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CLINICAL AND ANGIOGRAPHIC SPECTRUM OF UNSTABLE ANGINA IN CONTEMPORARY PRACTICE : A CASE SERIES ANALYSIS

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ABSTRACT

Background: Unstable angina (UA) is a high-risk condition within the acute coronary syndrome spectrum, often presenting with normal biomarkers but significant coronary artery disease (CAD). Objective: To describe the angiographic profile of patients presenting with UA and evaluate the proportion with significant CAD requiring revascularization.**Methods:** This case series includes 60 consecutive patients with UA who underwent coronary angiography at a single tertiary centre.**Results:** Significant obstructive CAD requiring percutaneous coronary intervention (PCI) was identified in 18 patients (30%), while 9 patients (15%) required or were referred for CABG. Mild CAD was seen in 11 patients (18.3%). Normal coronaries were present in 22 patients (36.7%).**Conclusion:** Nearly half of the patients with UA had significant CAD requiring revascularization despite normal biomarkers. Early angiographic evaluation remains critical in UA management.

KEYWORDS : Unstable angina, coronary angiography, PCI, CABG, acute coronary syndrome.

INTRODUCTON

Unstable angina (UA) remains an important clinical diagnosis characterised by ischemic chest pain at rest, new-onset (<2 weeks) severe angina, or a crescendo pattern without elevation of cardiac biomarkers.[1] Although troponins and ECG may remain nondiagnostic, plaque instability may be present and may progress to myocardial infarction if untreated. Early coronary angiography is recommended to identify high-risk lesions and guide management.[2]

This case series presents the angiographic findings of 60 consecutive UA patients to assess the burden of significant coronary artery disease (CAD).

METHODS

Study Design and Setting

A descriptive observational case series conducted at a tertiary care cardiac centre over a defined study period.

Inclusion Criteria

Patients presenting with clinical features of UA including:

1. Chest pain at rest lasting >10 minutes
2. Recent onset angina (<2 weeks)
3. Crescendo pattern of angina
4. Normal cardiac biomarkers (Troponin I/T, CK-MB)
5. ECG showing no ST elevation or only nonspecific ST-T changes

Exclusion Criteria

- Elevated troponins
- ST-elevation myocardial infarction
- Prior coronary artery bypass grafting (CABG)
- Active myocarditis or pericarditis

Data Collection

All patients underwent:

- Serial troponin and CK-MB assays
- Baseline ECG
- Routine laboratory evaluation including CBC, CRP, fasting lipid profile
- Coronary angiography via standard femoral or radial route

Angiographic Assessment

Significant CAD was defined as ≥70% stenosis in any major epicardial artery or ≥50% stenosis in the left main coronary artery. Decisions regarding PCI or CABG were made by a heart team.

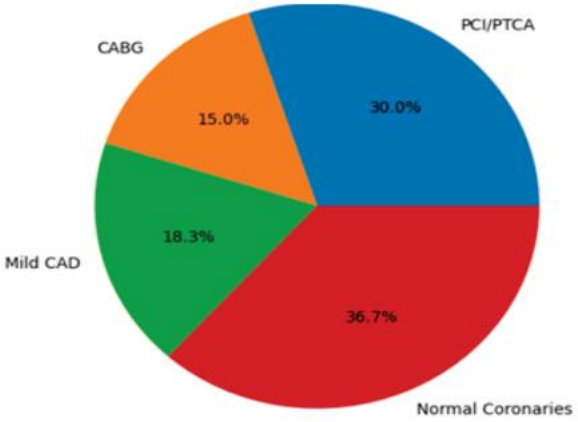
RESULTS

Patient Profile

A total of 60 patients fulfilled the diagnostic criteria for UA and underwent angiography.

Angiographic Categories

CATEGORY	Number of patients	Percentage
PTCA/PCI performed.	18	30%
CABG recommended	9	15%
Mild CAD (non-obstructive)	11	18.3%
Normal coronaries.	22	36.7%



Key Findings

- Significant obstructive CAD requiring intervention was present in 27/60 patients (45%).
- Normal coronaries were seen in over one-third of patients, suggestive of microvascular angina or vasospasm.

- Mild CAD was identified in 18.3% of patients and managed conservatively.

REPRESENTATIVE CASES

Case 1: Proximal LAD Lesion Requiring PCI

A 52-year-old male presented with crescendo angina. ECG showed nonspecific ST-T changes; biomarkers were normal. Angiography revealed a critical proximal LAD stenosis (90%). PCI with drug-eluting stent was successfully performed.

Case 2: Triple Vessel Disease Referred for CABG

A 64-year-old diabetic female presented with prolonged rest angina. CAG demonstrated severe triple-vessel disease unsuitable for PCI. She was stabilised medically and referred for CABG.

Case 3: Mild Non-Obstructive CAD

A 48-year-old patient had 30–40% stenosis in LAD and LCx. Managed medically with antianginal therapy.

Case 4: Normal Coronaries with Suspected Microvascular Angina

A 45-year-old female experienced recurrent rest angina. Coronary angiography showed normal epicardial coronaries. Treated with nitrates and calcium channel blockers.

DISCUSSION

This case series demonstrates that normal cardiac biomarkers do not reliably rule out significant CAD in patients with clinical UA. Almost one in two patients had angiographically significant lesions requiring revascularization.

Previous studies also report a substantial prevalence of obstructive CAD among UA patients with non-diagnostic ECGs and normal enzymes.[3,8] Early invasive evaluation reduces recurrent ischemia and progression to NSTEMI.[4]

The high percentage of normal angiograms (36.7%) in this study aligns with known proportions of:

- Microvascular angina
- Vasospastic angina
- Endothelial dysfunction

Recognition of these phenotypes is important for appropriate treatment.[9,10]

CONCLUSION

In this series of 60 unstable angina patients, 45% had significant obstructive CAD requiring either PCI or CABG. Despite normal biomarkers and indeterminate ECG findings, UA poses substantial risk. Early coronary angiography is essential for accurate risk stratification and timely management.

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