



Jiten Vora
Editor, Cardio Digest

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INCREASED FATALITY FOR MYOCARDIAL INFARCTION IN DIABETES

It is well-recognised that myocardial infarction and stroke are more common among patients with diabetes than in the general population. It has been suggested that the presence of type 2 diabetes imparts a significant risk for cardiac mortality, of 20% over 7 years, rising to 45% over 7 years for a second myocardial infarction. Myocardial infarction case fatality is also increased in the presence of diabetes, and likewise the occurrence of congestive cardiac failure, with a 4-fold increase in left ventricular failure in patients with diabetes. A recent study demonstrated an increase in early hospital mortality in patients with type 2 diabetes and death from myocardial infarction being associated with higher HbA_{1c} levels, increased age, blood pressure and urinary albumin levels (Stevens et al, 2004; Otter W et al, 2004). Additionally, studies corroborate the increased frequency of diabetes in a cohort of patients with myocardial infarction. Little attention has been paid to cardiac autonomic dysfunction, prior to and during myocardial infarctions in patients with diabetes.

So why then is there an increased fatality for myocardial infarction in diabetes, especially in the early admission phase? It is proposed that patients with type 2 diabetes have a less eloquent expression of symptoms of acute coronary syndromes, resulting in a delay in recognition and consequent admission of such patients. As a consequence of reduced symptoms and potential of diffuse disease there is less acute angiography, and less intervention in such patients has been clearly identified. It is, of course, also reported that intervention is reduced on the grounds of potentially more concomitant disease such as renal impairment.

Where to next then?....Clearly, further data is required and perhaps a large early intervention trial in patients with diabetes is necessary to evaluate the benefits of early, aggressive intervention.

At a local level, it is clearly necessary to impose the will of the diabetologist upon the cardiologist, and hopefully diabetologists will have a greater involvement in coronary care units and increase the frequency of early intervention. Case fatality would also be reduced by improvements in long-term glycaemic control. Calculations for such case fatalities are now included in the UKPDS risk engine.

Stevens RJ, Coleman L, Adler AL, Stratton IM, Matthews DR, Holman RR (2004) Risk factors for myocardial infarction case fatality and stroke case fatality in type 2 diabetes. *Diabetes Care* **27**(1): 201–07

Otter W, Kleybrink S, Doering W, Standl E, Schnell O (2004) Hospital outcome of acute myocardial infarction in patients with and without diabetes mellitus. *Diabetic Medicine* **21**: 183–87