

### Clinical outcomes of Coronary Artery Disease in Octogenarians

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#### Background

Coronary artery disease (CAD) is a major cause of morbidity and mortality in patients above 80 years of age. Understanding the pathophysiology, epidemiology, and optimal means of diagnosis and treatment of CAD in older adults is crucial in improving outcomes in this high-risk population. It is crucial to identify the knowledge gaps in the diagnosis and management of CAD in this vulnerable population as most clinical trials and studies tend to exclude older patients altogether or include those at lower risk.

Older patients are more likely than their younger counterparts to present with left main CAD, multivessel CAD, and left ventricular dysfunction often contributing to poor outcomes with a higher risk of cardiovascular events. Batchelor et al [1] had compared the outcomes of octogenarians receiving PCI with younger patients and found that octogenarians had a

two to four-fold increased risk of complication including death, stroke, Q wave myocardial infarction (MI), and kidney injury.

Management decisions in older patients can be challenging to clinicians as increasing age is a strong predictor of adverse events. Older age is predictive of lower use of cardiac catheterization. This is despite data by Singh et al [2] showing in-hospital mortality after PCI has come down for all age groups over the past several years including octogenarians.

The overall health status, functional capacity, cognitive ability, and frailty in conjunction with patient preferences are critical when evaluating older patients. As octogenarians are the fastest-growing cohort dying of CAD, further improvements in prevention, diagnosis and treatment are required to adopt strategies.

## **Objectives**

To study the clinical profile, angiographic patterns, management, and outcomes of ACS in octogenarian patients presenting to a tertiary health care facility

## **Materials and Methods**

### ***Study population***

Data from consecutive patients admitted undergoing intervention will be collected. Based on contemporary practice guidelines, revascularization strategies shall be determined by the Heart Team. The Heart Team comprises Interventional Cardiologists, Cardiac Surgeons, and Physicians. On admission, the Thrombolysis in Myocardial Infarction (TIMI) score will be assessed to determine the likelihood of ischemic events or mortality in patients with unstable angina or NSTEMI

***Type of study:*** Prospective EMR based Observational Study

### ***Inclusion Criteria***

1. Age > 80 years
2. All patients presenting with ACS
3. Patients undergoing Elective / Rescue PCI

### ***Exclusion Criteria***

1. Age <80 Years

## ***Procedure and medication***

The PCI strategy and the stent type shall be left to the treating physician's discretion. ACS patients scheduled for PCI will receive the same dose of aspirin and ticagrelor or clopidogrel on a diagnosis of ACS. During the procedure, unfractionated heparin (100 U/kg) will be administered to all patients. The use of glycoprotein IIb/IIIa inhibitors will be left to the treating consultant. Post-procedure the patient will be on dual antiplatelet therapy as per the ESC 2021 guidelines.

### ***Patient follow up***

All patients shall be followed up by clinical visit or by phone at 1,6 and 12 months. Thereafter the patients will be followed up annually. Patients will be advised to return for complete evaluation if clinically indicated by symptoms or documentation of myocardial infarction.

### ***Variables proposed to Study***

#### ***Demographic details***

##### ***Risk factors***

Smoker  
Diabetes  
Hypertension  
Dyslipidemia  
Prior MI  
Prior Stroke  
Insomnia

Family History of Premature CAD

*Vitals on Admission* – Heart Rate/ Blood Pressure/SpO<sub>2</sub>

*Laboratory Parameters*

CBC/ Hb/ Urea/ Creatinine/ Sodium/ Potassium/ RBS (On admission)

ECG Findings

ECHO parameters

*Clinical Presentation*

STEMI

NSTEMI

Unstable angina

*TIMI Score*

Intervention Proposed Medical / Surgical

*CAG Findings*

LMCA

LAD

LCX

RCA

*SYNTAX score*

Before Procedure

After Procedure

Unprotected LMCA

Triple vessel Disease

Total Occlusion

Puncture Site

IVUS/ OCT usage

IABP usage

*Procedure*

Single Stent strategy

Double Stent Strategy

Provisional stenting

*Stent Type*

Bleeding during Hospital Stay

Contrast-Induced Nephropathy

Medication at discharge

**Death**

*Ethical Consideration*

Consent will be obtained from either the patient or a close family member of the patient before the procedure. The consent will have all the details regarding the option of the treatment as well as the outcomes of the procedure in the local language.

**Results**

The results of the study shall be analysed periodically and published