Normative Data of Psychometric Hepatic Encephalopathy Score in Thai Population

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Background: Psychometric hepatic encephalopathy score (PHES) is used to diagnose minimal hepatic encephalopathy (MHE) due to its easy application and good validity. The PHES is calculated from the sum score of the portosystemic encephalopathy syndrome test battery (PSE-Syndrom-Test) that needs normative data of population as the reference values to interpret.

Objective: 1) To produce the normative data of the PHES in healthy Thai population, and 2) To determine factors that associated with the score.

Methods: Healthy Thai volunteers were asked to perform the PSE-Syndrom-Test battery comprising 5 subtests (Digit Symbol Test, Number Connection Test A & B, Serial Dotting Test and Line Tracing Test). Data including age, gender, and educational duration were also collected.

Results: A total of 93 healthy subjects were enrolled and completely assessed with the tests. Mean age was 41.26 years (SD = 13.03) and nearly half (45%) were men. Mean educational duration was 14.64 years (SD = 4.24). Mean PHES was -0.58 (+1 to -6, SD = 1.34) and mean minus 2 standard deviations was -3.26. PHES was significantly correlated with educational duration, r (91) = .36, p = .002, but did not show a significant correlation with age, r (91) = -.15, p = .195. A Mann-Whitney test indicated that PHES was greater for men (Mdn = 0) than women (Mdn = 0), U = 502.0, p = .046, r = .21).

Conclusion: A normative Thai PHES data including mean and standard deviation was created. The cut-off score of -4 should be used for differentiating normal from MHE. Only education and gender are factors associated with PHES.

Keywords: Psychometric hepatic encephalopathy score, Normative data, Minimal hepatic encephalopathy