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Unstable angina

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Abstract
Unstable angina is chest discomfort or pain caused by an insufficient flow of blood and oxygen to the heart. It is part of the acute coronary syndromes and may lead up to a heart attack. This activity describes the evaluation and management of unstable angina and reviews the role of the interprofessional team in improving care for patients with this condition.

Keywords: unstable angina, oxygen, acute coronary syndromes

Introduction
Unstable angina falls along a spectrum under the umbrella term acute coronary syndrome. This public health issue that daily affects a large portion of the population remains the leading cause of death worldwide. Distinguishing between this and other causes of chest pain that include stable angina is important regarding the treatment and disposition of the patient. Providers should be aware of the signs and symptoms of acute coronary syndrome as patients rely on health care professionals to make the distinction from other causes of chest pain. Often patients will present to the emergency room. However, acute coronary syndrome can be seen in the outpatient setting as well. Over the years, a significant amount of research has gone into determining the appropriate and most effective treatment modalities, as well as the diagnostic tools available, in evaluating unstable angina and the other variants of acute coronary syndrome.

Etiology
Coronary atherosclerotic disease is the underlying cause of unstable angina in nearly all patients with acute myocardial ischemia. The most common cause of unstable angina is due to coronary artery narrowing due to a thrombus that develops on a disrupted atherosclerotic plaque and is nonocclusive.
A less common cause is vasospasm of a coronary artery (variant Prinzmetal angina). Endothelial or vascular smooth dysfunction causes this vasospasm

Case Report
Diagnosis: Type 2 Diabetes Mellitus, Cad - Acs – Unstable Angina Nsr, Normal Lv Size and Function, Lvef ~ 74.6%.

History & Examination
This patient diabetic (18 years), non-hypertensive, with no family h/o CAD, Presented with h/o typical chest pain on 18/12/2020 for which he was evaluated outside and TMT was positive for inducible ischemia. He then visited to cardiology OPD AIIMS RAIPUR. No h/o orthopnea, PND, syncope and palpitations. O/E BP= 110/58 mmHg, Pulse = 58 Bp/m, regular, JVP- Normal, CVS- S1,S2 normal, No S3/S4, no murmurs. R/S- NVBS present. No crackles. Patient was admitted for management and Coronary angiogram.

ECG - NSR, HR- 72/min, LEFT AXIS DEVIATION, LAHB.
ECHO- Normal Lv Size & Function, Lvef ~ 74.6%, No Rwma, No Mr, No Tr, No Ar, Ra & Rv- Normal Size.

Operation Details: CAG

Braunwald Classification of Unstable Angina

Classification	Description	Designation
Severity		
I	New onset of severe angina or increasing† angina No angina during rest	—
II	Angina during rest within the past month but not within the preceding 48 hours	Subacute angina at rest
III‡	Angina during rest within the preceding 48 hours	Acute angina at rest
Clinical situation		
A	Develops secondary to an extracardiac condition that worsens myocardial ischemia	Secondary unstable angina
B‡	Develops when no contributory extracardiac condition is present	Primary unstable angina
C	Develops within 2 weeks of acute myocardial infarction	Post-myocardial infarction unstable angina

Cag Report: Cad-Three Vessel Disease

Status At Discharge: Stable

Hospital Course: Patient was managed conservatively with DAPT, Statin, and other supportive measures.

Future Plan: CABG with grafts to LAD, RAMUS & OM1.

Investigations

CBC		RFT		LFT		Thyroid profile		Viral marker	
TRBC	3.31millon/ul	Urea	27mg/dl	AST	24U/L	TSH	1.879mIU/L	HIV	NR
HB	10.7gm%	Creat	0.9mg/dl	ALT	22U/L	T3	ng/ml	HBsAg	NEG
TLC	7100/ul	UA	4.5mg/dl			T4	ug/ml	HCV	NEG
Platelet	162000/ul	Na	135mEq/L					COVID-19(12.01.21)	NEG
Urine R/M	WNL	K	4.6mEq/L						

Lipid profile		Blood sugars		Coagulation profile		Others	
T. Chol	110mg/dl	RBS	201 mg/dl	PT	10.7 sec	Vit D3	7.83ng/ml
TG	101mg/dl	FBS	125mg/dl	INR	1.0	Vit B12	84pg/ml
HDL	29mg/dl	PPBS	223mg/dl	aPTT	26.9sec	TROP I	<0.006ng/mL
VLDL	20mg/dl	HBA1C	8.5%			Urine Microalbumin	1.8mg/L
LDL	70mg/dl						

Systemic Examination

CNS- Conscious
RS- NVBS present. No crackles
P/A- Within normal limits
CVS- S1, S2 normal, No S3/S4, no murmurs

Discussion

Unstable angina and non-ST segment elevation myocardial infarction account for about 2.5 million hospital admissions worldwide and are a major cause of mortality and morbidity in Western countries. The prognosis is substantially worse than for chronic stable angina. In-hospital death and re-infarction affect 5-10%.

Conclusion

Unstable angina should be treated as an emergency. If you have new, worsening or persistent chest discomfort, you need to go to the ER. You could be having a heart attack which puts you at increased risk for severe cardiac arrhythmias or cardiac arrest, which could lead to sudden death.

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