Structured care improves mortality in women with type 2 diabetes

Structured personal diabetes care reduced deaths from diabetes and all causes in women but not men with type 2 diabetes, in a primary care study from Denmark.

The Diabetes Care in General Practice project is a Danish multicentre, cluster randomised, controlled trial. The participating practices, involving 474 GPs, were randomised to provide six years of structured personal care (243 GPs) or routine care (231 GPs) for newly diagnosed patients with type 2 diabetes. The intervention included regular follow-up, individualised goal setting and continuing medical education for the GPs in that group.

Of an initial 1,381 patients, 970 (492 men) were re-examined at the end of the six-year period. They were then followed up for a further 13 years, by reference to national registries. Outcomes studied included: all cause mortality, diabetes-related death, any diabetes-related endpoint, myocardial infarction, stroke, peripheral vascular disease and microvascular disease.

During 13 years of follow-up, no statistically significant reductions in outcomes were observed for men when comparing the structured personal intervention group with the routine care group.

However, compared with routine care, structured personal diabetes care reduced all cause mortality and diabetes-related death in women. The hazard ratio (HR) was also reduced for any diabetes-related endpoint in women:

- **HR for all cause mortality 0.74 (95% CI: 0.57-0.97; P = 0.028)**
- 55.5 vs 68.5 events/1,000 patient-years
- **HR for diabetes-related death 0.70 (95% CI: 0.50-0.96; P = 0.031)**
- 34.6 vs 45.7 events/1,000 patient-years
- **HR for any diabetes-related endpoint 0.65 (95% CI: 0.48-0.87; P = 0.004)**
- 73.4 vs 107.7 events/1,000 patient-years.

After multivariate adjustment for confounding variables the only outcomes with statistically significant differences between the sexes were all cause mortality and diabetes-related death. These effects were not explicable in terms of differences of surrogate markers for control, such as HbA1c.

The researchers were unable to explain the difference, but concluded that intensive intervention for patients with diabetes may need to be tailored to the two sexes.

‘There is a need to further explore the gender-specific effects of major intervention trials in order to rethink the way we provide medical care to both men and women, so that both men and women benefit from intensified treatment efforts,’ the study authors conclude.