About hierarchical log linear analysis of admission blood parameters and clinical outcome following traumatic brain injury

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Dear Editor,

We read with interest the findings of the article titled *Hierarchical log linear analysis of admission blood parameters and clinical outcome following traumatic brain injury*, published in the journal *Acta Neurochirurgica* (2010) Jun; 152(6): 953–7, by the authors Helmy et al. on the importance of established parameters that define the prognosis of head trauma victims.

We agree with most of the findings they presented, but we believe also that other factors should be taken into account and not only blood parameters, especially in children. In fact, other clinical factors can also be associated with the worse outcome and prognosis such as hypothermia that was found to correlate with the worse outcome [1, 2].

Regarding blood parameters, the question whether hyperglycemia is a marker of a worse prognosis or participates to it remain unanswered. The exact blood glucose values to be regarded as harmful in severe head traumas are not yet fully established. We found in our pediatric population that blood glucose levels above 11.1 mmol/L were associated to a worse prognosis and brain damage [1, 2].

Another important variable associated with higher rates of death is the presence of coagulation disorders. Different from the other authors findings, we found in our study that prothrombin time values below 50% to be an independent factor for bad prognosis [1, 2].

Defining a single scale that can measure the risk of death in severe traumatic brain injury is indeed difficult, and several studies will be needed to validate it [3], but it would help the management of our patients.

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