Title	Short-latency somatosensory-evoked potential in patients with central nervous system space-occupying lesions: a study of 261 cases
Author(s)	Chang, RSK; Mak, W; Cheung, RTF; Ho, SL
Citation	The 15th Medical Research Conference (MRC 2010), Hong Kong, 16 January 2010. In Hong Kong Medical Journal, 2010, v. 16 suppl 1, p. 13, abstract no. 10
Issued Date	2010
URL	http://hdl.handle.net/10722/126414
Rights	Hong Kong Medical Journal. Copyright © Hong Kong Academy of Medicine Press.

Risk factors, clinical features and prognosis of perioperative stroke in adults

9

RSK Chang[1], RCL Chan[2], MMY Chu[3], CH Yan[4], W Mak[1], RTF Cheung[1], SL Ho[1]
[1]Department of Medicine, The University of Hong Kong, Queen Mary Hospital, Hong Kong
[2]Department of Surgery, The University of Hong Kong, Queen Mary Hospital, Hong Kong
[3]Department of Obstetrics and Gynaecology, The University of Hong Kong, Queen Mary Hospital, Hong Kong
[4]Department of Orthopaedics and Traumatology, The University of Hong Kong, Queen Mary Hospital, Hong Kong

Introduction: Perioperative stroke (POS) is an uncommon but severe surgical complication. No widely accepted guidelines for risk prediction or management have been established. Its prevention depends on knowledge about the nature of this disease.

Methods: A total of 36 cases and equal number of controls in Hong Kong West Cluster hospitals were recruited over 43 months. Peri- and intra-operative features were compared and characteristics of POS were described.

Results: Atrial fibrillation, diabetes mellitus (DM), and history of stroke were identified as risk factors (P=0.017, 0.002, and 0.003, respectively). Prolonged aortic occlusion (P=0.018) and bypass (P=0.002) contributed in cardiac surgery. Only few BP parameters, but not consistently all, were significant; 78% POS were infarcts. Watershed infarction related to hypotension was uncommon. Beta-blocker use seemed to bare protective effect. Blood loss and haemoglobin levels did not correlate to POS. Three-month mortality rate was 36%.

Conclusion: Optimal DM control and cardioversion before elective OT, perioperative anticoagulation in AF and old stroke patients, and beta-blockers may be preventive measures for POS. Role of hypotension in POS aetiology is debatable.

Acknowledgements: This study was supported by Prof KN Lai, Prof DK Luk, Prof ST Fan, Prof YS Ngan (Chiefs-of-Service of Departments of Medicine, Orthopaedics and Traumatology, Surgery, and Obstetrics and Gynaecology respectively, Queen Mary Hospital, Hong Kong).

Short-latency somatosensory-evoked potential in patients with central nervous system space-occupying lesions: a study of 261 cases

10

RSK Chang, W Mak, RTF Cheung, SL Ho
Department of Medicine, The University of Hong Kong, Queen Mary Hospital, Hong Kong

Introduction: Short-latency somatosensory-evoked potential (SSEP) is an electrophysiological technique to study the dorsal column–medial lemniscal sensory system. Its application in central nervous system space-occupying lesions (CNS SOLs) has sparsely been published.

Methods: A total of 261 patients with CNS SOLs underwent SSEP before neurosurgeries. Anatomical locations of the lesions, histopathological diagnoses and prognosis were tried to correlate with the SSEP variables.

Results: The spinal SOLs, especially nerve sheath tumours, was associated with significant abnormalities in various variables including the central conduction time. Other anatomical sites and histopathologies did not correlate with the SSEP findings. Also SSEP did not reflect clinical prognosis.

Conclusion: Short-latency somatosensory-evoked potential is probably not a sensitive test for CNS SOLs except spinal cord lesions. This is probably due to anatomy of the somatosensory pathway. The fact that SSEP has different sensitivities to various tumours may reflect that sensory neurons have heterogenous susceptibilities to different pathologies.