

# Evidence in practice — number 8

## What is the prognosis of optic neuritis?

### How often does it lead to multiple sclerosis?

#### Clinical question — What is the chance of developing multiple sclerosis following the first episode of optic neuritis in a 19-year-old male?

This question was asked of us at the Centre for General Practice, University of Queensland, Australia, where we were providing a literature-search service in collaboration with the Department of Primary Health Care at the University of Newcastle, funded through the NHS Northern and Yorkshire Regional Library Advisory Service, for local GPs. The service was based on an Australian model.<sup>1</sup>

We present our response to one of the questions asked, updating the original search July 2005.

#### SEARCH QUESTION

First, the clinical question was reformatted into a 'searchable question'.<sup>2</sup>

#### What is the risk of developing clinically apparent multiple sclerosis following a first episode of optic neuritis in a young male?

The ideal study to answer this question would be an inception cohort study of adults experiencing a first episode of optic neuritis over several years, with minimal loss to follow-up, and the development of clinically apparent multiple sclerosis as the outcome.

#### RAPID SEARCH

We searched Medline (on SilverPlatter via WebSpirs) for articles published in English using the following terms 'optic neuritis' (MeSH and text) AND 'multiple sclerosis' (MeSH and text) combined with a sensitive search filter for detecting clinically sound prognostic studies.<sup>3</sup>

#### SUMMARY OF FINDINGS

There were many studies evaluating the

risk of developing multiple sclerosis after a single episode of optic neuritis.<sup>4-13</sup> Their quality was good, although there may have been differential measurement causing bias (people with positive brain MRIs may have been less likely to have been lost to follow up, for example).

The risk of developing multiple sclerosis after an episode of optic neuritis ranged from 13 to 58%. Even with brain lesions identified at baseline, only slightly more than half of patients later developed clinical multiple sclerosis, although their absence did not eliminate the risk (0-22%).

Abnormal brain MRI were a strong predictor of multiple sclerosis in the largest study (optic neuritis trial), with 87% complete follow-up, the presence of one or more white matter lesions on baseline MRI brain scan more than doubled the 10-year risk of multiple sclerosis.<sup>4</sup>

#### COMMENT

The variation in results may be attributable to differences in study design, variation in criteria for the diagnosis of multiple sclerosis and optic neuritis, and length of follow-up. The studies give a reasonably robust indication of the prognosis.

The prognosis seems to be better than expected, and raises questions about whether optic neuritis may have other causes than the demyelination of multiple sclerosis, or that multiple sclerosis has a wide spectrum of expression, often little or never interfering with patients' lives.<sup>14</sup>

#### APPLYING THE RESULTS TO THE PATIENT

Apart from offering an overall prognosis, the literature suggests that this can be improved on by testing with MRI for other lesions on diagnosis of optic neuritis.

It also raises the question of treatment. The CHAMPS trial compared interferon

$\beta$ -1a and placebo on developing multiple sclerosis after a single demyelinating event among 192 patients.<sup>15</sup> After 3 years, the adjusted rate ratios of clinically definite multiple sclerosis between the two trial arms was 0.58, (95% CI = 0.34 to 1.00). Similarly, in a second randomised placebo controlled trial of interferon  $\leq\beta$ -1a among 309 patients with a first neurologic episode consistent with multiple sclerosis (although in only 35% was this from optic neuritis), clinically apparent multiple sclerosis developed in 34% intervention patients compared with 45% controls.<sup>16</sup> But this is a different question ...

**Sharon Sanders**  
**Chris Del Mar**  
**Sarah Purdy**  
**Annelise Spinks**  
**Lisa Tait**  
**Brian McAvoy**

#### REFERENCES

1. Del Mar CB, Silagy CA, Glasziou PP, *et al*. Feasibility of an evidence based literature search service for general practitioners. *Med J Aust* 2001 175(3):134-137.
2. Centre for Evidence-Based Medicine. *Focusing clinical questions*. [http://www.cebm.net/focus\\_quest.asp](http://www.cebm.net/focus_quest.asp) (accessed 28 Aug 2005).
3. Wilczynski NL, Haynes RB for the Hedges Team. Developing optimal search strategies for detecting clinically sound prognostic studies in MEDLINE: an analytic survey. *BMC Med* 2004 2(1): 23.
4. Beck RW, Trobe JD, Moke PS, *et al*. High- and low-risk profiles for the development of multiple sclerosis within 10 years after optic neuritis: experience of the optic neuritis treatment trial. *Arch Ophthalmol* 2003; 121(7): 944-949.
5. Ghezzi A, Martinelli V, Rodegher M, *et al*. The prognosis of idiopathic optic neuritis. *Neurol Sci* 2000; 21(4 Suppl 2): S865-S869.
6. Jin YP, de Pedro-Cuesta J, Huang YH, Soderstrom M. Predicting multiple sclerosis at optic neuritis onset. *Mult Scler* 2003 9(2): 135-141.
7. Nilsson P, Larsson EM, Maly-Sundgren P, *et al*. Predicting the Outcome of Optic Neuritis: Evaluation of risk factors after 30 years of follow-up. *J Neurol* 2005; 252(4): 396-402.
8. Druschky A, Heckmann JG, Claus D, *et al*.

## A patient-led NHS?

It is difficult to think of a greater absurdity than the concept of a 'patient-led NHS', the slogan that now guides government health policy in Britain.

Patients tend to be ill, and have always therefore been provided with care and attention and relieved of the burdens of everyday life. They are not expected to play a leading role in their own treatment, never mind in leading the NHS. Patients also tend to lack the knowledge and expertise required to play a leading role in NHS administration, even in their own medical management. When patients cease to be patients they generally have little interest in leading the NHS, having jobs to do, families to look after, lives to lead.

Those few patients who express a great interest in running the NHS tend to lack these other interests. Hence, they are highly unrepresentative of patients in general and, while giving them a greater say in the direction of the NHS may advance their exclusive concerns, it is unlikely to prove beneficial to the vast majority of patients. In my view, patients expect competent care from a doctor-led NHS, within a policy and funding framework decided by a democratically accountable government. I can think of numerous innovations in health care over the past 50 years — from special care baby units to hospices for the terminally ill — that were introduced on the initiative of medical and nursing staff. Although it is difficult to think of any useful innovation that has resulted from either political or consumer intervention, numerous useless and wasteful initiatives, from NHS Direct to 'choose and book' come readily to mind.

But according to NHS chief executive Nigel Crisp, we must abandon the hopelessly old-fashioned concept of a 'patient-centred NHS'.<sup>1</sup> He believes that in the modernised Britain we now have the 'capability as well as the capacity to become truly patient-led and deliver high quality services everywhere and at all times'. But if services were universally excellent, there would be no capacity for improvement, even if staff had the capability — under patient leadership, of course — to achieve this.

The Department of Health has struggled to explain its revolutionary concept. Back in March it indicated that 'a patient-led NHS means that patients are supported to make choices about, and take control of, their health and

health care, and services evolve to provide personalised care by listening and responding to patients.'<sup>2</sup> It is difficult to see any relationship at all between the first and second half of this sentence. It suggests, on the one hand, a government-led NHS in which patients are guided towards officially approved life styles and behaviour, and, on the other, an NHS that provides services according to consumer demand.

In October, perhaps in response to bemused patients, perhaps in an attempt to resolve its own confusion, the Department of Health again asked itself the question: 'What does patient-led mean'? Its answer: it means 'reshaping how the service delivers care, based on what patients need and want'.<sup>3</sup> The same ambivalence persists: the government knows what patients need, but who knows what they want? To find out, the health minister commissioned a PR firm to stage a consultation exercise, featuring the showcase event attended by health secretary Patricia Hewitt and around 1000 carefully selected members of the public (paid generous expenses for the day).

Early reports indicated that three proposals topped a poll of options for reform: extending GP opening hours, annual health MOTs and more walk-in centres.<sup>4</sup> This familiar list of the preoccupations of the professional middle classes confirms the way in which this focus-group approach places the demands of the worried well over those of the seriously ill (or even of the not very well, but socially marginal). The true purpose of a 'patient-led NHS' emerges as the subordination of the NHS to the political and electoral requirements of New Labour. Can a lunatic-led asylum be far behind?

### REFERENCES

1. Crisp N. *Creating a patient-led NHS — delivering the NHS improvement plan*. 2005. [http://www.dh.gov.uk/PublicationsAndStatistics/Publications/PublicationsPolicyAndGuidance/PublicationsPolicyAndGuidanceArticle/fs/en?CONTENT\\_ID=4106506&chk=ftV6vA](http://www.dh.gov.uk/PublicationsAndStatistics/Publications/PublicationsPolicyAndGuidance/PublicationsPolicyAndGuidanceArticle/fs/en?CONTENT_ID=4106506&chk=ftV6vA) (accessed 9 Nov 2005).
2. Department of Health. *About a patient-led NHS*. 2005. [http://www.dh.gov.uk/PolicyAndGuidance/OrganisationPolicy/Modernisation/SystemReform/SystemReformArticle/fs/en?CONTENT\\_ID=4106610&chk=1yG26](http://www.dh.gov.uk/PolicyAndGuidance/OrganisationPolicy/Modernisation/SystemReform/SystemReformArticle/fs/en?CONTENT_ID=4106610&chk=1yG26) (accessed 9 Nov 2005).
3. Department of Health. *What does patient-led mean?* 2005. [http://www.dh.gov.uk/PolicyAndGuidance/OrganisationPolicy/Modernisation/SystemReform/SystemReformArticle/fs/en?CONTENT\\_ID=4121856&chk=CUyt9D](http://www.dh.gov.uk/PolicyAndGuidance/OrganisationPolicy/Modernisation/SystemReform/SystemReformArticle/fs/en?CONTENT_ID=4121856&chk=CUyt9D) (accessed 9 Nov 2005).
4. Somerford C, Ford S. Minister turns the screw on GP access. *Doctor* 2005; 8 November.

- Progression of optic neuritis to multiple sclerosis: an 8-year follow-up study. *Clin Neurol Neurosurg* 1999; **101**(3): 189–192.
9. Rizzo JF III, Lessell S. Risk of developing multiple sclerosis after uncomplicated optic neuritis: a long-term prospective study. *Neurology* 1988; **38**(2): 185–190.
  10. Frith JA, McLeod JG, Hely M. Acute optic neuritis in Australia: a 13 year prospective study. *J Neurol Neurosurg Psychiatry* 2000; **68**(2): 246.
  11. Francis DA, Compston DA, Batchelor JR, McDonald WI. A reassessment of the risk of multiple sclerosis developing in patients with optic neuritis after extended follow-up. *J Neurol Neurosurg Psychiatry* 1987; **50**(6): 758–765.
  12. Amirzargar AA, Tabasi A, Khosravi F, *et al*. Optic neuritis, multiple sclerosis and human leukocyte antigen: results of a 4-year follow-up study. *Eur J Neurol* 2005; **12**(1): 25–30.
  13. Tintore M, Rovira A, Rio J, *et al*. Is optic neuritis more benign than other first attacks in multiple sclerosis? *Ann Neurol* 2005; **57**(2): 210–215.
  14. Beck RW, Smith CH, Gal RL, *et al*. Neurologic impairment 10 years after optic neuritis. *Arch Neurol* 2004 **61**(9): 1386–1389.
  15. CHAMPS Study Group. Interferon beta-1a for optic neuritis patients at high risk for multiple sclerosis. *Am J Ophthalmol* 2001; **132**(4): 463–471.
  16. Comi G, Filippi M, Wolinsky JS. European/Canadian multicenter, double-blind, randomized, placebo-controlled study of the effects of glatiramer acetate on magnetic resonance imaging — measured disease activity and burden in patients with relapsing multiple sclerosis. European/Canadian Glatiramer Acetate Study Group. *Ann Neurol* 2001 **49**(3): 290–297.