To summarize the characteristics of cuffed-tunneled catheters insertion and investigate the values of cuffed-tunneled catheters in pediatric patients” Wang et al (2018).

Abstract:

Objective: To summarize the characteristics of cuffed-tunneled catheters insertion and investigate the values of cuffed-tunneled catheters in pediatric patients.

Methods: Between March 2015 and July 2017, all the pediatric patients who received maintenance hemodialysis at least 3 consecutive months in our center were included. Sixteen cuffed-tunneled hemodialysis catheters were inserted in patients for long-term hemodialysis access. The clinical manifestations and complications were retrospectively reviewed.

Results: Fifteen pediatric patients with end stage renal disease (ESRD) were included in this study and they received 16 cuffed-tunneled catheters for long-term vascular access, including 10 males and 5 females; median age at start of catheter insertion was 11.5 (4.2-14.5) years. Body weight was (27.8±8.0)kg (16.0-39.4 kg) . The size and the length of the catheters were based on the height of patients as follows: 28 cm for (115.6±10.6) cm (102.0-130.0 cm) ,36 cm for (148.6±9.9)cm (140.0-167.0 cm) . Cuffed-tunneled catheters outcome: 10 cuffed-tunneled catheters were still functional at the end of the study; 5 catheters were removed after successful kidney transplantation. Catheter failure occurred in
1 out of 16 cuffed-tunneled catheters due to catheter-related infections. The median catheter survival time was 11.9 months (range 3.5-21.3 months).

Complications of cuffed-tunneled catheters: Catheter placements operation was successful in 15 cases using ultrasound guidance. No serious complications were observed in any patients receiving catheter inserting operation. The overall rate of catheter-related infections and thrombosis/malposition was 6.3% and 18.7%, respectively.

Conclusions: Ultrasound guidance is suggested in pediatric patients during the catheters insertion. The size and the length of the catheters should be based on the height of patients. Cuffed-tunneled hemodialysis catheters could be effectively used for maintenance of hemodialysis vascular access for pediatric patients with ESRD.

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