Superior vena cava obstruction following central venous cannulation

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Case

A 42-year-old woman presented with end-stage renal failure secondary to reflux nephropathy in 1998. She was treated with haemodialysis after a brief attempt at peritoneal dialysis. Unfortunately, because of problems with arteriovenous fistulae, multiple central venous cannulations were required for dialysis. In June 2002, she presented with sudden onset facial swelling and distended veins over her chest wall. A computed tomogram of the thorax showed right subclavian vein thrombosis, extension of the thrombus along the right internal jugular dialysis catheter and partial obstruction of the superior vena cava. Despite adequate anticoagulation, her facial swelling worsened and she became short of breath over the next few weeks. An internal jugular venogram showed complete occlusion of the mid-superior vena cava (Figure 1). Venous drainage occurred via the azygous vein and the left superior intercostal vein (through the hemi-azygous system) into the inferior vena cava infradiaphragmatically. While awaiting surgery, she suffered a respiratory arrest and died.

Conflict of interest statement. None declared.

Fig. 1. Internal jugular venogram showing occlusion of the mid-superior vena cava.