Failure of 'Double Catheter' Technique

An umbilical venous catheter was inserted in a preterm baby. The catheter was misdirected into the liver. A second catheter was inserted with the first catheter still in situ. The second catheter also entered the liver.

CASE REPORT

The ideal position of an umbilical venous catheter (UVC) tip is in the inferior vena cava (IVC) past the ductus venosus.¹ The catheter can sometimes be misplaced into the portal vein which carries a risk of liver injury, infection and thrombosis.² In such cases a few investigators have suggested the 'double catheter' technique.³ This involves inserting a second UVC while

the misplaced catheter is still in situ. This is based on the assumption that the first catheter would block the path towards the hepatic veins thus allowing the second catheter to easily pass into the IVC, *via* the path of least resistance.³

Umbilical venous catheterisation was attempted in a 34-week preterm neonate who was being ventilated for respiratory distress syndrome. The UVC was misdirected into the liver. The 'double catheter' technique was attempted. The check X-ray showed that the second UVC tip was also within the intra hepatic veins (Fig. 1).

Though the 'double catheter' technique is a safe and useful procedure, it is not always successful. This might be due to closure of the ductus venosus. Failure of this technique is more commonly encountered in full term babies. In such circumstances, as in our case alternative central venous access should be obtained.

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Fig. 1. Chest and abdominal X-ray showing both the umbilical venous catheters within the liver.

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