Q: What is Acute Coronary Syndrome (ACS)?
A: ACS is an umbrella term for situations where the blood supplied to the heart muscle is suddenly blocked, typically by a clot. It includes unstable angina, ST-elevation myocardial infarction (STEMI), and non-ST elevation myocardial infarction (NSTEMI).

Q: What is the difference between STEMI and NSTEMI?
A: STEMI is a complete blockage of a coronary artery and is identified by ST-segment elevation on ECG. NSTEMI is a partial blockage without ST elevation but still causes damage to the heart muscle.

Q: What are the common symptoms of ACS?
A: Chest pain or discomfort (often radiating to the left arm or jaw), shortness of breath, sweating, nausea, and fatigue.

Q: What are the major risk factors for ACS?
A: Smoking, hypertension, high cholesterol, diabetes, obesity, sedentary lifestyle, and a family history of cardiovascular diseases.

Q: What diagnostic tests are used for ACS?
A: Electrocardiogram (ECG), blood tests for cardiac biomarkers like Troponin and CK-MB, and coronary angiography.

Q: How is ACS managed in the emergency setting?
A: Immediate administration of aspirin, nitrates, anticoagulants, and beta-blockers. Urgent reperfusion with PCI (percutaneous coronary intervention) is preferred in STEMI cases.

Q: What are the key cardiac biomarkers for diagnosing ACS?
A: Troponin is the most specific and sensitive marker for myocardial injury. CK-MB is used as a secondary marker.

Q: Can ACS present without chest pain?
A: Yes, especially in elderly patients, diabetics, and women. Symptoms may include dyspnea, weakness, or syncope.

Q: How can physicians differentiate between unstable angina and NSTEMI?
A: Both conditions may have similar symptoms and ECG findings, but NSTEMI shows elevated cardiac biomarkers (e.g., Troponin), while unstable angina does not.

Q: What medications should a physician consider for secondary prevention post-ACS?
A: Dual antiplatelet therapy (aspirin + P2Y12 inhibitor), statins, beta-blockers, ACE inhibitors or ARBs, and lifestyle modifications.

Q: What is the role of coronary angiography in ACS?
A: Coronary angiography helps visualize the coronary arteries and determine the location and severity of blockages. It’s critical for planning PCI or CABG.

Q: When should PCI be preferred over thrombolytics in STEMI?
A: PCI is preferred when it can be performed within 90 minutes of first medical contact. It offers better outcomes and lower bleeding risk than thrombolysis.

Q: How do you manage ACS in patients with chronic kidney disease (CKD)?
A: Adjust medication dosages to avoid nephrotoxicity, prefer radial access during catheterization, and monitor renal function closely due to contrast use.

Q: What is the GRACE score and how is it used?

A: The GRACE score helps assess the risk of death or recurrent MI in ACS patients and guides decision-making regarding early invasive strategies.

Q: What are the long-term complications post-ACS?
A: Heart failure, arrhythmias, recurrent MI, and psychological conditions like depression and anxiety.