Abstract:

Objective: This study aimed to determine the incidence of umbilical venous catheter associated infection (UVCAI) in very preterm infants based on UVC tip position.

Study design: In this retrospective cohort study, infants born at ≤32 weeks were divided into groups with a UVC tip in either a low-lying or good position. The primary outcome was UVCAI. Survival analysis represented time to infection between groups. Subgroup analyses were based on duration of UVC indwelling time.

Results: Of 1,983 infants, 1,638 infants were eligible; 33% had low-lying UVC and 67% had good position UVC. Survival analyses suggested a significantly higher probability of infection was associated with low UVC (adjusted hazard ratio [HR]: 1.9, 95% confidence interval [CI]: 1.1-3.2; p = 0.001). The risk of infection was higher for UVC of >7 days duration (adjusted HR: 2.2, 95% CI: 1.1-4.2). Extravasation as a complication was significantly higher in the low UVC versus good position UVC (1.3 vs. 0.1%; odds ratio: 14.4, 95% CI: 1.8-119).

Conclusion: Low-lying UVC was associated with higher risk of infection and extravasation.

Reference: