Experiences using a mobility assessment course (MAC) to assess post-stroke hemianopia

Introduction: The aim was to investigate whether a mobility assessment course (MAC) can be used to assess adaptation to homonymous hemianopia following stroke. The MAC is not a test routinely used in clinical practice. There are no reported studies involving the use of such a course to assess how a person adapts to hemianopia.

Methods: Stroke survivors with homonymous hemianopia were identified within four weeks of onset. Participants undertook the validated MAC to measure the extent to which they scan the environment. Time taken, number of visual targets omitted to each side, obstacle collision and ability to follow directional arrows were recorded. Asymmetry score was calculated as the absolute difference in omissions between the affected and unaffected sides.

Results: 144 participants were assessed using the MAC at baseline (within four weeks of stroke onset). Visual field loss on the affected side ranged from 16.7% to 100% (mean 72.7%, SD 24.6). 39 participants (27.1%) had inattention in addition to hemianopia. Mean time for MAC completion was 80.8 seconds (SD 75.3). Asymmetry score ranged from 0 to 11 (mean 4.1, SD 2.9). Total number of targets missed (out of a possible 24) ranged from 0 to 20 (mean 6.9, SD 5.2).

Conclusion: Using the MAC allows functional ability in hemianopia to be explored in a novel way, by assessing a person's ability to navigate the environment. Repeated MAC measures at 12 weeks post-stroke will be compared to these baseline results to assess the extent of adaptation to post-stroke hemianopia.