Neurological symptoms after parenteral nutrition

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DESCRIPTION

A 67-year-old woman consulted the emergency department because of a 3-day story of abdominal pain and vomiting. Since 12 years she was following a multimodal management of a rectal cancer with no recurrence since. An abdominal CT scan was performed and demonstrated a mechanical ileus with proximal jejunal dilation (47 mm) without free peritoneal air or fluid. She was taken to the operation room for a laparotomy with extended adhesiolysis and peritoneal washing. At the end of the surgery, a central catheter was placed in the right jugular vein under ultrasound guidance for parenteral nutrition (Omegaflex) to cover the period of oral fasting during her abdominal recovery. On the eighth day after surgery, the central line became dysfunctional and was switched on a guide wire. The patient was recovering well from abdominal surgery but developed a sudden transient paraesthesia of her right lower limb concomitant to the reinitiation of her parenteral nutrition. A CT scan of the brain followed by an MRI showed multiple ischaemic lesions in the right anterior cerebral artery and the right posterior inferior cerebellar artery territories (shown in figure 1). The differential diagnosis for this observation was likely vascular. The patient had no history of atrial fibrillation or carotid atherosclerosis. The CT scan also showed that the central venous had transected the jugular vein and travelled through the subclavian artery to the aortic cross (shown in figure 2). All treatments administered by the central venous line were stopped and the central line was removed surgically

Figure 2 Three-dimensional volume rendition showing the trajectory of the central venous catheter, transecting the right jugular vein and travelling through the subclavian artery to the aortic cross.

Patient's perspective

I have now totally recovered and I am happy with this publication, since it can help further doctors to recognise this complication of central venous catheter malposition.

Learning points

- Complications of central venous catheter misplacement might be severe and must be recognised quickly.
- Lipids of parenteral nutrition administered intra-arterially can cause ischaemic cerebral lesions.

Figure 1 Axial diffusion-weighted magnetic resonance imaging (DWI-MRI) images (A–C) showing high signal intensity ischaemic lesions (arrows) in the right anterior cerebral artery territory (A,B) and the right posterior inferior cerebellar artery territory (C). Corresponding apparent diffusion coefficient (ADC) maps (D–F) showing low signal intensity (arrowheads) indicating the acute nature of the lesions.

by cervicotomy.^{1–3} A second reading of the brain MRI confirmed the ischaemic lesions were related to the lipids of the parenteral nutrition administered intra-arterially. The patient was discharged 12 days after initial abdominal surgery.

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