Title	Clinical features, management, and prognostic factors of status epilepticus in Chinese
Author(s)	Yeung, CF; Fung, HF; Wong, YK; Chang, RSK; Mak, W; Hon, SFK; Cheung, RTF; Ho, SL; Chan, KH; Lau, KK
Citation	The 18th Medical Research Conference (MRC 2013), Department of Medicine, The University of Hong Kong, Hong Kong, 12 January 2013. In Hong Kong Medical Journal, 2013, p. 56, abstract no. 94
Issued Date	2013
URL	http://hdl.handle.net/10722/181789
Rights	Hong Kong Medical Journal. Copyright © Hong Kong Academy of Medicine Press.

Serum FGF21 is a sensitive prognostic biomarker of acute liver injury in mice and men

DW Ye[1,2],* YD Wang[1],* HT Li[3], WP Jia[3], J Zhou[4], J Fan[4], K Man[5], CM Lo[5], Y Wang[2], KSL Lam[1,6], AM Xu[1,2,6]
[1] Department of Medicine, The University of Hong Kong, Hong Kong
[2] Department of Pharmacology & Pharmacy, The University of Hong Kong, Hong Kong
[3] Department of Endocrinology and Metabolism, Shanghai Jiao Tong University, China
[4] Department of Liver Surgery, Zhongshan Hospital, Fudan University, Shanghai, China
[5] Department of Surgery, The University of Hong Kong, Hong Kong
[6] Research Center of Heart, Brain, Hormone and Healthy Aging, The University of Hong Kong, Hong Kong
* These authors contributed equally to this work.

Background and Aims: Fibroblast growth factor 21 (FGF21) is a liver-secreted hormone with pleiotropic effects on energy metabolism and insulin sensitivity. We aimed to investigate the potential role of serum FGF21 as a biomarker for acute liver injury (ALI) in both rodents and humans.

Methods: Mouse models of ALI were induced by peritoneal injection of carbon tetrachloride (CCl4, 1 mL/kg) and acetaminophen (APAP, 300 mg/kg). Two independent cohorts of liver transplantation patients were recruited for the collection of blood samples at various time points.

Results: In both CCl4- and APAP-treated mice, serum FGF21 levels were markedly elevated by over 60-fold, which occurred before the detectable increase of serum alanine aminotransferase (ALT) and aspartate aminotransferase (AST). The marked elevation of serum FGF21 was due to the dramatic increase in hepatic FGF21 expression, but not due to hepatocyte damage. In patients receiving liver transplantation, a dramatic increase in serum FGF21 levels (approximately 25-fold) was observed as early as 2 hours after surgery, whereas the peak levels of serum ALT and AST caused by ischaemia/reperfusion injury were detected only after 24 hours. Temporal correlation analysis demonstrated a significant association of peak serum levels of FGF21 at 2 hours with the magnitude of the increase in both serum ALT and AST levels at 24 hours after liver transplantation, indicating a predictive value of serum FGF21 for liver ischaemia/reperfusion injury.

Conclusion: Serum FGF21 may represent a sensitive and specific prognostic biomarker for early detection of ALI in rodents and humans.

Clinical features, management, and prognostic factors of status epilepticus in Chinese

CF Yeung, HF Fung, YK Wong, RSK Chang, W Mak, SFK Hon, RTF Cheung, SL Ho, KH Chan, KK Lau
Division of Neurology, Department of Medicine, The University of Hong Kong, Hong Kong

Introduction: Status epilepticus (SE) is a neurological emergency with significant mortality and morbidity. There are currently limited data regarding the causes and outcomes of SE in our locality, and identification of prognostic factors, especially those available at presentation, could lower risk of under- or over-treatment in SE.

Methods: We retrospectively studied the clinical characteristics, management, and clinical outcome of adults diagnosed with incident SE, excluding episodes due to cerebral anoxia, at a regional hospital in Hong Kong during 1 January 2007 to 31 December 2011.

Results: A total of 38 patients with incident SE were identified during the study period. The mean age was 58 ± 22 years and 61% were males. Underlying cerebrovascular disease (34%), poor compliance to anti-convulsants in patients with known epilepsy (16%), and infection of the central nervous system (11%) were the main causes of SE. SE was associated with 21% mortality during hospitalisation period and 32% mortality within 6 months of admission. Age$\geq$65 years, absence of prior history of seizures, a higher blood glucose level during SE and a Status Epilepticus Severity Score (STESS)$\geq$4 were associated with 6-month mortality ($P<0.05$). Multivariate analysis subsequently identified a STESS$\geq$4 as an independent predictor of poor prognosis (odds ratio=8.6, 95% confidence interval: 1.2-61.2, $P=0.03$).

Conclusions: SE in adults is most commonly due to underlying cerebrovascular disease and is associated with a high mortality. The STESS is a useful tool in predicting 6-month mortality.