

PublisherInfo		
PublisherName	:	BioMed Central
PublisherLocation	:	London
PublisherImprintName	:	BioMed Central

'No independent link' between diabetes and poor outcomes after CABG/PTCA

ArticleInfo		
ArticleID	:	27
ArticleDOI	:	10.1186/cvm-2001-72154
ArticleCitationID	:	72154
ArticleSequenceNumber	:	6
ArticleCategory	:	Paper Report
ArticleFirstPage	:	1
ArticleLastPage	:	3
ArticleHistory	:	RegistrationDate : 2000-12-7 Received : 2001-10-19 OnlineDate : 2001-10-19
ArticleCopyright	:	Biomed Central Ltd2001

ArticleGrants	:	
ArticleContext	:	1306322

Joanna Lyford,^{Aff1}

Corresponding Affiliation: [Aff1](#)

[Aff1](#) [Medwire](#), [U.K](#)

Keywords

Diabetes, outcome, revascularization

Context

An investigation into why diabetic patients have worse outcomes than nondiabetics after cardiac catheterization reveals that the discrepancy can be entirely explained by adverse clinical variables that are associated with diabetes. Contradicting previous studies, Canadian researchers identified no 'independent diabetes factor' - such as an increased tendency towards thrombosis - that was independently associated with worse mortality following revascularization procedures.

Significant findings

The team reports that unadjusted 1-year mortality was 7.6% for patients with diabetes versus 4.1% for those without diabetes (odds ratio 1.9, 95% confidence interval [CI] 1.6-2.3). However, after adjusting for potential confounders including comorbid conditions, previous cardiac history, coronary anatomy and renal function, the odds ratio was reduced to 1.1 (95% CI 0.8-1.3). Similarly, the adjusted hazard ratio for longer term mortality was 1.2 (95% CI 1.0-1.4, mean follow-up 702 days).

Comments

The team suggests various reasons for the discrepancy between their findings and those of prior epidemiological studies, which have reported relative risks ranging from 1.3 to 2.5 - even after adjusting

for other prognostic factors such as left ventricular ejection fraction and renal disease. 'Prior studies either focused on selected patient samples or failed to measure potential confounders. The rich clinical detail of the APPROACH database may have allowed us to adjust more fully for the clinical status of our patients. Duration of follow-up may also affect the prognostic importance of diabetes', they note. As the hazard ratio at 3 years was greater than that at 1 year, Ghali *et al* postulate an atherogenic mechanism for long-term risk associated with diabetes, noting that this is consistent with our current understanding of the pathophysiology of glucose metabolism. They also admit that their study focused only on survival, although other outcomes (such as quality of life, severity of angina, readmission to hospital) are important and deserve attention. 'When physicians are considering the short- to intermediate-term prognosis of diabetic patients who have undergone diagnostic cardiac catheterization, they should be evaluated mainly on the presence or absence of other clinical variables associated with poor prognosis', the team concludes.

Methods

A multicenter team analyzed data from a prospective cohort study (APPROACH) that captured detailed clinical information and longitudinal outcomes for 11,468 patients (17% of whom were diabetic) undergoing cardiac catheterization in Alberta, Canada. They used logistic regression to model predictors of 1-year mortality, while proportional hazards analysis was used to model predictors of survival up to 3 years after cardiac catheterization.

Additional information

References

1. Ghali WA, Quan H, Norris CM, Dzavik V, Naylor CD, Mitchell LB, Brant R, Knudtson ML: Prognostic significance of diabetes as a predictor of survival after cardiac catheterization. *Am J Med.* 2000, 109: 543-548.