

# **UCLA CARDIAC HOSPITALIZATION ATHEROSCLEROSIS MANAGEMENT PROGRAM: CHAMP**

The UCLA Cardiac Hospitalization Atherosclerosis Management Program (CHAMP) provides protective therapies for patients with coronary atherosclerosis through innovative treatment algorithms and application of research advances.

## **Program Experience**

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The Division of Cardiology initiated the UCLA Cardiac Hospitalization Atherosclerosis Management Program in 1994 as a way to promote the utilization of secondary preventive therapies in follow-up care. The program is provided to all hospitalized patients with coronary artery disease including patients with acute myocardial infarction, unstable angina, congestive heart failure and patients undergoing coronary artery bypass surgery and angioplasty.

By initiating these therapies prior to hospital discharge at a time when patients and families are most

receptive, the long term use of risk factor modification practices is greatly enhanced. This practical innovation in traditional medical treatment is now endorsed by the American Heart Association as a way to combat the documented under-utilization of preventive therapies by patients with coronary atherosclerosis.

## **Program Approach**

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A multidisciplinary team of cardiologists, nurses, dietitians, and pharmacists follow carefully developed clinical practice guidelines to deliver treatments, preventive care, and education to UCLA inpatients diagnosed with coronary atherosclerosis.

The following therapies have been demonstrated to alter the natural history of atherosclerosis, decrease cardiac events, and improve survival. At UCLA, these therapies are applied according to focused treatment algorithms:

- Aspirin
- Beta blockers
- Angiotensin converting enzyme (ACE) inhibitors
- Cholesterol lowering medications
- Exercise
- Diet
- Smoking cessation
- Patient education

Treatment algorithms are integrated into follow-up care through discharge orders and summaries. The treatment team is available to the referring physician for consultation during the patient's hospitalization and upon return of the patient to the care of the referring physician after discharge.

## ***Aspirin***

Aspirin is started immediately in all patients, unless it is contraindicated. Pooling data from the four largest trials suggests a 48% reduction in the risk of myocardial infarction and a 51% reduction in the risk of death in patients taking aspirin on a daily basis. This benefit

continues beyond 10 years.

### ***Beta Blockers***

Beta blockers indicated in all patients with unstable, myocardial infarction, and heart failure. They are considered first line agents in patients with hypertension and coronary artery disease, since they reduce the risk of myocardial infarction and make it more likely that a patient will survive an infarction.

Beta blockers also control symptomatic angina, attenuate the remodeling process post myocardial infarction, and reduce the risk of developing heart failure. The duration of benefit with long term therapy appears to extend out for at least 5 years.

### ***ACE Inhibitors***

ACE inhibitors have potent vascular and cardiac protective effects. ACE inhibitors are started in all patients, unless contraindicated. Patients with coronary artery disease have improved survival and less strokes, heart attacks, and heart failure when treated with ACE inhibitors. These agents may also benefit patients

by reversing endothelial dysfunction and lowering the risk of atherosclerosis progression.

### ***Cholesterol Lowering Medications***

All patients are started immediately on medication to lower cholesterol and treat the underlying atherosclerotic disease process. HMG CoA reductase inhibitors are the most effective and best tolerated cholesterol lowering medications and are considered the preferred first line agents.

Initiation of a HMG CoA reductase inhibitor in patients with documented coronary artery disease results in a reduction in myocardial infarction, unstable angina, need for revascularization, and hospitalizations. This is true regardless of whether the patient has undergone bypass surgery, angioplasty, or is being treated medically.

### ***Exercise***

All patients receive specific instructions for a daily aerobic exercise program. Either a home based program or supervised cardiac

rehabilitation is essential for the management of patients with coronary artery disease.

Additionally, patients receive instruction on activities that should be avoided, such as heavy lifting.

### ***Diet***

There is a benefit when diet is used in combination with exercise and cholesterol lowering medication. Patients and families are encouraged to pursue counseling on the National Cholesterol Education Program Step 2 Diet during hospitalization.

### ***Smoking Cessation***

Patients who continue to smoke after presenting with unstable angina have 5.4 times the risk of death from all causes compared to patients who stop smoking. Patients are offered intensive smoking cessation intervention during hospitalization. They also receive a relapse prevention manual, information about outpatient behavior modification programs, and the option of Zyban and/or nicotine replacement therapy.

**Patient Education**

Patients and families are instructed regarding the use of medications and the monitoring of symptoms. The purpose, dose, and major side effects of each prescribed medication are explained. Written medication sheets and schedules are provided upon discharge. The warning signs of a heart attack are discussed with each patient and an immediate plan of action is developed and reviewed. Patient delays in seeking medical attention are a major contributor to diminished benefit with reperfusion therapy.

Risk factor modification classes taught by physicians, nurses, pharmacists, and dietitians are offered to all inpatients. Extensive patient education materials are given to patients for reference after discharge.

**Follow-up**

Medications should be reviewed on each outpatient visit. A fasting lipid panel should be obtained in 6 weeks to evaluate whether target lipid levels have been achieved and to guide cholesterol

lowering medication dosing adjustments.

Continuation of therapies targeting the underlying atherosclerotic disease process markedly improves clinical outcome. The ongoing use of prescribed therapies should be strongly reinforced during patient follow-up.

**Future Directions**

As new therapies are developed for atherosclerosis treatment they can be readily integrated into routine patient care using the CHAMP protocol.

**Team Members**

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**Indications for Treatment**

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All inpatients with coronary atherosclerosis, are candidates for the UCLA Cardiac Hospitalization

Atherosclerosis Management Program.

**Contact for Program Information**

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