

Aspirin before heart surgery reduces the risk of postoperative acute kidney failure

Aspirin taken for 5 days before a heart operation can halve the numbers of patients developing postoperative acute kidney failure, according to research presented at the European Anaesthesiology Congress in Paris.

Professor Jianzhong Sun, professor and attending anaesthesiologist at Jefferson Medical College, Thomas Jefferson University, Philadelphia, USA, told the meeting that in a study of 3219 patients, preoperative aspirin therapy was associated with a reduction in acute renal failure of about three in every 100 patients undergoing coronary artery bypass graft, valve surgery or both.

The patients were divided into two groups: those taking aspirin within 5 days before their operation (2247 patients) and those not taking it (972 patients). Although the researchers had no record of the precise dose taken, between 80 and 325 mg per day is the normal dose for aspirin taken over a period of time.

After adjusting their results for various differing characteristics such as age, disease, and other medications, the researchers found that preoperative aspirin was associated with a significant decrease in the incidence of postoperative kidney failure: acute renal failure occurred in 86 out of 2247 patients (3.8%) taking aspirin, and in 65 out of

972 patients (6.7%) not taking it. This represented an approximate halving in the risk of acute renal failure.

Professor Sun said: 'Thus, the results of this clinical study showed that preoperative therapy with aspirin is associated with preventing about an extra three cases of acute renal failure per 100 patients undergoing coronary artery bypass graft or/and valve surgery.'

Acute renal failure or injury is a common postoperative complication and has a significant impact on the survival of patients undergoing heart surgery. 'It significantly increases hospital stay, the incidence of other complications and mortality,' said Professor Sun.

Short-term antiarrhythmic drug treatment effective in atrial fibrillation

Short-term antiarrhythmic drug treatment after cardioversion is nearly as effective in preventing recurrence of atrial fibrillation as long-term treatment, according to a controlled clinical trial by the German Competence Network on Atrial Fibrillation, published in the *Lancet*.

Blood test can identify tramadol non-responders

A simple blood test measuring CYP2D6 metabolism can identify quickly the 5–10% of patients in whom tramadol does not work effectively, enabling doctors to switch a non-responding patient onto another painkiller.

New treatment for *Clostridium difficile* infection

Fidaxomicin (Dificlir), a first in class antibiotic, has been launched for treatment of adults with *Clostridium difficile* infection. Fidaxomicin has similar efficacy and safety to vancomycin, but more than halved the rate of recurrence in patients with *C. difficile* infection compared to vancomycin – recurrence occurs in up to 25% of patients within 30 days of initial treatment with current therapies.

Personalized therapy more cost-effective

Tailoring biologic treatment to individual rheumatoid arthritis patient characteristics and response increases effectiveness and improves cost-effectiveness, revealed a Dutch modeling study presented at the European Congress of Rheumatology in Berlin.

The study included 272 patients with rheumatoid arthritis who were starting treatment with the biologic therapy adalimumab. Researchers measured their disease activity score (DAS28, which measures the number of tender and swollen joints, the erythrocyte sedimentation rate and the patient's global assessment of their health), function and health-related quality of life (HAQ DI) and biologic use over 3 years.

They also used a treatment protocol for personalized care

which determined whether adalimumab was stopped or continued, dosing was changed, or another biologic treatment started based on EULAR response (which assesses change in disease activity) and adalimumab serum drug levels at 6 months.

Based on the findings, the research group simulated outcomes in DAS28, HAQ DI and biologic use for the personalized care group using a patient level Markov model. They then compared these with the observed drug use and disease course.

Results showed tailoring biologic treatment to individual patients increased effectiveness by an average of 3.67 quality-adjusted life years. At the same time, using this approach reduced total costs of managing rheumatoid arthritis

by €2,595,557 for 272 patients over 3 years. Most of the saving was on biologic drug costs.

'Governments and health authorities around the world are looking to save money by cutting costs and providing reduced access to more expensive treatments,' said lead author Charlotte Krieckaert from the Jan van Breemen Research Institute, Reade, the Netherlands. 'This study demonstrates that with careful monitoring and testing disease activity at 6 months, costs for rheumatoid arthritis treatment can be reduced and treatment effectiveness can actually increase.'

Overall, personalized care saved costs and was more effective in 77.6% of simulations, but was cost saving and less effective in 22.4%.

Susan Mayor