MRI of thoracic cord in tropical spastic paraparesis

Tropical spastic paraparesis (TSP) is a disease occurring in Afro-Caribbeans following HTLV-1 retro-virus infection. There is some evidence that the geographical and ethnic distribution of HTLV-1 illness is even wider and HTLV-1 associated myelopathy (HAM) in Japan is probably the same disorder. Abnormalities are found on MRI of the brain in both TSP and HAM. High signal areas are found in the brain similar to those of multiple sclerosis (MS), though they tend to be less extensive. The thoracic cord (on which the brunt of the pathological process falls) has been examined in only three patients, one of whom had atrophy. Since the clinical picture of TSP may resemble that of progressive MS, we have made a systematic comparison of the MRI characteristics of the thoracic cord in the two conditions.

Nine patients with TSP who were born in the Caribbean were compared with an age and sex matched group of European white patients with clinically definite MS, all of whom had a progressive spastic paraparesis. Disability was scored using the Kurtzke Disability Status Scale. The patients with TSP were anti-HTLV1 positive and had HTLV-1 genome integrated into leucocyte DNA. Eight were female. The mean age was 53 years (range 43-65 years), the mean HAMM duration was 12 years (range 1.5-23 years), and the mean Kurtzke disability score was seven (range five to eight). The mean age of the MS patients was 42 years (range 35 to 53 years), the mean symptom duration was 11 years (range seven to 17 years), and the mean Kurtzke disability score was five (range 4 to 6). The spine was imaged by a Picker 0.5 T superconducting machine with T1 weighted (SE$^{1000}$) 5 mm contiguous parasagittal slices using a surface coil. All MS patients and five TSP patients had additional T2-weighted sequences (SE$^{1000}$, 5 mm contiguous parasagittal slices) to detect abnormal signal. Images were reported without knowledge of the individual diagnosis by one of the authors (EPGH du B).

Atrophy of the thoracic cord was seen in six of nine patients with TSP and five of nine patients with MS. Three of five patients with TSP who had T2-weighted images of thoracic cord had diffusely high signal and all three had atrophy (fig). Five of nine with MS had high signal return on T2 weighted images, one of whom did not have atrophy. The pattern of high signal was diffuse in two and focal or patchy in three (fig).

These results confirm the previous MRI finding of atrophy in the thoracic cord in a proportion of patients with TSP. However, a similar degree of atrophy is seen as frequently in patients with MS who had a progressive spastic paraparesis, a finding compatible with pathological studies where cord atrophy is present in 72% of patients with MS at necropsy. There was some difference in the pattern of high signal seen in the two groups with more diffuse and uniform high signal in TSP and focal or patchy high signal in MS. However, these differences in the MRI findings are slight and a reliable distinction between the two conditions cannot be made on these grounds.

Lewy bodies and subacute sclerosing panencephalitis

The occurrence of Lewy bodies in the nervous system is relatively specific to Parkinson's disease. Their association with other disorders may provide a clue to the aetiology of Parkinson's disease, especially when the cause of these disorders is known. We describe Lewy bodies in two patients with subacute sclerosing panencephalitis (SSPE). They are examples of long survival and the first has been reported for this reason.

A 14 year old boy presented with intellectual deterioration and absence attacks. When seen at the National Hospital he had generalised epileptic seizures, multifocal myoclonus, emotional lability, dystarthis, mild chorea and ataxia. Serum measles virus titre was elevated. An EEG showed periodic complexes and cerebrospinal fluid (CSF) showed a parietal Lang curve. His condition stabilised, but at the age of 21 years he deteriorated again. Six years later he was bed-bound, and died of bronchopneumonia.

The brain showed severe atrophy associated with widespread neuronal and myelin loss, gliosis, and occasional neurofibrillary tangles. Very few nerve cells remained in the substantia nigra with a couple of Lewy bodies present in each unilateral section. Lewy bodies were also present in the locus
LETTERS TO THE EDITOR: MRI of thoracic cord in tropical spastic paraparesis

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*J Neurol Neurosurg Psychiatry* 1990 53: 710
doi: 10.1136/jnnp.53.8.710

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