeding, think you may be pregnant or are planning to have a baby, ask your doctor or pharmacist for advice before taking this medicine. Its effect in pregnancy is not known but some beta-blockers can affect the growth of your unborn baby. Metoprolol can pass into your breast milk. Do not breast-feed your baby unless you have spoken to your doctor first. Ask your doctor or pharmacist for advice before taking any medicine.

Metoprolol tablets are not recommended during pregnancy or breastfeeding.

DRUG INTERACTIONS:

When administered with calcium channel blockers and digoxin, it causes lowering of blood pressure and heart rate to dangerous levels. In patients with coronary artery disease, abruptly stopping metoprolol can suddenly worsen angina, and occasionally precipitate heart attacks. If it is necessary to discontinue metoprolol, its dosage can be reduced gradually over several weeks.

OVERDOSE:

If you have accidentally taken more than the prescribed dose, contact your nearest casualty department or tell your doctor or pharmacist at once.

Symptoms of overdose are low blood pressure (fatigue and dizziness), slow pulse, heart conduction problems, shortness of breath, unconsciousness, coma, , cardiac arrest, feeling and being sick ,blue colouring of the skin, low blood sugar levels and high levels of potassium in the blood.

If you forget to take Metoprolol tablets:

If you forget to take a dose, take it as soon as you remember, unless it is nearly time for your next dose. Then go on as before. Do not take a double dose to make up for a forgotten dose.

If you stop taking Metoprolol tablets:

Do not suddenly stop taking Metoprolol tablets as this may cause worsening of heart failure and increase the risk of heart attack. Only change the dose or stop the treatment in consultation with your doctor. If you have any further questions on the use of this medicine, ask your doctor or pharmacist.

STORAGE:

- Keep out of the sight and reach of children.
- Do not use Metoprolol tablets after the expiry date, which is stated on the blister and the carton after 'EXP'. The expiry date refers to the last day of that month.
- Do not store above 25°C.
- Medicine should not be disposed of via waste water or household waste. Ask your pharmacist how to dispose of medicines no longer required. These measures will help to protect the environment.

Manufactured by:
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