

# CARPHOLOGY by Rajendra



Pract Neurol 2007; 7: 420

## Preventing venous thromboembolism

The good thing about idraparinux is that can be given once a week by subcutaneous injection. The unfortunate thing is that although it can prevent deep vein thrombosis it cannot prevent pulmonary embolism. These are the findings from two randomised, open-label non-inferiority trials including 2904 patients with deep vein thrombosis and 2215 patients with pulmonary embolism which compared idraparinux to heparin plus a vitamin K antagonist. The primary efficacy outcome was the three-month incidence of symptomatic recurrent venous thromboembolism. Neurologists would of course like to know if idraparinux works for the primary prevention of deep vein thrombosis in patients with neurological illnesses.

*N Engl J Med* 2007;**357**:1094–104.

## Delaying multiple sclerosis

A two-phase trial including 468 patients with a first event suggestive of multiple sclerosis shows that early treatment with interferon beta-1b delays conversion to clinically definite multiple sclerosis. The recruited patients had a minimum of two clinically silent lesions on magnetic resonance imaging. The initial early treatment phase lasted two years and was placebo controlled. The follow-up delayed treatment phase was open-label and lasted a year. Early treatment reduced the risk of clinically definite multiple sclerosis by 41% (HR 0.59, 95% CI 0.44 to 0.80,  $p=0.0011$ ; absolute risk reduction 14%) compared with delayed treatment. It also reduced the risk for progression of disability by 40% compared with delayed treatment (HR 0.60, 95% CI 0.39 to 0.92;  $p=0.022$ ; absolute risk reduction 8%). Using this treatment means many costly injections for benefits that look small to this carphologist.

*Lancet* 2007;**370**:389–97.

## Neuroprotection in stroke

The free radical trapping agent NXY-059 showed promise as a neuroprotectant in the SAINT I trial, reducing disability when given to patients with acute ischaemic stroke within 6 h after the onset of symptoms. However, a large, randomised, double-blind placebo-controlled trial including more than 3300 patients has found it to be ineffective. Neither did it reduce alteplase related intracranial haemorrhages. Like many other ineffective drugs NXY-059 will remain a nameless car number plate.

*N Engl J Med* 2007;**357**:562–71.

## Occupational therapy after stroke

A meta-analysis shows that occupational therapy focused on improving personal activities of daily living after stroke can improve performance and reduce the risk of deterioration in these activities. Nine randomised controlled trials (1258 participants) survived the exclusion criteria. Occupational therapy increased performance scores (standardised mean difference 0.18, 95% CI 0.04 to 0.32,  $p=0.01$ ) and reduced the risk of poor outcome (death, deterioration or dependency in personal activities of daily living) (OR 0.67, 95% CI 0.51 to 0.87,  $p=0.003$ ). Thus for every 100 people who received such therapy, 11 (95% CI 7 to 30) would not have a poor outcome.

*BMJ* 27 Sep 2007; [Epub ahead of print] (doi:10.1136/bmj.39343.466863.55).

## Heading in soccer

Heading in soccer was not associated with any neurochemical signs of injury to the brain, say the authors of a small study on 23 male amateur soccer players who took part in a heading session. The players then bravely underwent lumbar puncture and serum sampling as did 10 healthy male non-athletic controls. Cerebrospinal fluid was analysed for neurofilament light protein, total tau, glial fibrillary acidic protein, S-100B, and albumin concentrations, and serum was analysed for S-100B and albumin. All samples were normal except for a slightly

raised CSF S-100B concentration in controls—whatever that means.

*Br J Sports Med* 2007;**41**:574–7.

## Preventing brain metastases

Prophylactic cranial irradiation reduced the incidence of symptomatic brain metastases and prolonged disease-free and overall survival in patients with extensive small cell lung cancer who had responded to chemotherapy. This is the finding of a randomised trial including 286 patients with extensive small cell lung cancer. The primary end point was the time to symptomatic brain metastases. Irradiation was associated with an increase in median disease-free survival from 12.0 weeks to 14.7 weeks and in median overall survival from 5.4 months to 6.7 months after randomisation. The one-year survival rate was 27.1% (95% CI 19.4 to 35.5) in the irradiation group and 13.3% (95% CI 8.1 to 19.9) in the control group.

*N Engl J Med* 2007;**357**:664–72.

## Rhizotomy for cerebral palsy

Application of strict selection criteria leads to better results in children with cerebral palsy treated with selective dorsal rhizotomy, say doctors from Oswestry in Shropshire, UK. They operated on 17 children with diplegia, one child with hemiplegia, and one with hereditary spastic paraparesis. Most of the 34 patients who were not selected for the procedure were excluded because of insufficient spasticity and marked underlying muscle weakness. After surgery the children walked on average 0.15 m/s faster, with a step length improvement of 0.11 m. Changes were seen at hip and ankle, and knees became less stiff. Precise measurements were possible because the investigators used video examination in three orthogonal planes, 3-D instrumented gait analysis, and dynamic electromyography of critical muscles. The authors say that selective dorsal rhizotomy is excellent for combating crouch gait and knee stiffness, provided rigorous selection criteria are applied.

*Arch Dis Child* 2007;**92**:781–5.