

In brief

NHS to adopt early warning system: Chief Medical Officer Liam Donaldson this week announced a new scheme for England obliging hospital trusts and general practices to report mistakes and untoward incidents to a central register. He said that such a system might have spotted the problems in Swindon and other parts of the west of England—revealed this week—in which locum consultant James Elwood allegedly misdiagnosed more than 200 patients with suspected cancer. Details at www.doh.gov.uk.

US may introduce abortion pill: The US Food and Drug Administration is considering approving the use of mifepristone (RU 486) to induce abortions, but only under strict conditions. Prescribing privileges may be restricted to doctors who are trained to give surgical abortions, and clinics providing the service may have to be situated within one hour of an emergency room.

BMA launches push for more organs: A campaign to increase the number of organs available for donation was launched this week by the BMA to combat the growing gap between the numbers of patients needing a transplant and those receiving one. In the second half of the 1990s, 1000 patients died waiting for a transplant. Full story in News Extra at bmj.com.

New top job at English health department: A new post of chief executive and permanent secretary at the Department of Health in England will be created in the autumn. The post holder will be responsible for the whole of the department's business, covering public health, social care, and the NHS.

Drug users and doctors warned about unidentified illness: The Public Health Laboratory Service (PHLS) in north London has distributed a fact sheet to heroin users on how best to avoid the unidentified illness that has killed 46 people in the United Kingdom (10 June, p 1559). Full story in News Extra at bmj.com.

Pallidotomy relieves some symptoms of Parkinson's disease

Deborah Josefson *San Francisco*

Posteroventral medial pallidotomy can provide long term relief from many of the debilitating symptoms of Parkinson's disease, but it does not improve others and is not without side effects, according to a study by physicians at the University of Toronto, Canada (*New England Journal of Medicine* 2000;342:1708-14).

Pallidotomy is a surgical procedure in which overactive dopaminergic neurons in a portion of the basal ganglia, the globus pallidus, are ablated in an effort to reduce the tremors and dyskinesias of Parkinson's disease.

The procedure was developed in Sweden by Dr Lars Leksell in the 1950s but was abandoned in the 1960s after the introduction of levodopa for treating the disease. However, with the realisation that the response to levodopa in Parkinson's disease tends to wear off and in itself can produce dyskinesias, pallidotomy gained renewed acceptance as a treatment if the disease proved refractory.

Several hundred patients have undergone the procedure and have benefited from short

term symptom relief. Few studies, however, have followed patients beyond two years.

The University of Toronto's researchers, led by Dr Jennifer Fine, followed 20 patients who



Michael J Fox, who has Parkinson's disease, waits to testify to a Senate committee

underwent unilateral pallidotomy between 1993 and 1996. The group (15 men and 5 women, with a mean age of 57 (range 45-69) years) was followed up for an average of 52 months (range 41-

64 months). The patients had had symptoms of Parkinson's disease for an average of 12 years.

Serial postoperative assessments of the patients were taken both while the patients were taking anti-Parkinson's drugs and after an overnight withdrawal of the drugs.

The assessments were performed according to the unified Parkinson's disease rating scale (UPDRS), which scores motor function and abilities to carry out everyday activities.

The researchers found that pallidotomy was effective mainly in relieving contralateral symptoms of dyskinesia, bradykinesia, and tremor and that these improvements were most pronounced after an overnight withdrawal of the drugs. Initial improvements in activities of daily living were not sustained.

They report significant improvements in the UPDRS scores for contralateral tremor (65.4% improvement, $P=0.007$), rigidity (43.2%, $P=0.03$), and bradykinesia (18.2%, $P=0.04$).

The scores for contralateral dyskinesias for the period when patients were taking anti-Parkinson's drugs were also improved, by 70.6% ($P<0.001$), but other symptoms during this period were unaffected. The improvements in motor function were sustained for up to 5.5 years. □

Antibodies can repair damaged myelin in model of MS

Abi Berger *BMJ*

Damaged myelin can be repaired with the use of human monoclonal antibodies. A team of immunologists led by Dr Moses Rodriguez at the Mayo Clinic in Minnesota has discovered two human monoclonal antibodies that seem to promote the repair of damaged myelin (*Proceedings of the National Academy of Sciences* 2000;97:6820-5).

The idea that antibodies may be useful in myelin repair came from observations made about 10 years ago. Dr Rodriguez discovered that mice immunised with a spinal cord homogenate (containing myelin) produced a serum which, when put into

demyelinated mice, seemed to promote repair of their damaged myelin.

This suggested to Dr Rodriguez that the antibodies induced by this particular immunisation process were responsible for promoting myelin repair.

In this latest study, Dr Rodriguez's team obtained 150 different monoclonal antibodies from patients with monoclonal gammopathies and other blood dyscrasias and screened them for action against human oligodendrocytes (the central nervous system support cells which are damaged in demyelinating diseases) in vitro. The researchers identified six antibodies which bound to these oligodendrocytes, and, of these, two were significantly associated with myelin repair.

One theory to explain this is known as the "scavenger hypothesis." The antibodies bind to damaged oligodendrocytes,

and the debris which is created by these antigen-antibody complexes is then removed by macrophages, allowing spontaneous repair.

Such spontaneous repair is usually inhibited in multiple sclerosis and other demyelinating diseases, presumably by the presence of the damaged cells.

Dr Rodriguez's team was able to sequence one of the two active monoclonal antibodies and so theoretically could manufacture large quantities of it. The researchers had an insufficient amount of the second antibody to sequence it fully, and they were unable to obtain a larger sample because the patient has since disappeared.

Their next step will be to test the manufactured monoclonal antibody against many different animal models of multiple sclerosis. If its efficacy is confirmed and the risk of toxicity is acceptable, they will be going on to test it in clinical trials. □