

## Cardiovascular News

### Fondaparinux better than enoxaparin for non-ST ACS patients with renal dysfunction

21 September 2007

*MedWire News:* Fondaparinux is more effective and better tolerated than enoxaparin for patients presenting with non-ST segment elevation acute coronary syndromes (ACS) and renal dysfunction, results from the OASIS-5 trial indicate.

The OASIS-5 (Fifth organization to assess strategies in acute ischemic syndromes) trial compared the effectiveness and safety of the selective factor Xa inhibitor fondaparinux with the low-molecular-weight heparin enoxaparin in 20,078 patients with non-ST elevation ACS.

For the current study, Keith Fox (University of Edinburgh, UK) and colleagues analyzed the outcomes of 19,979 participants. Creatinine levels measured at baseline were used to determine whether the risk for bleeding associated with fondaparinux and enoxaparin is influenced by the degree of renal dysfunction.

Patients receiving fondaparinux were less likely than those treated with enoxaparin to experience the combined endpoint of major bleeding, myocardial infarction (MI), refractory ischemia or death, but the difference was only significant among those with severe renal dysfunction, as indicated by a glomerular filtration rate below 58 ml/min per 1.73 m<sup>2</sup>.

For these patients with severe renal dysfunction, the rate of the combined endpoint at 9 days was 8.8% among patients receiving fondaparinux compared with 12.5% among those treated with enoxaparin, 12.9% and 17.6%, respectively, at 30 days, and 21.3% and 24.7% at 180 days.

The benefit of fondaparinux over enoxaparin was mainly explained by significantly lower rates of major bleeding events, at 2.8% versus 6.4%, the team notes.

The researchers suggest that the observed differences in bleeding risk may be associated with the way the compounds are cleared, as enoxaparin excretion involves renal clearance of active and non-active fragments whereas fondaparinux is excreted by the kidney without previous metabolism.

Fox *et al* conclude in the *Annals of Internal Medicine* that, compared with enoxaparin, "fondaparinux has a lower risk for bleeding events and a significant advantage in risks for death" in patients with non-ST elevation ACS and renal dysfunction.

They add: "The powerful association between renal dysfunction and the adverse outcomes of death and of bleeding suggests that results from patients with well-preserved renal function should not be extrapolated to the full spectrum of patients presenting with non-ST segment elevation ACS."

[\*Ann Intern Med\* 2007; 147: 304-310](#)