with delayed diagnosis and more complications, especially failure in removing them. They are more common in the younger age groups. Plain chest radiography revealed radioopaque foreign bodies (FBs) in 22.12% of all patients with proved FB. This is a high incidence due to the habit of Muslim girls and women to cover their heads using a veil approximated using pins.

References

[1] Aytac A, Yurdakul Y, Ikizler C, Olga R, Saylam A. Inhalation of foreign bodies in Muslim girls and women to cover their heads using a veil with proved FBI. This is a high incidence due to the habit of younger age groups. Plain chest radiography revealed failure in removing them. The ya are more common in the left? Clin Otalaryngol Allied Sci 2003;28(4):364–7.


Letter to the Editor

Immediate ischemic preconditioning for spinal cord protection following descending thoracic aortic cross-clamping

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I read with great interest the article titled ‘Immediate ischemic preconditioning based on somatosensory evoked potentials seems to prevent spinal cord injury following descending thoracic aorta cross-clamping’[1]. I congratulate Contreras et al. on their study of immediate ischemic preconditioning (IPC) utilization to provide ischemic spinal cord protection.

IPC has been found to protect various organs from ischemic injury and there is experimental evidence that IPC protects the spinal cord after aortic cross-clamping. IPC is a biphasic phenomenon, with an early and a late phase of protection and these two phases have been documented in the spinal cord of big mammals as well[2–5]. In this study, Contreras et al. evaluated the effect of immediate IPC in a canine model of 45-min descending thoracic aortic cross-clamping. They used somatosensory evoked potentials to determine the duration of IPC. Controls underwent only 45-min aortic cross-clamping, while animals in group A underwent one cycle of IPC and animals in group B three cycles of IPC prior to 45-min aortic cross-clamping. They found that the three cycles of IPC reduced spinal cord injury when compared with the controls at 72 h (P = 0.036).

In our recent published studies, we have demonstrated that immediate IPC without hypotension prevents spinal cord injury in a porcine model of descending thoracic aortic occlusion [3,5]. We used 20 min of brief ischemia, 80 min of reperfusion and the duration of the occlusion of the descending thoracic aorta was 35 min or 45 min. We assessed the neurologic outcome of our animals at the fifth postoperative day. In our studies, it was very important to maintain the arterial systolic blood pressure higher than 100 mmHg during the 80-min reperfusion interval. Two animals had an arterial systolic blood pressure of 80–90 mmHg during the reperfusion period. Although, they had a Tarlov score of 4 at 24 h postoperatively, these two animals became paraplegic at 48 h, and the histological examination showed loss of neurons and a moderate grade of inflammation [3].

In the study by Contreras et al., it is mentioned that the proximal arterial blood pressure was monitored continuously during the experimental procedure, however, it is not clear whether there was any difference among groups in blood pressure during the reperfusion interval between the brief and prolonged ischemia periods. Was there any difference in mean arterial pressure during the reperfusion in comparison to baseline mean arterial pressure in the three groups? In other words, did the authors observe any hypotension during this reperfusion interval and how did they deal with it? It is also shown in Table 1 of the study that mean arterial pressure was not significantly increased during aortic cross-clamping (control group from 117 to 121 mmHg, group A from 111 to 116 mmHg and group B from 111 to 119 mmHg) in contrast to other studies[2,3,5]. How did the authors explain this phenomenon and what is its effect on neurologic outcome? It may be possible to correlate neurologic or histopathologic outcome with differences in arterial pressure during reperfusion or aortic cross-clamping time intervals.

References


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