



Coventina's Column

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Scotland's continual appearance in the top echelons of worldwide tables of cardiac mortality means that Coventina is always eager to popularise newer methods of diagnosing and treating cardiac conditions. Measurement of B-type natriuretic peptide (BNP) has been in use in the United States and in specialist centres in the United Kingdom for some time as a way of assessing the degree of ventricular dysfunction in cardiac failure, but a recent paper, *British Journal of General Practice* 2008; 58: 393-9, suggested that measurement of BNP may be a way in which general practitioners in this country can identify and guide treatment of ventricular dysfunction in the primary care setting. In the study, patients invited to attend for BNP measurement, all 65 years old or over, were not only those with clinical ischaemic heart disease but also those with diabetes mellitus who were obviously at risk of ischaemic heart disease. Attendees comprised 40% of the 1918 patients invited, and of this 759, the 76 who showed a persistent elevation of BNP levels at repeated measurements were offered initiation or gradual increase in treatment, aimed towards reducing their BNP levels to a target of less than 36 picomol/l. Of the 76 patients undergoing treatment, 84% were either asymptomatic or only mildly breathless. The therapy that proved most effective was changing the beta blocker to carvedilol or bisoprolol. This study shows that GPs may assess severity of ventricular dysfunction by measuring BNP in both symptomatic and at-risk patients, and use serial measurements to guide treatment in the community. While it will not obviate the need for specialist treatment by cardiologists in both in-patient and out-patient settings in hospital, it may mean that more patients with ventricular dysfunction are diagnosed and treated than would otherwise be the case.

Another screening test for myocardial disease featured in *The Lancet*, 2008; 371: 1587-1594 may raise eminent eyebrows across the land. Medical students have long been told that carotid bruits are a poor predictor of risk of stroke. While this is true, this large meta-analysis which looked at 17,295 patients showed that the rate of myocardial infarction in patients with carotid bruits was 3.69 per 100 patient years compared to 1.86 per 100 patient years in those without bruits. Those with bruits also showed a higher incidence of cardiovascular death each year than those without. In the four trials in which it was possible to directly compare patients with and without bruits, the odds ratio for myocardial infarction was 2.15 and that for death from cardiovascular disease was 2.27. So it seems that while auscultation for carotid bruits will still not help predict patients who will go on to experience a cerebrovascular event, it may be helpful in pinpointing patients who would benefit from assessment and modification of risk factors for myocardial infarction and commencement of pharmacological treatment to reduce this risk.

Of course, if Coventina could transport Scotland back to her hey-day when the only things that smoked were fires, it would reduce the incidence of a multitude of illnesses from cardiac disease and respiratory conditions to cancers of many kinds. Interventions to dissuade youngsters from taking up smoking are usually objects of derision in the eyes of these adolescents since obeying the edicts of uncool adults is anathema to teenagers. A sneaky way round this might be to enlist the help of some of the most admired of the youngsters' own peer group. This tactic was assessed in a randomised controlled trial of 59 schools in England and Wales and involved 10,730 pupils aged 12-13, *The Lancet*, 2008; 371: 1595-1602. Twenty nine schools continued their previous smoking education while in 30, an intervention was introduced. The intervention consisted of training influential students to informally encourage their peers not to smoke. Follow up immediately after the intervention period showed that the odds ratio of being a smoker in the intervention compared with control schools was 0.75 immediately after the intervention, 0.77 at one year follow-up, and 0.85 at two year follow-up. Interventions similar to this in Scotland may be useful in reducing the burden of smoking-related disease in the future.

Diabetes is another illness seen all too often in Scotland. While it has long been known that some degree of protection against diabetic nephropathy may be obtained by blocking the renin-angiotensin system with angiotensin converting enzyme inhibitors (ACEI) or angiotensin II receptor blockers (ARB), a recent trial, *New England Journal of Medicine* 2008; 358: 2503-2505, suggests that adding a direct renin inhibitor, aliskiren, to existing treatment with maximal dosage of losartan (an ARB), producing dual blockade of the renin-angiotensin system, may offer additional protection against diabetic nephropathy in patients with type two diabetes with nephropathy and hypertension. Treatment with aliskiren as opposed to placebo reduced the mean urinary albumin-to-creatinine ratio by 20%, and a reduction of 50% in this ratio was seen in 24.7% of aliskiren patients compared with 12.5% of the placebo group.

GPs are sometimes faced with women asking if it is safe for them to continue antidepressants during pregnancy. This is a difficult situation: the use of many medicines during pregnancy is controversial, especially as lack of evidence of adverse effects is not the same as evidence of lack of adverse effects. Previous studies have suggested that exposure to serotonin reuptake inhibitors may lead to adverse neonatal outcomes. At the same time, untreated severe depression may have catastrophic effects for both mother and baby. A tentative note of reassurance comes from a recent study, *British Journal of Psychiatry* 2008; 192: 344-350, which shows that longer duration of antidepressant use in the first trimester was not

associated with an increased risk of major congenital malformations.

Another study from a different team in the same issue, *British Journal of Psychiatry*, 2008; 192: 338-343, suggests that the trimester in which exposure to antidepressants occurs makes no difference to outcome, with early exposure not differing significantly from late exposure in terms of risk. This study showed that longer prenatal exposure did increase risks – albeit

of lower birth weight and premature birth, which are not always as devastating outcomes as the major congenital malformations studied in the other trial. Further research into this area is required, but it seems that judicious assessment and monitoring (serial mental state assessments in those women abstaining from antidepressants) of individual cases is what is required, since in a minority of women with depression, the risks of major depression during or after pregnancy may outweigh those of a low weight or premature neonate.
