Important high light on diabetes in acute coronary syndrome cases: Saudi Arabia

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Abstract
Diabetes mellitus (DM) patients who present with acute coronary syndrome (ACS) have worse cardiovascular outcomes. We aimed to study clinical features and hospital outcomes of diabetic patients with ACS in Saudi Arabia. This is a review of our retrospective study which included ACS patients enrolled in the Saudi Project for Assessment of Acute Coronary Syndrome (SPACE) study from December 2005 to December 2007, either with DM or newly diagnosed during hospitalization. Baseline demographics, clinical presentation, therapies, and in-hospital outcomes were compared with non-diabetic patients.

Of the 5055 ACS patients enrolled in SPACE, 2929 (57.9%) were diabetic (92.8% known diabetics and 7.2% newly diagnosed). A total of 902 (30.8%) diabetics were on insulin, 1871 (63.9%) on oral hypoglycemic agents, and 156 (5.3%) followed a diet.

Diabetic patients were older, female, Saudi nationals, had higher risk-factor (e.g., hypertension, hyperlipidemia) prevalence and were more likely to present with non-ST-elevation myocardial infarction (40.2% vs. 31.4%, p < 0.001), heart failure (25.4% vs. 13.9%, p < 0.001), significant left ventricular systolic dysfunction and multi-vessel disease. Diabetic patients had higher in-hospital heart failure, cardiogenic shock, and re-infarction rates. Adjusted odds ratio for in-hospital mortality in diabetic patients was 1.83 (95% CI, 1.02–3.30, p = 0.042).

In conclusion, a substantial proportion of Saudi patients presenting with ACS have DM and a significantly worse prognosis.
Conclusion

A substantial proportion of Saudi patients presenting with ACS have DM and a significantly worse prognosis. Almost two thirds of ACS patients enrolled in this registry were diabetic, the highest DM prevalence ever reported in an ACS population. This reflects the sedentary lifestyle, adopting the “western diet” and the fast pace of urbanization. Also, the Saudi population has a special genetic predisposition to developing type 2 diabetes; this groundwork is further amplified by a high rate of consanguinity, a rise in obesity rates, and the presence of other components of insulin resistance syndrome. These data highlight the importance of cardiovascular preventative interventions in the general population.

References

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