

## **AMCAB-AT**

**GENERIC NAME:** Amlodipine + Atenolol.

**PHARMACOLOGICAL CLASS:** Calcium channel blocker + Beta adrenergic Blockers.

**THERAPEUTIC CATEGORY:** Antihypertensive

### **COMPOSITION AND PRESENTATION:**

#### **Composition**

Each uncoated tablet contains Amlodipine Besylate BP equivalent to Amlodipine 5 mg and Atenolol BP 50 mg.

#### **Presentation**

30 Tablets X 5 blisters.

### **MECHANISM OF ACTION:**

Atenolol blocks the action of the sympathetic nervous system, which stimulates the pace of the heart beat. By blocking the action of these nerves, atenolol reduces the heart rate and is useful in treating abnormally rapid heart rhythms. Atenolol also reduces the force of heart muscle contraction and lowers blood pressure. By reducing the heart rate and the force of muscle contraction, atenolol reduces heart muscle oxygen demand. When oxygen demand of the heart exceeds supply, atenolol is helpful in treating angina. Amlodipine causes coronary vasodilatation and increases coronary blood flow. It reduces the total peripheral vascular resistance. The systolic and diastolic blood pressure is also reduced. The combination of Beta Adrenergic Blocker- Atenolol with calcium channel blocker –amlodipine will enhance the efficacy of amlodipine.

### **INDICATION**

Amcab-AT is indicated for all grades of hypertension and angina.

### **DOSAGE**

Adults: 1 tablet of Amcab AT once daily.

### **PHARMACOKINETICS**

Combination of the two drugs results in additive antihypertensive action.

#### **Absorption:**

**Amlodipine:** Plasma levels peak 6-12 hr after oral admin; absolute bioavailability is estimated to be 64-90%.

**Atenolol:** Absorption is rapid and consistent but incomplete; about 50% of an oral dose is absorbed in the GI tract; plasma levels peak 2-4 hr after oral admin.

### **Distribution:**

**Amlodipine:** 93% bound to plasma proteins.

**Atenolol:** 6-16% bound to plasma proteins.

### **Metabolism:**

**Amlodipine:** About 90% converted to inactive metabolites hepatically.

**Atenolol:** Little or no hepatic metabolism.

### **Excretion:**

**Amlodipine:** 10% of parent compound and 60% of the metabolites are removed in the urine; elimination from the plasma is biphasic with terminal half-life of about 30-50 hr.

**Atenolol:** 50% of the oral dose is removed unchanged in the faeces; absorbed drug is removed mainly via renal elimination; half-life is about 6-7 hr.

### **ADVERSE EFFECT:**

Headache, hypotension, dizziness, breathlessness, fatigue, muscle cramps, bradycardia, palpitations, flushing, oedema, dyspnoea, dyspepsia, cold extremities. Drowsiness, chestpain & impotence rarely. Hypersensitivity reactions.

### **SPECIAL PRECAUTIONS IN SPECIAL POPULATION**

- **Elderly Patients:** Excessive fall of BP may occur.
- Caution in patients with COPD, thyrotoxicosis, congestive failure, vasospastic angina, hepatic & renal impairment.
- Caution in diabetic patients as beta-blockers may mask tachycardia occurring with hypoglycaemia. Withdrawal should be gradual.
- **Lactation:** Safety and efficacy have not been established in children.
- Not to be used in untreated phaeochromocytoma.

### **DRUG INTERACTIONS**

- Additive effect when used with catecholamine depleting drugs; monitor for hypotension and/or marked bradycardia.
- If used with clonidine, clonidine withdrawal should occur a few days after withdrawal of the beta-blocker to prevent rebound hypertension; if replacing clonidine by beta-blocker, beta-blocker should be introduced only after clonidine administration has stopped for several days.
- Concurrent use with prostaglandin synthase inhibiting drugs (e.g. indomethacin) may reduce the hypotensive effects of beta-blockers.

### **ADVANTAGES:**

- Better therapeutic response than either drug alone
- Improves the condition of symptomatic agina patients.
- Better patient compliance

For further information, please contact:

**Market Planning Department**



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