Poster ME-2

Comprehensive fMRI protocol in combination of word-generation, object-naming, and visual memory: pilot study

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목적 : Our aim was to assess the feasibility of comprehensive fMRI protocol for the language and memory lateralization.

대상 및 방법 : The protocol was designed to be performed in under 25 minutes in standard 1.5 tesla MR unit. We used three stimulation tasks in single protocol to test 7 healthy adult volunteers (6 right-handed, 1 ambidextrous): word-generation, object-naming, and visual memory. The SPM program was used for the postprocessing of images and the threshold for significance was set at $p<0.01$. A lateralization index was calculated from the number of activated pixels in frontal, temporoparietal, and medial temporal regions. The results for lateralization were compared among stimulation tasks and those of group analysis.

결과 : The functional map from the word-generation task showed left dominance in 6 subjects. Language lateralization was better with the word-generation task than object-naming in which only two subjects showed left dominance. On group analysis, lateralization was better with the word-generation task than object-naming. Four of seven subjects showed medial temporal activation on visual memory task.

결론 : Word-generation, object-naming and visual memory tasks are feasible to be performed in single protocol. Combined results of this comprehensive fMRI will be adequate for a comparative study with Wada test.