

**The aim of this study was to determine whether US reduces number of puncture attempts, procedure time, and complication rate during IJV access in children”
Zanolla et al (2017).**

Abstract:

PURPOSE: The aim of this study was to determine whether US reduces number of puncture attempts, procedure time, and complication rate during IJV access in children.

METHODS: A prospective study was performed in children (age ≤ 18 years) admitted to our institution, from September 2013 to July 2014, with indications for central venous access. Patients meeting the inclusion criteria were randomized to the US-guided or control groups. The same physician performed all IJV cannulations in both groups. The end-points for comparison were: length of time to venous access, number of attempts, and rate of complications.

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RESULTS: Fifty-one patients were included: 23 in the US-guided group and 28 in the control group. There were no between-group differences in weight, age, or sex. In the US-guided group, the number of punctures needed to achieve IJV access (median, 3 [2-5] vs. 1 [1, 2]; $P < 0.001$), time to achievement of venous access, and complication rate (39% vs. 4.3%, $P < 0.009$) were significantly lower.

CONCLUSION: US guidance is a useful adjunct to central venous access in children, facilitating the procedure, decreasing time to cannulation, and increasing safety.

TYPE OF STUDY: Prospective randomized study.

LEVEL OF EVIDENCE: 1.

Reference:

Zanolla, G.R., Baldisserotto, M. and Piva, J. (2017) How useful is ultrasound guidance for internal jugular venous access in children? *Journal of Pediatric Surgery*. August 17th. .



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