P-0633 Very high prevalence of diabetes in patients with Acute Coronary Syndrome(ACS): A cross sectional study from South India

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Background

Patients with both Atherosclerotic Cardiovascular Disease (ASCVD) and diabetes (DM) are classified as extreme-risk groups.¹ The prevalence of diabetes in population with Acute Coronary Syndrome (ACS) increased from 18% in 1997 to 30% in 2006 in US.² There is paucity of national and regional data on recent patterns and factors associated with DM among persons with incident cardiovascular events.

Aim

To assess prevalence, clinical characteristics and associations of DM in patients admitted with ACS in a semi urban multispecialty hospital in South India.

Methods

Retrospective data of 424 patients (331 males and 93 females) aged 21 to 80 years admitted with ACS from April 2018 to March 2019 were analysed. Patients with incomplete data, terminal illness and pregnant women were excluded. Diagnosis of Prediabetes and Diabetes, UA, NSTEMI and STEMI were based on standard guidelines. Coronary angiogram (CAG) reports were obtained from Cath lab EMR. Statistical analysis including descriptive statistics and Chi- square test for categorical data were done using SPSSv15.

Results

Overall, 78.1% were males. Mean age of patients was 60.8 years. 54.72% aged between 41-64 years. 83.3% had history of hypertension, while only 17.2% had LDL-C <100mg/dL. 46.2% were smokers. (see Table 1)

Previous DM was present in 51.4%. Mean HbA1c was 8.05%. RBS at admission was >200mg/dL in 39.62%. 66.03% had HbA1c >6.5%. UA/NSTEMI was diagnosed in 41.7% and STEMI in 58.3%. CAG showed single vessel(SVD), double vessel(DVD) and triple vessel disease(TVD) in 34.7%, DVD in 31.8%, TVD in 24.3%.

Table: 1- Overall characteristics of Study Population	
Previous history of DM	51.4%
HbA1c <6.5	22.6%
HbA1c below 5.7%	8.25%
Hypertension	83.3%
History of previous ASCVD	16.98%
EGFR was < 60	16.5%
Albuminuria	36.8%
Smokers	46.2%

Those between 65-80 years had higher prevalence of multi vessel disease (MVD) on CAG. SVD was more common in those below 65 years of age. (p=0.002). Angioplasty was more performed in age group <65 years. (p=0.001). Those with DM (p=0.03), higher RBS at admission(p<0.001) older patients (p=0.007) and females (p<0.001) had longer hospital stay (>5 days). Interestingly, smokers where more in the non-DM group. (p=0.001). Prevalence of MVD was significantly higher in those with history of DM (p<0.001). Among those without previous history of DM, 25.73% were pre-diabetic, 33.98% had A1c > 6.5%. Only 38.35% were on statins. Hba1C was not estimated in 23.3% . (See Table 3)

Among those with previous history of DM, 66.51% had an A1c >8.0. Only 52.29% patients with previous history of DM were on statin. LDL was above the target value of 100mg/dl in 76.61%. Albuminuria was present in 55.5%. (See Table 2)

Males had higher prevalence of MVD (p=0.04). Prevalence of STEMI was higher in statin non users (p=0.034), those with albuminuria (p=0.01) and smokers (p=0.006).

AGE VS CAG RESULT – P=0.002

ADMISSION RBS(mg/dl) VS LENGTH OF STAY – P<0.001

Table: 2- Those with previous h/o DM	
HbA1c >8	66.51%
Adm RBS>200mg/dL	65.1%
Statin use	52.29%
LDL > 100mg/dL	76.71%
H/o previous ASCVD	16.98%
EGFR was < 60	21.1%
Albuminuria	55.5%
Smokers	37.61%
SVD/ DVD/ TVD	23.85%/33.94%/30.28%

Table: 3- Those without previous h/o DM	
HbA1c >6.5%	33.98%
HbA1c 5.7-6.4%	25.73%
HbA1c <5.7%	16.99%
Adm RBS>200mg/dL	12.62%
Statin use	38.35%
LDL > 100mg/dL	89.3%
SVD/ DVD/ TVD	46.1%/29.6%/18%

Discussion

Ours is the first reported study of this kind from South India. Results show high prevalence of diagnosed and undiagnosed diabetes in patients admitted with ACS. This study illustrates on the importance of primary prevention of ASCVD with better curtailment of modifiable risk factors. Newly diagnosed diabetes has been recognised as an independent predictor of mortality⁵. It also shows the necessity to evaluate for DM in all patients with ACS, irrespective of previous glycemic status. Greater insights into this area may be of enormous public health and economic importance.

References:

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