Internal Knotting of a Guidewire: A Complication of Subclavian Vein Cannulation

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Dear Sir,

The complications of subclavian vein cannulation are well recognised [1]. We have recently encountered a previously unreported complication.

A 46-year-old lady who had been established on maintenance haemodialysis for 15 years had clotting of her left upper arm arteriovenous fistula. Following the uneventful insertion of a temporary cannula (Vas-Cath) into the left subclavian vein, she had six normal dialysis sessions over a 2-week period.

However, she began to experience progressive shoulder discomfort at the site of the cannula. The cannula was removed and a second cannula inserted in the left side using a standard Seldinger technique. The subclavian vein was entered without difficulty and the guidewire passed through the introducer needle. For the first 10 cm there was minimal resistance, after which the guidewire could be advanced no further. Subsequent attempts to withdraw the guidewire were unsuccessful. A chest X-ray (fig. 1) showed the guidewire to be knotted. Removal was by open operation. This was uneventful.

We thought it likely that the guidewire tip had dragged on the vessel wall, causing it to become coiled. At operation there was no evidence of local thrombosis or stenosis to account for the coiling. This is a further example of the risks involved in subclavian venous cannulation.

Reference

1 Kozeny, G.A.; Bansal, V.K.; Vertuno, L.L.; Hurley, R.M.; Hano, J.E.: Complications of subclavian vein dialysis. *Int. J. artif. Organs* 5:239-242 (1985).