Archives of Disease in Childhood, 1979, **54**, 563–567

Correspondence

Simple method for stabilising umbilical catheters

Sir,

We were interested in the letter from Gatrad (*Archives*, 1979, **54**, 166). For the last 2 years we have used a method for stabilising umbilical catheters that has almost eliminated the problem of accidental dislodgement.

The umbilical cord is cut approximately 2 cm from the base, sterilised with povidone-iodine solution, and the lumen of the umbilical artery carefully dilated with fine forceps. A fluid-filled 5 FG catheter is then inserted and advanced in the usual manner. Once positioned, there should be free flow of arterial blood from the catheter. Position of catheter tip at the level of the 3rd or 4th lumbar vertebra is ascertained by *x*-ray. A 4–0 silk purse string suture is passed around the artery containing the catheter (not the entire base of the cord) and tied. One end of this suture is passed through the skin at the base of the cord. This is tied and cut so as to leave about 4–5 cm of free ends of the suture. These lengths of suture are then taped securely to the catheter just above its entry into the artery with standard 2.5 cm adhesive tape. A length of umbilical cord tape is passed around the waist of the infant and tied loosely. This loop is taped securely to the catheter 5–6 cm above the previous piece of tape, thus preventing the catheter from being dislodged should traction be applied to it during *x*-rays, routine care, or weighing of the infant. Povidone-iodine solution is applied twice daily to the cord and to the place at which the catheter is inserted until it is removed. The Figure shows this method of stabilisation in a low birthweight infant.

Techniques of catheterisation of umbilical vessels have been well described. Most methods of stabilisation combine purse string suturing around the catheter with taping of the catheter to the skin of the infant with or without a covering gauze dressing. This can lead to the catheter slipping through the purse string suture and to trauma to large areas of skin in low birthweight infants. Such areas subsequently serve as sites of increased fluid and protein loss and can be potential portals of entry for infection. Even paper tape may denude the skin of the small premature baby during the first 3 days of life.

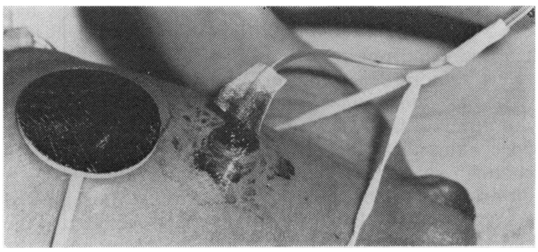

Figure *Method of stabilising umbilical catheter.*

Our technique, besides making accidental dislodgement of the catheter unlikely, additionally allows the umbilical cord to remain dry, and reduces the risk of colonisation with hospital-acquired organisms.

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Chloramphenicol and phenobarbitone —a drug interaction

Sir,

I read with interest the Short Report by Bloxham *et al.* (*Archives*, 1979, **54**, 76). The authors are mistaken in their belief that the interaction between these drugs has not been specifically reported in man. Windorfer and Pringsheim (1977) reported that premature and newborn babies (n = 20) who received phenobarbitone in addition to chloramphenicol and penicillin had lower levels of chloramphenicol than groups of comparable babies who received chloramphenicol alone (n = 29) or chloramphenicol and penicillin combined (n = 35).

The Short Report draws attention to the problem of drug interactions, and two points are worthy of mention. Chloramphenicol is known to inhibit the hepatic microsomal enzyme system (Adams *et al.*, 1977) and it causes a reduction in phenobarbitone clearance (Koup *et al.*, 1978) and raises the levels of phenytoin and other drugs (Christensen and Skovsted, 1969). It would therefore have been particularly interesting to have seen the trend in serial phenobarbitone concentrations in the two cases cited by Bloxham *et al.* Sodium valproate may offer no advantage, as although it appears to have little or no enzyme-inducing properties, it may in fact inhibit the microsomal enzyme system and this is presumably one mechanism by which an increase in phenobarbitone, phenytoin, and primidone concentration occurs when these drugs are used in combination with sodium valproate (Windorfer *et al.*, 1975; Vajda *et al.*, 1976).

It is imperative that all possible drug-drug interactions are considered when contemplating giving a combination of drugs. The importance of drug level monitoring, especially in these circumstances, is worth emphasising.

References

Adams, H. R., Isaacson, E. L., and Masters, B. S. S. (1977). Inhibition of hepatic microsomal enzymes by chloramphenicol. *Journal of Pharmacology and Experimental Therapeutics*, **203**, 388–396.