Case Study

50 YEAR OLD MALE WITH UNSTABLE ANGINA

Case History

A 50-year-old man with type 1 diabetes mellitus and hypertension presents after experiencing 1 hour of midsternal chest pain that began after eating a large meal. Pain is now present but is minimal.
On examination Pulse 80/min, regular, BP 110/80 mm Hg, Cardiovascular examination normal
Past history- Diabetes -8 years, hypertension 5 years.
Drugs- Glimepiride 1 mg daily, metformin 500 mg twice daily, Telmisartan 40 mg daily, aspirin 75 mg/day, atorvastatin 10 mg/day.

ECG

Troponin I - negative

CKMB – normal

Blood sugar (R) 176 mg %

1. Based on the above history and clinical findings, the diagnosis in this case is

a) ST elevated Acute myocardial infarction

b) Non ST elevated myocardial infarction

c) **Unstable angina**

d) Non cardiac chest pain

2. What are the types of unstable angina

Three clinically distinct forms exist, as follows:

- New-onset exertional angina
- Angina of increasing frequency or duration or refractory to nitroglycerin
- Angina at rest

3. How is the diagnosis of unstable angina made?

- A diagnosis of unstable angina requires determination of the likelihood of CAD and assessment of the severity of presentation.
- The likelihood of significant CAD in patients presenting with acute chest pain syndrome is related to the physician's assessment of the patients' symptoms as angina, categorized as definite, probable, probably not, or definitely not angina; evidence of prior MI or other indicators of CAD; and the sex, age, and number of major risk factors for atherosclerosis. Other factors important in diagnosis of unstable angina include a known history of variant angina or cocaine use and details of prior treatment for known or suspected CAD.
- Physical findings of value include a transient S3or S4mitral regurgitation (MR) murmur or precordial lift during an episode of discomfort. The presence of bruits or pulse deficits suggesting extracardiac vascular disease increases the likelihood of CAD.
- The standard 12-lead electrocardiogram (ECG) provides crucial information in the diagnosis of unstable angina, and recordings during periods of both pain and absence of pain are useful. Markers of high likelihood of CAD on ECG include ST-segment elevation or depression >=1 mm, deep symmetrical T-wave inversion in multiple precordial leads, or any transient ECG change occurring during pain. ST-segment depression >=0.5 mm but <=1 mm, T-wave inversion >=1 mm in leads with dominant R waves, and nonspecific ST- and T-wave changes are features of patients with an intermediate likelihood of CAD. These clinical features on initial evaluation can be used to stratify patients into high, intermediate, and low likelihood of CAD.

4. The drugs to be administered in this patient are

a) Aspirin

b) Nitoglycerine

c) Heparin

d) **All of the above**

Case contd.

Patient was admitted to ICU of a private nursing home. He was given Inj enoxaperin 0.4 ml twice daily for 5 days. He was also started on aspirin 15o mg/day, clopidogrel 75 mg/day, metaprolol 12.5 mg/day in addition to his regular medicines.
His stay in the nursing home was uneventful and he was discharged from the nursing home after 5 days.

- The two goals of initial management of patients with unstable angina are to institute immediate therapy and move the patient to a proper environment for the monitoring of complications. In many cases, stabilization progresses concurrently with patient evaluation.

- All patients with unstable angina should receive aspirin (ASA) unless they have documented hypersensitivity or active bleeding. Those with persistent symptoms or ECG changes suggesting ongoing ischemia should also receive nitroglycerin (NTG). Beta blockers and IV heparin/LMV heparin are indicated for patients with intermediate- and high-risk unstable angina who do not have contraindications to these drugs. Unless patients have a compelling history for acute MI accompanied by ST-segment elevation or left bundle branch block (LBBB) on the 12-lead ECG, IV thrombolytic therapy is not indicated.

5. What are the indications for coronary angiography in patients with unstable angina?

Indications for cardiac catheterization in patients with unstable angina include:

1. Failure to stabilize with adequate medical therapy;
2. Recurrent unstable angina;
3. High-risk result of noninvasive test;
4. Prior revascularization procedure; and
5. Diagnosis or exclusion of significant CAD in patients with multiple clinical episodes of unstable angina without objective documentation of ischemia.

Unless cardiac catheterization is indicated, all other patients hospitalized for unstable angina should undergo noninvasive testing after stabilization has been achieved and prior to discharge or as soon as possible thereafter. In this context,

noninvasive testing is most useful to assess the adequacy of current therapy, estimate prognosis, and guide decisions on further evaluation and management

Case contd.

Patient underwent coronary angiography which showed triple vessel disease. He underwent an uneventful CABG.

Patients found at catheterization to have significant left main disease (>=50%) or significant (>=70%) three-vessel disease with depressed LV function (EF <=0.50) should undergo CABG to improve survival as well as relieve symptoms. Patients with two- or three-vessel disease with proximal severe subtotal stenosis (>=95%) of the left anterior descending coronary artery (LAD) may also experience a survival benefit from revascularization. Other patients are appropriately treated for control of anginal symptoms by CABG, PTCA, or medical therapy.

References

1. Anderson JL, Adams CD, Antman EM, Bridges CR, Califf RM, Casey DE Jr., et al. ACC/AHA 2007 guidelines for the management of patients with unstable angina/non-ST-Elevation myocardial infarction: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Writing Committee to Revise the 2002 Guidelines for the Management of Patients With Unstable Angina/Non-ST-Elevation Myocardial Infarction) developed in collaboration with the American College of Emergency Physicians, the Society for Cardiovascular Angiography and Interventions, and the Society of Thoracic Surgeons endorsed by the American Association of Cardiovascular and Pulmonary Rehabilitation and the Society for Academic Emergency Medicine. J Am Coll Cardiol. 2007; 50:e1-e157.

2. Antman EM. ST-Elevation Myocardial Infarction: Management. In: Libby P, Bonow RO, Mann DL, Zipes DP, eds.

3. Braunwald's Heart Disease: A Textbook of Cardiovascular Medicine. 8th ed. Philadelphia, Pa: Saunders Elsevier; 2007:chap 51.