CLINICAL PRACTICE GUIDELINES FOR BETA-BLOCKER PROPHYLAXIS FOLLOWING AN ACUTE MYOCARDIAL INFARCTION

Since 1995, the American Heart Association has recommended beta-blockers as part of a comprehensive program to prevent second heart attacks. According to the American Medical Association Quality Care Alert dated June 7, 2001, “Beta-blockers following an AMI decreases cardiovascular mortality, decreases re-infarctions, and increases the probability of long-term survival up to 40%.” Below are the HMO Blue Texas clinical practice guidelines for beta-blocker prophylaxis following an acute myocardial infarction.

PATIENT GOALS

- Prevent or minimize the incidence of recurrent infarction.
- Decrease long-term mortality in patients who have had an acute myocardial infarction (AMI).

THERAPY

Recommendations for long-term therapy in survivors of myocardial infarction.

Class I

- All but low-risk patients without a clear contraindication to beta-adrenoceptor blocker.
- Four beta-blockers are specifically indicated for treatment of patients who are clinically stable following an acute myocardial infarction.

Decreased incidence in all but non-Q wave infarctions have been observed in all age groups and genders as well as in patients with varying diastolic pressure and heart rate. One of the following medications should be started within 24 hours or as soon after the AMI (5 – 28 days) as the patient's condition permits, dosed such that the patient's exercising heart rate does not exceed 75 beats/minute or to the maximum dose, and continued indefinitely (minimum of six months):

- Propranolol (Inderal) – 80 mg/three times per day
- Metoprolol (Lopressor) – 100 mg/two times per day
- Atenolol (Tenormin) – 100 mg/once per day
- Timolol (Blocadren) – 10 mg/two times per day

Beta-blockers with intrinsic sympathomimetic activity (ISA), such as acebutolol, carteolol, pibuterol and pindolol have not decreased mortality and are inappropriate for post-myocardial infarction treatment.

CONTRAINDICATIONS

- Benefits should be weighed against potential risks in patients with the following conditions:
  - **IDDM**: Beta-blockers can produce hypo/hyperglycemia and may mask the effects of hypoglycemia that may deprive patients of early awareness of and response to falling blood sugar.
  - **Congestive Heart Failure**: Beta-blockers may exacerbate CHF initially.
  - **Asthma, COPD, Bronchitis**: Beta-blockers can lead to bronchospasm in some patients.
  - **Hyperlipidemia**: Beta-blockers can increase serum triglyceride concentration and can decrease serum density lipoprotein.

  - Heart rate less than 60 bpm/Systolic arterial pressure less than 100 mm HG.
  - Moderate or severe LV failure/Second – or third degree AV block.
  - Signs of peripheral hypoperfusion/Severe peripheral vascular disease.

REFERENCES