Cardio DIGEST
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Editorial

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Diabetes: A major risk factor for incident heart failure

While the increased incidence of heart failure in people with diabetes compared with those without is generally recognised, the extent to which this association is independent of traditional cardiovascular risk factors has remained unclear, especially in people over the age of 65 years. Two articles summarised in this issue of *Cardio Digest* (page 118) look at this important question.

The first of these studies reports findings from a propensity-matched study of community-dwelling older adults (Roy et al, 2011). The authors found that diabetes had a strong association with incident heart failure (P=0.003) and all-cause mortality (P=0.001) in this population, and that these associations were independent of most traditional and non-traditional cardiovascular risk factors judged at baseline.

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The second study – based on the Acute Heart Failure Global Survey of Standard Treatment international registry – was an observational survey that comprised 4953 inpatients admitted for acute heart failure in six European countries, Mexico, and Australia (Parissis et al, 2012). These data revealed that people with diabetes presented significantly more frequently with acute pulmonary oedema than those without diabetes, and also had more often acute coronary syndrome, as precipitating factors for admission with acute heart failure (both P<0.001). Their admission was associated with multiple comorbidities such as renal dysfunction, arterial hypertension, and peripheral vascular disease. As has now been widely recognised, Parissis et al (2012) confirm that all-cause mortality among inpatients with diabetes was higher when compared with those without diabetes (11.7% vs 9.8%; P=0.01). Thus, this study demonstrates that people with diabetes and acute heart failure have a higher in-hospital mortality rate than those without diabetes, despite intensive treatment regimens, including for heart failure and acute coronary syndrome.

While Roy et al (2011) demonstrate an independent association between diabetes and incident heart failure and all-cause mortality among older adults who did not have heart failure at baseline, Parissis et al (2012) demonstrate that the high incidence of heart failure in a similar population was due predominantly to acute myocardial infarction, which indirectly is of course related to traditional cardiovascular risk factors. Given these findings, the clinician should be vigilant for the diagnosis of heart failure in people with diabetes, especially in the current era of fragmenting care.

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Parissis JT, Rafouli-Stergiou P, Mebazaa A et al (2012) Acute heart failure in patients with diabetes mellitus: clinical characteristics and predictors of in-hospital mortality. *Int J Cardiol* **157**: 108–13

Roy B, Pawar PP, Desai RV et al (2011) A propensity-matched study of the association of diabetes mellitus with incident heart failure and mortality among community-dwelling older adults. *Am J Cardiol* **108**: 1747–53