



Coventina's Column

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Sadly for football fans, the only league table Scotland is going to continue to head is that of cardiac morbidity and mortality. Coventina is therefore always interested in new treatments for coronary artery disease. A recent study (*The Lancet*, Sep 5-Sep 11, 2009. Vol. 374, Iss. 9692; pg. 787) looked at the use of the direct factor Xa inhibitor Otamixaban for treatment of patients with non-ST elevation acute coronary syndromes. The double-blind, multi-centre (196 sites in 36 countries) trial examined 3241 patients who were either treated with heparin followed by eptifibatide or were assigned to one of five different doses of otamixaban. The incidence, within seven days, of death, myocardial infarction (MI), urgent revascularisation or bail-out treatment with glycoprotein IIb/IIIa inhibitor use was significantly lower in four of the otamixaban groups than in the control (heparin and eptifibatide) group. The fourth highest dose of otamixaban used seemed most cardio-protective. Rates of bleeding related to the treatment were slightly higher in three of the otamixaban groups than in the control group. From the results, it seems that further tests of otamixaban are warranted as it may be a very useful drug to reduce ischaemic cardiac events with a safety profile comparable to heparin.



Another drug that may be useful in acute coronary syndromes, whether or not they involve ECG evidence of ST elevation, is the anti-platelet drug ticagrelor. This oral drug has a more swift onset than clopidogrel, and a recent trial compared its efficacy with that of clopidogrel in acute coronary syndromes (*The New England Journal of Medicine*, Volume 361(11), 10 September 2009, p 1045–1057). The multi-centre, double-blind, randomised study assigned 18,624 patients admitted with an acute coronary syndrome (with or without ST elevation) to either ticagrelor or clopidogrel. At 12 months, death from a composite of MI, stroke or other vascular problems had occurred in 9.8% of the ticagrelor group and 11.7% of the clopidogrel one. The deaths from MI and other vascular problems were significantly lower in the ticagrelor group but the stroke deaths were not. Overall death rate was lower in the ticagrelor group than in the clopidogrel one. Unfortunately, the ticagrelor group was associated with a higher risk of major bleeds not related to coronary artery bypass grafting, such as intra-cranial bleeds, although overall risk of major bleeding was not significantly different between the two groups. Coventina is a fan of clopidogrel since it helps control her own vascular disease, and awaits further studies of ticagrelor with interest.



There can be few procedures less edifying than awake colonoscopy (even ancient Celtic goddesses are not immune from this indignity), so optimal sedation and analgesia for patients undergoing colonoscopy is important. A randomised trial has compared intravenous (iv) sedation with the benzodiazepine midazolam in combination with iv analgesia with the short-acting opioid fentanyl with inhaled entonox, the 50:50 mixture of nitrous oxide and oxygen commonly used by

women in labour (*British Journal of Surgery* Sept 2009, 6467; pages 361-368). 131 patients undergoing elective colonoscopy were randomised to receive either the iv midazolam/fentanyl mix or inhaled entonox. Patients who received entonox were ready for discharge earlier than the iv midazolam/fentanyl group, and reported significantly less pain. They also exhibited better recovery of both physical and mental function immediately after the procedure. Patient satisfaction was higher in the entonox group. Coventina is impressed since the risks of over-sedation caused by iv agents is also avoided, which is always a good thing when anaesthetists are not in attendance. Entonox has its own safety feature built in since, like all other forms of patient-controlled analgesia, patients who become obtunded will stop taking the drug. Adequate ventilation of rooms used would be important to prevent environmental pollution but this is usually the case in theatre areas anyway.



Thankfully, treatment of HIV has come a long way since the early '80s when the problem first erupted in this country and many young people died prematurely. Patients with HIV can now live thirty or more years after diagnosis. There are now 26 anti-retrovirus drugs licensed for use in HIV, working at five different targets to prevent replication of the virus. The integrase inhibitors are a fairly new class of anti-HIV drugs which stop the replication of the virus by inhibiting the enzyme that integrates viral genes into the host DNA. Until now, the drug raltegravir, the first HIV integrase inhibitor, has been used mainly for patients with multi-drug resistance. A recent study (*The Lancet*. London: Sep 5-Sep 11, 2009. Vol. 374, Iss. 9692; p 796) looked at giving patients without drug resistance raltegravir as first-line treatment. Patients from 67 centres in five continents were assigned randomly to combination therapy based either on raltegravir or efavirenz. All patients also received other drugs, namely tenofovir and emtricitabine. 86.1% of the raltegravir group and 81.9% of the efavirenz group achieved a viral RNA concentration of less than 50 copies per mL at week 48. The time taken to reach this point was shorter for patients on raltegravir than on efavirenz. There were significantly less drug side-effects in patients on raltegravir than those on efavirenz. This trial suggests that raltegravir should not only be used for patients with multiple drug resistance but may have a role as first-line treatment in HIV infection.



It's well known that obesity is a major problem in Scotland, but the extent of the sequelae are often not appreciated by patients, who may not realise that locomotor difficulties may arise from being overweight. A recent study looked at whether knee pain in overweight people might be reduced by regular exercises to strengthen the quadriceps muscles and /or by moderate weight loss (*British Medical Journal*, 2009;339: p 3170). Patients were randomised to dietary intervention together with muscle-strengthening exercises for the quadriceps; dietary intervention on its own; quadriceps strengthening exercises alone; or advice leaflet only

(control group). Dietary intervention involved advice to reduce energy intake by 2.5 MJ (600 kcal) a day. There was a significant improvement in knee pain in the quadriceps exercise groups compared with those in the non-exercise groups at two years. The mean weight loss in the dietary intervention group was at 2.95 kg at two years. Interestingly, weight loss did not lead to

reduced knee pain but did reduce reports of depression. The researchers conclude that home-based exercise regimes may improve knee function and pain. Certainly Coventina is in favour of any home-based treatment since both patients and NHS resources favour this.
