# SUMMARY

Coronary artery disease (CAD) is a disease of middle and advanced age. In fact, some clinical studies of patients with chest pain have excluded individuals under 40 years of age **(Lee et al., 1985)**.

Nevertheless, CAD has been recognized in young age groups more frequently in recent years. It is a topic of increasing clinical interest due to the potential for premature death and long-term disability **(Chouhan et al., 1993)**.

## Aim of the work:

The purpose of this study is to evaluate different risk factors of CAD and characterize angiographic criteria in young patients (less than 40 years of age) who were presented with acute coronary syndromes and to compare the results with older patients (above 40 years of age) who were admitted with the same diagnosis.

## Patients and methods:

The present study included 60 patients with ACS who were divided into 2 groups:

**Group I**: young patients (less than 40 years)

**Group II**: old patients (above 40 years)

**Exclusion criteria:**

1- Patients with atypical chest pain and with neither ECG changes nor elevation of cardiac enzymes.

2- Patients with clinical heart failure.

3- Patients with known rheumatic or congenital heart disease.

4- Patients with systemic diseases.

5- Patients who died before coronary angiography could be done.

**Each patient was subjected to the following:**

- Full history taking.
- Thorough clinical examination.
- Serial ECGs.
- Laboratory evaluation in the form of blood glucose level, lipid profile, and serial CPK.
- Echocardiography.
- Coronary angiography.

## Results:

Smoking was the most important risk factor in both groups. Diabetes mellitus was less prevalent in young patients. Dyslipidemia was mostly associated with NSTEACS in young patients.

STEMI was more common in young patients and inferior wall MI was the most common type of STEMI.

Young patients had less complications of ACS than old patients except for heart failure.

Echocardiography showed no statistical difference between both groups as regard ejection fraction.

Coronary angiography revealed that single-vessel disease and normal coronary arteries were statistically more common in young patients and old patients tended to have multivessel disease.

Young patients tended to have less severe CAD and type B lesion was the most common type in these patients.

Collateral circulation was more evident in old patients.

LAD artery was the most common artery affected in both groups.

## Conclusion:

This study characterizes the clinical features and the angiographic criteria in a select group of young adults presenting to emergency department with ACS.

An increased number of conventional risk factors was observed, with cigarette smoking and dyslipidemia being the most prevalent.

The incidence of STEMI was the most prevalent type of ACS. Among patients with STEMI, inferior MI was the most common type of infarctions.

The incidence of complications was relatively low, except for heart failure. Angiographically, single-vessel disease and normal coronary angiography were the most common findings in young adults with a relatively less extensive coronary disease.