

Depression increases death risk in coronary stent patients

Depression increases the risk of death in patients who have a coronary stent implanted. After 7 years of follow up, depressed patients were 1.5 times more likely to have died than non-depressed patients, according to research presented at the 12th Annual Spring Meeting on Cardiovascular Nursing, 16–17 March, in Copenhagen, Denmark (Damen et al, 2012). The findings were independent of age, gender, clinical characteristics, anxiety and the distressed personality.

Depression has been associated with poor outcomes in coronary artery disease but previous studies have mainly looked at short-term effects, primarily in patients who have had a myocardial infarction or a coronary bypass operation. The current study (FPN 17) investigated the impact of depression on mortality during a 7-year follow up period in

patients treated with percutaneous coronary intervention.

For the study, 1234 patients undergoing percutaneous coronary intervention aged 26–90 years (average age 62 years) from the Rapamycin-Eluting Stent Evaluated At Rotterdam Cardiology Hospital (RESEARCH) registry completed the Hospital Anxiety and Depression Scale to assess depression 6 months after having a stent implanted. The end point was all-cause mortality.

The prevalence of depression was 26.3% (324 out of 1234 patients). After 7 years there were 187 deaths in total (15.2%). The incidence of all-cause mortality in depressed patients was 23.5% (76 out of 324 patients) *vs* 12.2% (111 out of 910 patients) in non-depressed patients.

Depression was independently associated with all-cause

mortality (hazard ratio=1.56; 95% confidence interval 1.03–2.35, $P=0.035$) after adjusting for sociodemographics (age, gender), clinical characteristics, anxiety and the type D personality.

Clinical characteristics included type of stent, number of vessels obstructed, body mass index, past cardiac surgery or myocardial infarction, indication for percutaneous coronary intervention, coronary risk factors (hypertension, hypercholesterolaemia, diabetes, family history of cardiovascular disease, smoking) and cardiac medications (aspirin, angiotensin-converting enzyme inhibitors, beta blockers, calcium antagonists, diuretics, nitrates and statins).

Male gender, older age and diabetes mellitus were also significantly associated with an increased risk of death after 7 years of follow up, whereas

use of statins was associated with a reduced risk. Anxiety and type D personality had no significant effect on all-cause mortality.

The reasons for the finding are under investigation. One possible explanation is that depressed patients may have less healthy lifestyles with regard to smoking, drinking alcohol, physical activity, and diet, and may be less likely to take their medications. Another possible explanation is that depression could alter the activity of the sympathetic nervous system, leading to increases in heart rate and blood pressure.

Damen NLM, Versteeg H, Boersma E, Van Geuns RM, Van Domburg RT, Pedersen SS (2012) Depression is independently associated with 7-year mortality in patients treated with percutaneous coronary intervention: results from the research registry. *Eur J Cardiovasc Nurs* 11(Suppl): S5

Emergency admissions for heart attack patients drop by 28%

Hospitals in England have seen the annual number of emergency admissions for heart attacks among patients aged 35 to 74 years drop by more than a quarter in a decade and the death rate nearly halve, according to data from the NHS Information Centre.

Emergency admissions fell from 42 400 in 2000–1 to 30 600 in 2009–10. During the same period the death rate for within 30 days of an emergency admission for heart attack almost halved, dropping from one in 11 to one in 20.

The report presents mortality information on selected conditions and procedures

(non-elective surgery, coronary artery bypass graft, and emergency admissions for stroke, myocardial infarction and fractured proximal femur), to help the NHS monitor potential avoidable deaths following hospital treatment.

As well as the notable changes for heart attacks, the report also shows that while the death rate has reduced for stroke (among all age groups) between 2000–1 and 2009–10, the annual number of emergency admissions has not changed greatly.

The report findings can be accessed at: www.ic.nhs.uk/pubs/hesdeaths0910

Meta-analysis shows role of IL-6 receptor in heart disease

Research undertaken as part of the IL6R Genetics Consortium Emerging Risk Factors Collaboration, funded by the British Heart Foundation and the Medical Research Council, analysed human genetic and biomarker data from more than 200 000 participants of 82 previous studies.

The research focused on the genetic variant Asp358Ala which affects interleukin-6 receptor signalling pathways involved in the inflammatory response.

The researchers discovered that people who carry the 'Ala' form of the variant have a reduced risk of coronary

heart disease. Although this genetic change in risk is small, the potential reduction in an individual's risk of heart disease provided by a drug could be much greater.

The findings suggest that targeting the interleukin-6 receptor signalling pathway might therefore be an effective way of combatting heart disease, and existing drugs such as tocilizumab could be used for this.

IL6R Genetics Consortium Emerging Risk Factors Collaboration (2012) Interleukin-6 receptor pathways in coronary heart disease: a collaborative meta-analysis of 82 studies. *Lancet* 14 March [Epub ahead of print]