A fit and healthy female patient, aged 25 years, was anaesthetized for removal of the left ovary and a plastic operation on the right. Anaesthesia was induced using 12 ml of 2.5 per cent thiopentone and d-tubocurarine 30 mg for which a fresh size 12 needle was used, the site of puncture being an antecubital vein which was superficial and well formed. The needle was left in situ throughout the operation. A total of five injections were made through this needle during the course of anaesthesia to administer thiopentone, d-tubocurarine, a supplementary dose of d-tubocurarine, atropine and finally neostigmine.

Anaesthesia was maintained using nitrous oxide and oxygen. Anaesthetically and surgically the patient's condition was satisfactory throughout until the final injection of neostigmine was being given. At that point it was seen that the solution was not entering the vein but was escaping around the needle and in fact there was separation of the shaft from the mount.

The usual emergency measures were carried out. These included the immediate application of very firm pressure above the vein and the rapid application and inflation of a sphygmomanometer cuff. Finally the vein itself was incised and the shaft was removed after a little difficulty.

At this stage there was little to suggest that the accident was due to any other cause than a fracture of the shaft. On examination of the two parts, however, there appeared to be scant evidence that this was so and indeed the shaft fitted extremely well into the mount of the needle.

A little further manipulation brought the surprising discovery that a very slight twisting of the shaft, about one/eighth turn, resulted in the most misleading firmness of the union. The needle was then quite indistinguishable from a perfectly normal one and by this slight twist the shaft could be firmly united and released at will.

Examination under a high-powered lens showed a rudimentary thread on the shaft which accounted for this unusual phenomenon, and indicated a danger (which might be far from obvious) which anaesthetists should be aware.

In the light of this discovery it became simple to understand why the needle was accepted as normal at the commencement of the operation. The slight twisting which took place on four subsequent occasions, when syringes were attached to or detached from the needle, had produced an identical effect to the twisting described above with, not surprisingly, the same separation of the shaft from the mount.

Among the several points which might be made about this accident must be a reconsideration of the advisability of using the large antecubital veins for intravenous work, except in exceptional circumstances. In addition the dangers of placing the shafts of needles to their full extent in the lumen of veins and the importance of ensuring that the function and structure of needles are basically sound before use are re-emphasized.

There would appear to be some indication for investigation into the manufacture of needles used for intravenous work, for whatever criticisms may be made regarding technique in this case, the basic cause of the accident must certainly be the poor construction of the needle and the inadequate joining of the shaft to the mount.