UMBILICAL ARTERY CATHETERISATION & REMOVAL
Supporting information

Prophylactic antibiotics are not needed to prevent infection?
A Cochrane review (Inglis, 2007) found two quasi-randomised trials relevant to this question, but both were of poor quality and their results did not merit pooling. The authors concluded that there was insufficient evidence to either support or refute the use of prophylactic antibiotics in this situation.

Inglis GT, Jardine LA, Davies W. Prophylactic antibiotics to reduce morbidity and mortality in neonates with umbilical artery catheters. Cochrane Database of Systematic Reviews 2007, Issue 4. Art. No.: CD004697
http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD004697.pub3/full

Evidence Level: V

How should catheter insertion length be estimated in very low birth weight (VLBW) infants?
A randomised study (Wright, 2008) compared infants <1500g catheterized according to a standard practice nomogram with another group whose catheters were placed according to a new formula (insertional length in cm = 4 x birthweight in kg + 7); a total of 74 insertions. There was a significant increase in correctly-placed catheters with the new formula ($p = .003$). Overinsertion, a problem in VLBW infants when the standard nomogram was used, was significantly less likely ($p < .0001$).
A 2015 study compared Wright's formula with the Dunn Method and found that the former was significantly more accurate in measuring the correct insertion length for term, low birth weight and very low birth weight newborns (success rate 83% vs 61% [$p<0.05$]) (Min, 2015).

Min SR, Lee HS. Comparison of Wright's formula and the Dunn method for measuring the umbilical arterial catheter insertion length. Pediatr Neonatol. 2015;56:120-5
http://www.sciencedirect.com/science/article/pii/S1875957214001363?via%3Dihub

Wright IM, Owers M, Wagner M. The umbilical arterial catheter: a formula for improved positioning in the very low birth weight infant. Pediatr Crit Care Med 2008;9:498-501

Evidence Level: II

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