

1) Discrepancy in unilateral spatial neglect between daily living and neuropsychological test situations; a single case study.

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We report results of our investigation of the case of a 34-year old woman (YJ) showed persistent left unilateral spatial neglect in daily living, although her visuospatial ability was mostly preserved in the standard neuropsychological tests. In order to clarify this discrepancy, her eye fixation pattern was monitored. The results showed that when taking the neuropsychological tests YJ shift her fixation points to the left edge of the testing frame to overcome over-searching tendency to the right although this compensatory leftward fixation was not found in natural settings. Our findings suggest limitation of laboratory neuropsychological testing to fully appreciate the scope of a patient's disability in natural settings. What Kinds of Names Are Unlikely to Be Recalled? : Based on the Normative Data of Unrecalled Japanese Names. Hasegawa Chihiro, Shimizu Hiroyuki, 9th Tsukuba International Conference on Memory(2011/03/5), Gakushuin University

2) 作業療法の評価と呼吸器特有の ADL 評価表との解離を示した症例の検討

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第 21 回呼吸ケア・リハビリテーション学会 (ポスター発表) (2011/11/3) (松本)

2008 年の診療報酬改定に伴い、作業療法士が呼吸器疾患患者に関わり、ADL 改善を目的として作業療法 (以下 OT) を行う機会が増えてきている。OT を実施するにあたり、最初に呼吸器特有の評価表 (P-ADL・NRADL など) を使用し、ADL の実施状況を確認することが多い。今回、我々は重症 COPD 患者において、実際の ADL 状況下でのデータと P-ADL・NRADL 評価表との間で解離を示した症例を経験したので報告する。結果、実際の ADL 実施状況下のデータでは、SpO₂ や BS の改善から若干の ADL 改善が認められたものの、P-ADL や NRADL の呼吸器特異的 ADL 評価表においては、点数の低下 (ADL の悪化) という結果となり、解離を認めた。医療の進歩に伴い、生命予後は改善する一方で、今後重症化した症例が増えてくると思われる。重症化すると当然 ADL 改善率も小さくなる。ADL 改善率の小さい重症例にも、より客観的に、改善を明確に示せる評価表の開発が望まれる。

3) Impairment of Verbal Working Memory in Primary Progressive Aphasia.

Chihiro Hasegawa, Tomoko Saito, Keiko Yamauchi, Kae Kokubo, Nobutsugu Hirono, Hiroyuki Shimizu. 10th Tsukuba International Conference on Memory (2012/03/5), Gakushuin University

Primary progressive aphasia (PPA), resulting from a neurodegenerative disease, is characterized by a progressive loss of specific language functions with relative sparing of other cognitive domains. Three variants of PPA are semantic variant, logopenic variant, and nonfluent/agrammatic variant. Repetition deficits and phonological paraphasias are characteristic of conduction aphasia. Warrington (1969) also reported a patient who had a gross impairment in the repetition of auditory verbal stimuli after a left parietal injury.

We describe a case of the 61-year old man with prominent impairment of the verbal working memory in the form of PPA, and present the MRI and SPECT of the patient. The features, which are selectively impaired verbal working memory, are not typical of either semantic or logopenic forms of primary progressive aphasia (PPA).

The impairment of verbal working memory, mainly involving the impairment of phonological-loop functions, are reported to be carried out in left inferior parietal cortex. The atrophy and hypoperfusion of left parietal cortex, which is considered to be an important region on the phonological-loop functions, are clearly demonstrated in MRI and SPECT of this case.

5) Neural substrates of positive emotion induced in hypnosis

Chihiro Hasegawa, Nobutsugu Hirono 17th World Congress of Psychophysiology (ポスター発表) (2014/9/26) 広島国際会議場 (International Journal of Psychophysiology, 94(2), 2014, p242)

There are a number of techniques have been developed to induce positive mood status in a laboratory. Hypnosis, as well as imagination or adopting facial expression, is one of widely used mood induction procedures, and the elicited emotion under hypnosis is considered to be 'genuine' (Friswell and McConkey, 1989) because hypnotized subjects are subjectively convinced of the reality of the suggested mood. Researches using hypnotic mood induction procedure (HMIP) have also reported

that participants who evoked positive or negative emotion have demonstrated psychological, behavioral, or psychophysiological change. In this study, we applied HMIP to investigate the neural substrate of positive emotion using functional magnetic resonance imaging (fMRI). This experiment was conducted in accordance with guidelines of Ethical committee in Kobe Gakuin University and The Brain Activity Imaging Center. Thirty seven right-handed healthy participants who have not reported history of neurological and psychiatric problems took part in the experiment. They are voluntarily participated and provided the written informed consent. 10(4 males, 6 females, mean age =22.1 years; age range =21- 27years) are evaluated as highly hypnotizable participants by Stanford hypnotic scale, Form C (SHSS:C) and proceeded in the following fMRI experiment. Prior to an fMRI experiments, the participants were confirmed that they could intrinsically evoke strong positive emotion of happiness and change quickly their intensive positive emotion into neutral (non-happy) states under the hypnotic suggestions. The blocked-designed fMRI experimental paradigm were proceeded the hypnotized participants to alter their emotion of happy or neutral state in each block which continued 30s. Total of three sessions, consisted of 4 conditions (happy induction, happy state, neutral induction, and neutral state) were repeatedly executed. In each session, the valence of happiness is also rated 10-point scale of 0 (not happy at all) to 10(the happiest as long as you imagine). fMRI was performed on a 3-Tesla magnetic resonance scanner with echo planar imaging, and the data were processed using Statistical Parametric Mapping (SPM8). Compared with in neutral state, the participants who have evoked spontaneous positive emotion showed an overactivation in left supplementary motor area (SMA) which has been reported the relations to the emotional process in previous investigations. This result indicated that HMIP is an effective technique to elicit intensive and intrinsic positive emotion, which is related to the SMA which could be the pathway of the prefrontal top-down emotion regulation circuitry.

6)機能的磁気共鳴画像(fMRI)を用いた催眠による情動賦活の予備的研究, 長谷川千洋 (2014/10/18) 第60回日本催眠医学心理学会(口頭発表)(一橋大学, 東京)

本研究は, HMIP の有用性と健常成人の幸福情動に関与する脳部位を催眠導入により解明することを目的とする。具体的には, fMRI 環境下で実験参加者に催眠暗示によって幸福情動を生起させ, 脳のどの部位で賦活化が生じているかについて検討する。

実験参加者は、精神疾患及び神経疾患の既往歴のない大学院生及び助手 3 名（女性 2；男性 1）で、書面により研究内容の説明を受け参加に同意した。全員がスタンフォード催眠感受性尺度 C 形式（Stanford Hypnotic Susceptibility Scale; SHSS-C）において 12 段階中 8 以上の高催眠感受性を示した。情動賦活の催眠暗示は Maccallum F（2000）らの induced mood state を参考にした。まず fMRI 環境外での予備実験として、催眠暗示により速やかに幸福状態（happy state；HS）になり、非幸福暗示により、幸福情動が消失して穏やかでリラックスした気分、すなわち非幸福状態（no-happy state；NS）に戻ることを調べ、これら 2 種類の催眠状態を短時間で繰り返し変化可能であることを確認した。fMRI（1.5Tesla）実験では、催眠状態の深化が確認された後に測定を開始し、ヘッドフォンを通した聴覚的な催眠暗示により HS と NS（各 30 秒）を導入した。HS 及び NS 各 4 回を 1 セッションとし、合計 3 セッションのブロックデザインにより計測された。また、セッションごとに HS と NS の幸福度を 10 件法で評定させ、実験終了後には HS の幸福情動体験を可能な限り具体的に記述させた。fMRI データは SPM8 により分析が行われた。

HS 時には参加者全員が強い幸福情動を報告し、幸福情動時には視覚・聴覚・触覚・運動の種々の感覚様式を伴っていた。また、HS 時にのみ賦活する 3 人の共通脳部位は前頭前野、島、後頭葉、小脳を含む広範囲にわたっていた。

＜考察＞HMIP 下での幸福情動時の賦活部位については、従来の画像研究にて報告されている情動に関与する脳部位との関連が示唆された。画像及び行動データからも、HMIP の手法が情動の実験的研究において有用である可能性が示された。