

## Letters

### Cigarette smoking, Parkinson's disease and ulcerative colitis

Sir: Individuals who develop Parkinson's disease are about twice as likely to have been habitual non-smokers when compared with a control population.<sup>1-3</sup> Smoking also seems to exert considerable protective effects against ulcerative colitis.<sup>4-6</sup> It has been suggested that both these illnesses may be associated with inflexible, morose, inward-looking personalities.<sup>7,8</sup> One of us was struck by what was possibly an unrecognised association between these two conditions, five patients with both illnesses coming to light over a three year period. With the help of a letter expressing interest in this link which was published in the UK Parkinson's Disease Society Newsletter and further postal questionnaires and correspondence with the patients' general practitioners, 20 more people with both diseases were found. The mean age of all 25 patients (14 men, 11 women) was 62 years (range 43-79); six were in social class 1, eight in social class 2, six in social class 3, four in social class 4 and one in social class 5. In 19 the ulcerative colitis preceded the Parkinson's disease, sometimes by many years. Twenty of the patients had never smoked tobacco, three had given up 25, 21 and 10 years ago respectively; one was a very occasional pipe smoker and the other patient had smoked ten cigarettes a day all his life.

The prevalence of non-smoking for an age-sex-social class matched population in the United Kingdom would be about 50%.<sup>9</sup> Two of the ex-smokers in the study had stopped smoking at least ten years before the onset of their Parkinson's disease or ulcerative colitis; another smoked a pipe very occasionally. Eighty per cent of the patients had never smoked tobacco and only three (12%) were smoking tobacco at all at the time of onset of one or other disease. In these the quantity smoked was fairly small (15 cigarettes/day, 10 cigarettes/day and ½ oz (14 g) tobacco/week). Although derived from a highly selected cohort, these figures would be in keeping with the reported negative association between smoking and both ulcerative colitis and Parkinson's disease. Further prospective epidemiological studies should examine the possible link between these two diseases further and in particular the tantalising notion of a shared distinctive pre-morbid personality.

K BIHARI  
AJ LEES

Department of Neurology,  
Middlesex Hospital,  
Mortimer Street,  
London W1N 8AA, UK

### References

- 1 Kahn HA. The Dorn study of smoking and mortality among US veterans. Report on eight and one half years of observations. *In* Epidemiological Approaches to the Study of Cancer and other Chronic Diseases. Monograph No. 19. Washington DC, National Cancer Institute. US Govt. Printing Office 1966:1-125.
- 2 Kessler II, Diamond KL. Epidemiological studies of Parkinson's disease. 1. Smoking and Parkinson's disease. *Am J Epidemiol* 1971;94:16-25.
- 3 Godwin-Austen RB, Lee PN, Marmot MG, Stern GM. Smoking and Parkinson's disease. *J Neurol Neurosurg Psychiatry* 1982;45:577-81.
- 4 Jick H, Walker AM. Cigarette smoking and ulcerative colitis. *N Engl J Med* 1983;308:261-3.
- 5 Logan RFA, Edmond M, Somerville KW, Langman MJS. Smoking and ulcerative colitis. *Br Med J* 1984;288:751-3.
- 6 Vessey M, Jewell D, Smith A, Yeates D, McPherson K. Chronic inflammatory bowel disease, cigarette smoking and use of oral contraceptives: findings in a large cohort study of women of childbearing age. *Br Med J* 1986;292:1101-3.
- 7 Bellini M, Tansella M. Obsessional scores and subjective general psychiatric complaints of patients with duodenal ulcer or ulcerative colitis. *Psychol Med* 1976;6:461-7.
- 8 Todes CJ, Lees AJ. The pre-marked personality of patients with Parkinson's disease. *J Neurol Neurosurg Psychiatry* 1985;48:97-100.
- 9 Office of Population Censuses and Surveys. *General Household Survey: cigarette smoking 1972-1982*. Govt. Statistical Service. GHC 83/2 July 1983.

Accepted 6 September 1986

### HLA-DR2 negative narcolepsy

Sir: Association between narcolepsy and HLA-DR2 antigen is the strongest so far described between an HLA antigen and a disease.<sup>1-3</sup> Among 28 narcoleptic patients, we found two HLA-DR2 negative cases. We present their case-reports and discuss the implications of these data.

We consulted the files of the patients suffering from narcolepsy and referred to

the Hôpital Neurologique, Lyon since its inauguration in 1965. We found 28 patients. Short REM sleep latency was recorded by 24-hour polysomnography at least once in 24 patients. The other four patients had typical narcolepsy-cataplexy attacks. 50 HLA-A, B and C, 12 HLA-DR and 2 HLA-DQ serologically defined antigens were studied in every patient as previously described.<sup>4</sup> Typing for HLA-DW2 and its subsets was also performed as reported.<sup>5</sup> Results were compared with a control population of Caucasian blood donors. Chi-square test was used with a correction of probability values according to the number of HLA antigens studied. The level of significance was chosen at  $p < 0.05$ .

Increases in the proportions of cases with HLA-DQW1 (100%), DR2 (92.9%), DW2 (92.9%) and B7 (50%) antigens were the only significant observed differences when narcoleptic patients were compared with controls (table). The 26 DR2 positive narcoleptic patients were all DR2 long/DQW1/DW2.

Two patients were DR2/DW2 negative. The first one was a Caucasian 54 year old female phone operator with A2 A30/B7 BW62/CW3/DRW13 DRW14/DQW1 antigens. Typical sleep attacks began at age 15 years, up to 5 times per day. They were corrected initially with 75 mg desipramine. The drug was stopped owing to dizziness and replaced by 100 mg clomipramine with good efficacy and tolerance. Excessive daytime somnolence was another salient feature. Nocturnal sleep was self-estimated as excellent and, usually, 10 hours long. However, there was a transient fatigue on awakening. No actual cataplexy attacks, sleep paralysis and hypnagogic hallucinations were experienced. A 24-hour polygraphic recording was made in February 1986 after a 2 weeks cessation of drugs. It showed four sleep episodes with direct REM sleep. Total sleep duration was 12 h 30 min with a relative excess of REM sleep (43%). Otherwise, since puberty, there were typical symptoms and signs of dystrophia myotonica (Steinert's disease) with myotonic discharges in the EMG. At the last examination in August 1986, our patient was still minimally affected by the muscle disorder in her daily activity. She had no respiratory insufficiency. A brother had both narcolepsy and Steinert's disease. He died from myocardial infarction at age 44. Two sisters were operated on for bilateral cataracts in their fourth decade. A brother and a sister were unaffected. We were aware of one case of muscle disorder, two cases of early cataracts and one case of early baldness in the paternal lineage.