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LETTER TO THE EDITOR

Acute cerebellar ischemia after lumbar spinal surgery: a rare clinical entity

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To the Editor:

We present a case of cerebellar ischemia following a lumbar spinal surgery with prolonged prone position. Acute cerebellar ischemia after lumbar surgery is extremely rare, and its exact cause is not well known [1, 2]. Compression of vertebral arteries as a result of the prone position and unusual neck rotation with prolonged surgery have been demonstrated as the causes of cerebellar hypoperfusion leading to ischemia [2, 3].

Our patient was an ASA physical status II, 69-year-old man with degenerative lumbar stenosis at L2–L3–L4 levels. The patient had small ischemic areas on his previous cranial magnetic resonance imaging (MRI), and a left vertebral artery occlusion was detected on his previous computed tomography (CT) angiography performed 2 years ago; with no neurological symptoms or signs relevant to those lesions. Clopidogrel and acetyl salicylic acid administered previously were discontinued 7 days before the operation to avoid the risk of intraoperative bleeding. Compression stockings were applied to the patient to prevent the thromboembolic events of both cardiovascular and central nervous system. The patient was turned into prone position with his head semiflexed and mildly turned to his right side on a donut cushion, not exceeding his normal range of motion. Neutral position could not be achieved because of his short neck. Parallel chest foams were placed because of lack of a spine frame. Total laminectomy and fusion by transpedicular screw stabilization was performed at L2 to L5 levels, and the duration of the operation was 6 h. Throughout the surgery, mean arterial pressure was kept at 65–70 mmHg levels for the majority of the operation.

The patient had altering levels of consciousness, dysarthria, and dizziness 2 h after the surgery. Brain CT scan demonstrated an acute cerebellar ischemia with surrounding edema in both hemispheres, more marked on the left side (Fig. 1). The patient was discharged from the hospital 4 weeks later with satisfying recovery of consciousness and dizziness, although his dysarthria improved very slowly.

The position of our patient might have compromised the blood flow of right vertebral artery. Also, our patient had a prior left vertebral arterial occlusion. Both the position and the prior left vertebral arterial occlusion might have contributed to the ischemia involving both sides of the cerebellum. Our preventive measures were the application of compression stockings and avoiding hypotension and extensive neck rotation. Additionally, a low molecular heparin prophylaxis could have been considered to prevent possible contribution of thromboembolic complication. Further, aspirin should have not been discontinued, as suggested in a most recent review [4]. We conclude that preference of neutral alignment of the neck, maintenance of mean arterial pressure in normal range, and

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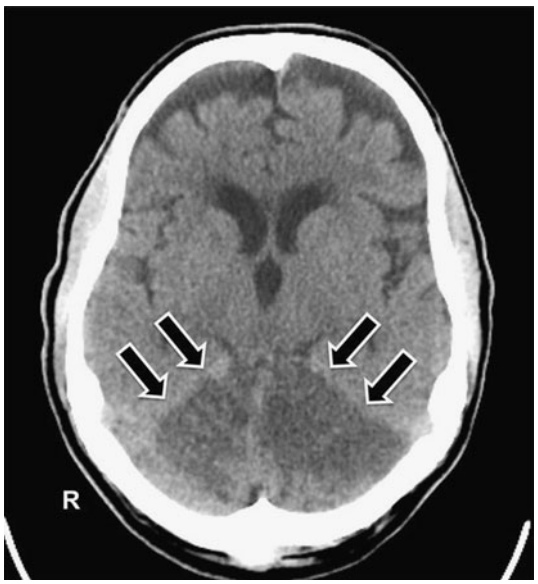

Fig. 1 Cranial computed tomography (CT) shows broad cerebellar ischemia in both hemispheres (*arrows*)

thromboembolic prophylaxis may be useful to prevent ischemia-related complications during spinal surgeries.

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