Reviewer’s report

Title: Is a Persistent Central Canal a Risk Factor for Neurological Injury in Patients Undergoing Surgical Correction of Scoliosis?

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Reviewer: Prokopis Annis

Reviewer's report:

This a well designed study. The aim of this study is to determine whether there is any evidence to suggest that patients with a PCC are also at a higher risk of neurological injury during surgical scoliosis correction.

Only 11 patients with a PCC were identified who had undergone correction of adolescent idiopathic scoliosis (AIS). The incidence of abnormal intra-operative spinal cord monitoring (SCM) traces in this group were in turn compared against 44 randomly selected age and sex matched controls with no PCC who had also undergone surgical correction of AIS during the study period.

The comparison of the 2 groups showed no significant difference in the incidence of abnormal intra-operative SCM signal traces between the PCC group and the control.

The authors concluded "We therefore recommend that surgical correction of scoliosis in patients with a PCC can be carried safely with routine precautions.

Given the very small number of patients with PCC I would be very conscious to give a recommendation. In addition in order to reinforce the results I think it would worth adding some more info in regards to the PCC group. The location of the PCC and the type of AIS should be included. A patient with a PCC at the upper thoracic spine has less risk of neurological injury if the proximal thoracic curve is non-structural. In addition the magnitude of the curve and the percentage of curve correction is important to know.

Have any of the 11 patients with PCC required significant correction at the level of the PCC? I think this is the group of patients at risk.

The inclusion of the above would reinforce your conclusion and again I would recommend you add the data and make some comments of the discussion section.

Thanks
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