Reviewer's report

Title: Changes of liver enzymes and bilirubin during ischemic stroke. Mechanisms and possible significance

Version: 1 Date: 7 February 2014

Reviewer: Gail J Pyne-Geithman

Reviewer's report:

The authors sought to investigate the significance of changes of liver enzymes and bilirubin often observed in the acute phase after ischemic stroke. Samples collected from 180 ischemic stroke patients at days 0 (day of infarct), 3, 7 and 14 were analyzed for bilirubin and associated proteins and enzymes as well as CBC. Infarct volume was calculated on day 3, and common bile duct diameter was measured (using ultrasound) at days 0 and 7.

Following multivariate analysis, C-reactive protein and glutamate oxaloacetate transaminase levels remained significantly correlated with infarct volume. The authors postulate inflammation as a cause of elevated CRP correlative with IV and attribute increased GOT to an inflammation-independent cause, possibly in response to neurotoxic levels of glutamate seen after ischemic infarction.

The manuscript has been much improved since the original submission, and I am now happy that this is worthy of publication and would contribute significantly to the understanding of ischemic stroke sequelae.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.