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Behavioral dysexecutive syndrome after stroke

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Dysexecutive Syndrome (DES) is defined as an impairment of executive functions constituting of two domains: Behavioral Dysexecutive Syndrome (BDES) and Cognitive Dysexecutive Syndrome (CDES) which are not accompanied always[1]. A growing body of studies demonstrated that BDES is a common post-stroke neuropsychiatric comorbidity. The prevalence of BDES in stroke survivors varies ranging from 3% to 25% possibly attributed to the lack of standardized diagnosis methods and variances in study sample and study mode. Post-stroke BDES comprises varieties of clinical presentations, the most prevalent of which are anosognosia and hypoactivity with apathy-abulia[2].

Experimental Studies: The clinical course of BDES in stroke population has not yet fully elucidated. Some studies showed that there was only a minor decrease of prevalence of BDES several months after stroke, suggesting the possible chronicity of BDES. Possible clinical correlates of behavioral symptoms in stroke are global cognitive impairment, executive dysfunction, premorbid personality and psychopathology and stroke severity. Despite BDES is also a possible predictor of poor post-stroke physical function and can increase the burden of caregivers, it is still often underestimated and untreated. Furthermore, the treating methods for BDES are limited and lack of high quality supporting evidences. The methods of psychosocial treatments varies including caregiver education, aromatherapy, exercise and behavioral intervention whereas their effectiveness is still under debated.

Results: First of all, frontal lobe is treated as the key component of FSC. Frontal lesion and reduced frontal volume contribute to behavioral disturbances. Particularly, abnormalities of Orbito Frontal Cortex (OFC) and Medial Prefrontal Cortex (MPC) involving the reward representation, response selection and behavioral flexibility are closely correlated with apathy, disinhibition and other dysexecutive syndromes in patients with neurologic diseases. Some studies suggested that antipsychotic drugs might be effective in controlling behavioral dysexecutive problems such as agitation, apathy and disinhibition.

Conclusion: Standardized diagnosis criteria and a deeper understanding of the mechanism of post-stroke BDES is urgently needed, which may benefit to recognize BDES in stroke survivors as early as possible and select the appropriate treatment, therefore, result in a better outcome of stroke.

References:

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Biography

Wai Kwong Tang was appointed to professor in the Department of Psychiatry, the Chinese University of Hong Kong in 2011. His main research areas are Addictions and Neuropsychiatry in Stroke. Professor Tang has published over 100 papers in renowned journals, and has also contributed to the peer review of 40 journals. He has secured over 20 major competitive research grants, including Health and Medical Research Fund, reference number: 02130726. Health and Medical Research Fund, reference number: 01120376. National Natural Science Foundation of China, reference number: 81371460. General Research Fund, reference number: 474513. General Research Fund, reference number: 473712. He has served the editorial boards of five scientific journals. He was also a recipient of the Young Researcher Award in 2007, awarded by the Chinese University of Hong Kong.

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