Management of the Patient with Unstable Angina/Non-Q-Wave Myocardial Infarction

Unstable angina most often results from disruption of an atherosclerotic plaque and a subsequent cascade of pathologic processes that decrease coronary blood flow. Most patients who die during unstable angina do so because of sudden death or an intervening myocardial infarction (MI).

**Canadian Cardiovascular Classification of Angina**

- **Class 1:** Pain is precipitated only by severe and unusually prolonged exertion.
- **Class 2:** Pain on moderate effort. There is slight limitation of ordinary activity.
- **Class 3:** Marked limitation of ordinary activity; pain occurs on mild exertion, usually restricting daily chores. The patient is unable to walk two blocks on a level at a comfortable temperature and at a normal pace.
- **Class 4:** Chest discomfort on almost any physical activity.

**Definition of Unstable Angina**

- Symptoms of angina at rest (usually prolonged >20 minutes)
- New onset (≤2 months) exertional angina
- Recent (≤2 months) acceleration of angina
- Variant angina
- Post-MI (>24 hours) angina
Differential Diagnosis

- Acute myocardial infarction (AMI)
- Aortic dissection
- Esophagitis
- Pleurisy
- Leaking or ruptured thoracic aneurysm
- Acute pericarditis
- Pulmonary embolism
- Pneumothorax
- Esophageal rupture

■ DIAGNOSIS OF ANGINA/AMI

The distinction between an AMI and unstable angina can sometimes be difficult at presentation. Patients with ≥1 mm ST elevation in two or more contiguous leads, or ST depression in V1–V3 or left bundle branch block with a consistent history should be managed as if they have an AMI.

Clinical Features Associated With a Higher Probability of AMI

- History of angina or prior MI
- Pain duration ≥1 hour
- Pain worse than prior angina or equivalent to prior MI
- Radiation of pain to the neck, left shoulder, or left arm

■ RISK STRATIFICATION

It is important to assess the likelihood that the patient has an unstable coronary syndrome, as this largely determines the management strategy. Risk stratification depends on the patient’s clinical symptoms and initial electrocardiogram(s) (ECGs):

High Risk

- ST-segment elevation or depression ≥1 mm
- Deep symmetrical T-wave inversion in multiple precordial leads
- ECG change occurring during pain
- Ongoing “anginal”-type pain despite aspirin and sublingual nitroglycerin