*Appendix 1*. Methods used in neuropsychological examination

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| Assessed domain | Method | Description  |
| Visual neglect | Behavioural Inattention Test (BIT) | Visual neglect was assessed with the six subtests of the BITC (Jehkonen, 2002a; Wilson et al., 1987). For individual patients, the criterion for visual neglect and inclusion in the N+ group was failure in at least two subtests (possible range 0-6), with cutoff points based on Wilson et al. (1987). The BIT sum score was used as a variable for statistical analyses in group comparisons (possible range 0-146). During assessment, each task sheet was placed in front of the subject in line with the midsagittal plane, an arrow indicating the location of the midline on the A4-sized sheet. Moving the sheet was not allowed. *The line cancellation task* includes 40 lines randomly spaced on a landscape sheet. Eighteen target lines locate on both sides of the sheet. Four central lines are used as examples by the examiner and are not scored (maximum score 36, cutoff 34). *The letter cancellation task* includes 40 target letters (E, R) and 130 non-target letters in five rows on a landscape sheet (maximum score 40, cutoff 32). Two example letters (E & R) beneath the rows are not scored. *The star cancellation task* includes 56 targets (small stars) and 75 non-targets (big stars, letters and words) randomly spaced on a landscape sheet. Twenty-seven targets locate on both sides of the sheet. Two central stars are examples and not scored (maximum score 54, cutoff 51). In these tasks, the subjects were instructed to search all the targets. *The figure and shape copying* contains two tasks. Figure copying includes three figures – a star, a cube, and a daisy – located on the left side of a portrait sheet, and the subjects were instructed to copy the figures to the boxes on the right side. Shape copying contains three geometric shapes on a landscape sheet, which the subjects copy to a separate blank sheet. The scoring was based on the completeness of the drawings (maximum score 4, cutoff 3). *The line bisection* includes three horizontal 20.4 cm lines in a staircase manner across a landscape sheet. The subjects were instructed to estimate the center for each line. The scoring was based on the level of the deviation between the estimated and the true center of the lines (maximum score 9, cutoff 7). *The representational drawing* contains three blank landscape sheets, to which the subjects were instructed to draw a clock face with numbers, a human being, and a butterfly. The scoring was based on the completeness of the drawings (maximum score 3, cutoff 2).  |
| Laterality of neglect | Center of Cancellation (CoC) | Laterality of visual neglect was evaluated based on the CoC (Binder, Marshall, Lazar, Benjamin, & Mohr, 1992) in the BIT cancellation tasks. CoC refers to the mean location of the targets found, i.e. the mean of the targets’ distances from the midline, with left-sided distances expressed as negative values and right-sided as positive values. CoC value 0 indicates a symmetrical performance, < 0 refers to a performance lateral to the left side (more targets found on the left side), and > 0 indicates a performance lateral towards the right side (more targets found on the right side). The CoC sum variable was formed by adding up the CoC values of the three BIT cancellation tasks (possible range: -37.6 - +39.4).  |
| Initial ipsilateral orienting bias | Starting point (SP) in cancellation tasks | Initial ipsilateral orienting bias was assessed based on the SPs of the three BIT cancellation tasks. SP indicates a location, i.e. a specific stimulus (target or non-target) from which the subject starts the cancellation task. In each task, SP was expressed as distance from the sheet’s midline in centimeters, with negative values for left-sided SPs and positive values for right-sided SPs (possible ranges: line cancellation -13.4 – +13.2 cm; letter cancellation -12.4 – +12.2 cm; star cancellation -11.9 – +14.0 cm). For individual patients, the criterion for ipsilateral orienting bias and inclusion in the MLI+ group (when actual neglect was not present) was an atypical SP in at least two cancellation tasks, meaning that these SPs were outside the guideline value for a normal SP. The guideline values for a normal SP were based on Nurmi et al. (2010; line cancellation: normal SP < -5.8 cm ≤ atypical SP, letter cancellation: normal SP < -10.0 cm ≤ atypical SP, star cancellation: normal SP < -11 cm ≤ atypical SP). In addition, because the SPs particularly in the line and star cancellation tasks have been found to be sensitive in detecting ipsilateral orienting bias (Nurmi et al., 2010; Jalas et al., 2002), they were chosen as SP variables for statistical analyses in group comparisons.  |
| Processing speed | Cancellation time  | Processing speed in visual search was assessed by measuring cancellation time in seconds to determine the duration of performance in cancellation tasks. Since complex tasks are more sensitive in detecting deficits in processing speed than simpler ones (Benton, 1986; Lezak, Howieson, & Tranel, 2012), processing speed was measured with the letter and star cancellation tasks, which place greater demands on attention than line cancellation (Mesulam, 2000). Cancellation time was measured for both tasks separately. Subjects were instructed to start the cancellation from the examiner’s signal, operate fast and accurately, and to tell the examiner when they had completed the task. The examiner measured the duration from the start signal to completion. |
| Cognitive status of healthy controls | Mini Mental State Examination (MMSE) | The healthy controls’ cognitive status was evaluated with the MMSE (Folstein, Folstein, & McHugh, 1975; range 0–30; 0 = severe cognitive impairment, 30 = normal cognitive functioning) using the cutoff score of ≤ 24 for exclusion from the study. |

*Appendix 2*. Methods used in neurological and neuroradiological examinations

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| Assessed domain | Method | Description  |
| Stroke severity and hemianopia | National Institute of Health Stroke Scale (NIHSS) | Stroke severity and hemianopia were assessed using the NIHSS (Goldstein, Bertels, & Davis, 1989). Stroke severity was based on the NIHSS sum score (range 0–34; 0 = no defect, 34 = severe stroke). Visual field deficit was evaluated on a scale from 0 to 2 (0 = no vision loss, 1 = partial hemianopia, 2 = complete hemianopia). |
| Functioning in basic activities of daily living (ADL)  | Barthel Index (BI) | The BI was used for evaluating functioning in basic ADL (range 0–100; 0 = dependent, 100 = independent; Mahoney & Barthel, 1965). |
| Infarct diagnosis and exclusion of hemorrhage | Computerized tomography (CT) | CT was conducted as a standard method of treatment on arrival at hospital in order to corroborate the infarct diagnosis and to exclude any hemorrhage.  |
| Infarct location and exclusion of significant cerebral atrophy | Magnetic Resonance Imaging (MRI) | MRI examination was used to rule out a presence of significant cerebral atrophy and to identify the location of infarct in anterior cerebral artery (ACA), medial cerebral artery (MCA) and posterior cerebral artery (PCA). |

*Appendix 3*. Individual values of neuropsychological variables for each patient in N+, MLI+ and N- groups

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Acute phase | 6 months | 12 months |  |
| Patient | BIT sum score | Failed sub-tests  | CoC sum score (cm) | SP in LiC (cm) | SP in StC (cm) |  Aty- pical SP:s  | LeC time (sec) | StC time (sec) | BIT sum score | Failed sub- tests | CoC sum score (cm) | SP in LiC (cm) | SP in StC (cm) | Aty- pical SP:s | LeC time (sec) | StC time (sec) | BIT sum score | Failed sub-tests | CoC sum score (cm) | SP in LiC (cm) | SP in StC (cm) | Aty- pical SP:s | LeC time (sec) | StC time (sec) | Reha-bilita-tion yes/no |
| N+123456789101112131415161718 | 140107133123120113813213610613912813612711610938136127 | 2423312326252334623 | -0.81.2-0.71.80.7-0.3-0.40.02.60.31.20.01.01.56.828.90.21.1 | -11.7-7.43.53.512.2-3.6-3.60.011.5-11.712.20.012.312.17.210.97.0-11.7 | 2.36.712.46.71.7-0.1-1.9-11.9-11.9-11.0-11.913.912.914.08.112.39.6-11.9 | 113332211123233330 | 1636283209179921285411598839614830224511118870 | 6057116778312910731965870601241631399821073 | 143140146138-137-142131-144136146136-137140143 | 0102-1-02-1201-100 | -0.3-0.40.0-0.6-0.8-0.20.5-0.00.00.00.0-1.7-0.10.2 | 11.1-11.73.53.5--8.7--11.712.2--11.70.0-11.712.4--11.73.3-11.7 | 12.8-11.9-11.0-11.9-1.7--11.9-11.9--6.613.9-11.9-6.6--8.58.6-11.9 | 2021-2-01-1313-120 | 1297812881-84-5780-18796114205-7222262 | 52417753-50-3162-856082164-7816238 | -142141134-142-135136-141137143144129139135138 | -103-0-21-12005021 | --0.1-0.4-1.0--0.1--0.2-0.8--0.4-0.60.0-0.20.4-0.20.40.7 | --11.711.511.7--11.7--11.7-11.7--11.73.4-11.7-7.37.2-11.712.2-11.7 | --11.9-11.99.7--11.0--11.9-11.9--11.912.5-11.91.76.9-11.912.5-11.9 | -012-1-00-02013030 | -11275103-53-63105-1487913734715110614758 | -406082-41-3570-1037411721114911612834 | nonononoyesno-noyes-yesnonoyes-yesnoyes |
| MLI+1234567891011121314151617181920212223 | 1451451451431421411461461391143136145141146145144132140137142142145144 | 00000000101000001000000 | -0.1-0.10.0-0.1-0.40.40.00.00.10.20.7-0.1-0.20.0-0.20.2-1.20.0-0.80.10.1-0.2-0.1 | 3.53.5-3.612.23.512.2-3.90.012.212.211.53.512.010.811.212.011.33.5-4.0-3.53.511.811.5 | 12.46.9-1.912.71.713.22.31.712.46.8-3.71.71.212.011.61.513.0-2.00.7-6.46.20.81.8 | 22222322232222223222322 | 721272151149216214391143809449141771177490689110611464118 | 94110103105861391356789821124979517683865978689553115 | 144143-141146142-141139140137145143146-140142143145139141145144 | 00-10000011000-00001000 | -0.20.0--0.20.0-0.1--0.30.0-0.2-0.20.2-0.30.0-0.2-0.3-0.10.3-0.4-0.4-0.2-0.1 | 11.53.5-11.512.23.5-11.7-11.712.212.3-11.7-11.74.00.0-12.011.7-11.74.1-11.70.0-11.74.0 | -11.91.7--1.9-11.98.8--11.912.4-11.2-11.9-11.12.3-11.9-13.5-2.8-11.9-3.7-6.612.6-11.90.8 | 12-212-0310021-22021202 | 51129-12898198957090907846144114-11011095971561146695 | 50108-8877107-44528055337054-7110855661391674554 | 144144-143144-145146143140141143140146144146140143137134135145145 | 00-00-00100000000032100 | -0.10.0--0.1-0.3-0.30.00.00.1-0.1-0.10.20.30.0-0.40.0-0.20.2-0.2-0.41.0-0.10.2 | 3.53.5-11.5-11.7-11.7-11.7-11.712.211.4-11.73.312.0-11.7-11.7-11.70.0-11.77.5-11.7-11.7-11.711.5 | -11.96.8--11.9-11.9-6.7-11.1-11.98.212.4-11.9-11.96.8-11.9-6.7-11.912.5-11.9-1.8-11.9-11.9-11.912.5 | 12-10100220130102020003 | 71110-105757790818782514310796878595707074665764 | 57100-79576973586665-316237446394586646493248 | nono-yesnoyesnononononononono-nononononononono |
| N-123456789101112131415161718192021222324 | 144143146143142144139146143138132146145142143145142140144146137144143137 | 000100000110010001001001 | -0.20.20.0-0.1-0.40.20.30.0-0.20.1-1.60.00.0-0.50.5-0.1-0.10.10.10.0-0.5-0.10.3-0.4 | -11.7-11.7-11.7-11.7-0.1-11.7-11.7-11.7-11.7-11.7-11.7-11.7-11.7-11.7-11.7-11.7-11.7-11.7-11.7-11.7-11.7-11.7-11.7-11.7 | -7.8-7.8-11.9-11.9-11.9-11.9-7.81.5--11.9-11.9-11.9-11.9-11.9-7.3-11.9-11.9-11.9-11.9-2.31.5-11.9-11.9-11.9 | 11001011-2000001000011000 | 8510515610710070-69667310511913962121618174627669828762 | 481161366675461218058441878911044118284969486140729142 | 136142145145145143132-143145134146146145141144142145144146145142144140 | 1100002-1010010000000000 | -0.4-0.50.20.00.2-0.4-0.6-0.0-0.10.90.00.00.00.1-0.2-0.20.20.10.00.0-0.10.10.8 | -11.7-11.7-11.7-11.712.2-11.7-7.4--11.7-11.7-11.7-11.7-11.7-11.7-11.7-11.73.5-11.7-11.7-11.7-11.7-7.1-11.7-11.7 | 1.7-11.9-11.9-11.9-11.9-11.90.7--11.9-11.9-11.9-11.9-11.9-11.9-11.9-11.91.5-6.8-11.9-11.9-11.9-11.9-11.91.6 | 1000101-0000000021000001 | 93122888112869103-61-546711859110638468618252-11660 | 40855457853763-434346487042803148634562394410658 | 140144142-146141---1431331144-1461321144146138139144141142146135 | 000-00---0110-011001000102 | -050.0-0.4-0.0-0.4----0.10.10.1-0.00.30.00.00.4-0.3-0.2-0.9-0.20.0-0.6 | -11.7-11.7-11.7--11.7-11.7----11.7-3.6-11.7--11.7-11.7-11.73.53.5-11.7-11.7-11.7-11.7-11.712.2 | 13.6-11.9-11.9--11.9-11.9----11.9-11.9-11.9--11.9-11.9-11.9-11.92.5-11.9-11.9-11.9-11.9-11.98.9 | 100-00---010-00012000002 | 849557-10965---686778-60885891615061556510251 | 355945-9637---444042-4069364858385235436739 | nonononononono-nononononononononononononononono |

*Note.* BIT = the Behavioural Inattention Test; CoC = the Center of Cancellation; SP = starting point; LiC = the line cancellation task; StC = the star cancellation task; LeC = the letter cancellation task; sec = seconds; N- = non-neglect group; MLI+ = mild left inattention group; N+ = neglect group

1 Exact value is unknown because of missing data, the given value is a minimum value

2 Exact value is unknown because of missing data, the value may vary from 0 to 1