Multiple sclerosis, corpus callosum and 'clapping' bedside test

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Aims

To evaluate 'clapping' as a bedside test to determine the competency of the corpus callosum in multiple sclerosis (MS).

Methods

The study period started from 1 September 2016. 70 consecutive patients with MS attending outpatient clinics and home visits underwent the 'clapping' test. The speed was compared between rapid supination/pronation of left and right hand separately and then clapping (supination/pronation of each hand alternately). Patients had to clap as fast as they could (Fig 1). Noticeable slowing of clapping compared with single-hand supination/pronation was taken as a positive sign.

Mid-sagittal magnetic resonance imaging (MRI) of the patients showing positive signs were taken, as well as from MS duration-matched patients who did not show positive signs. Measurement was made at the thinnest segment of the corpus callosum.

Exclusion criteria were upper limb power <3/5 on the MRC scale, pain in upper limbs, visual impairment, intentional tremors, stroke or cognitive impairment.

Results

Out of 70 patients, 31 patients were excluded, 34 patients showed no noticeable difference in the speed of supination/pronation and 'clapping', two patients were difficult to make conclusions about, and three patients showed definite slowing down in 'clapping' compared with supination/pronation (ie a positive sign). The average thickness of the corpus callosum in the three patients showing positive signs was 2.1 mm, and for the three MS duration-matched patients who did not show positive signs it was 3.8 mm.

Conclusions

- There is a clear correlation between the thickness of the corpus callosum and slowness in clapping hands.

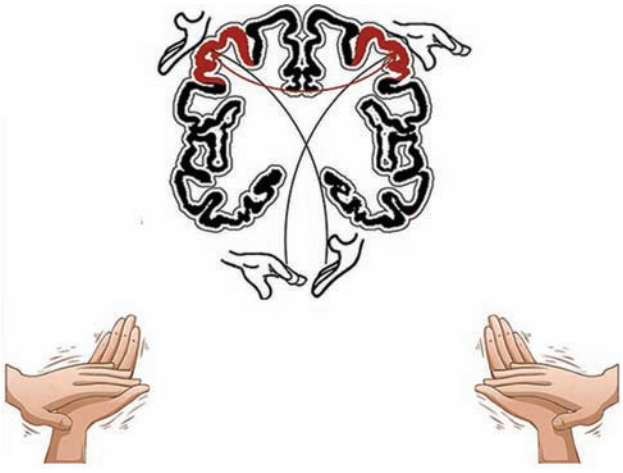

Fig 1. Essential role of corpus callosum in clapping.

- 'Clapping' can be used as a new bedside test to determine the competency of the corpus callosum.
- Clapping can also be used as an exercise to improve the competency of the corpus callosum. ■

Conflict of interest statement

There is no conflict of interest.

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