

The results suggest that ultrasound-guided IJV catheterization can be performed easily and without any serious complications in pediatric patients, even when performed by visiting house staff" Yang et al (2015).

Reference:

Yang, E.J., Ha, H.S., Kong, Y.H. and Kim, S.J. (2015) Ultrasound-guided internal jugular vein catheterization in critically ill pediatric patients. Korean Journal of Pediatrics. 58(4), p.136-41.

Abstract:

PURPOSE: Continuous intravenous access is imperative in emergency situations. Ultrasound-guided internal jugular vein (IJV) catheterization was investigated in critically ill pediatric patients to assess the feasibility of the procedure.

METHODS: Patients admitted to the pediatric intensive care unit between February 2011 and September 2012 were enrolled in this study. All patients received a central venous catheter from attending house staff under ultrasound guidance. Outcome measures included successful insertion of the catheter, cannulation time, number of cannulation attempts, and number and type of resulting complications.

RESULTS: Forty-one central venous catheters (93.2%) were successfully inserted into 44 patients (21 males and 23 females; mean age, 6.54 ± 1.06 years). Thirty-three patients (75.0%) had neurological disorders. The right IJV was used for catheter insertion in 34 cases (82.9%). The mean number of cannulation attempts and the mean cannulation time was 1.57 ± 0.34 and 14.07 ± 1.91 minutes, respectively, the mean catheter dwell time was 14.73 ± 2.5 days. Accidental catheter removal was observed in 9 patients (22.0%). Six patients (13.6%) reported complications, the most serious being catheter-related sepsis, which affected 1 patient (2.3%). Other complications included 2 reported cases of catheter malposition (4.6%), and 1 case each of arterial puncture (2.3%), pneumothorax (2.3%), and skin infection (2.3%).

CONCLUSION: The results suggest that ultrasound-guided IJV catheterization can be performed easily and without any serious complications in pediatric patients, even when performed by visiting house staff. Therefore, ultrasound-guided IJV catheterization is strongly recommended for critically ill pediatric patients.

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