Regina Grigolli Cesara et al., J Health Med Informat 2018, Volume 9
DOI: 10.4172/2157-7420-C1-021

ULTRASOUND-GUIDED CENTRAL VENOUS CATHETERIZATION: A PROTOCOL TO BE FOLLOWED IN PEDIATRICS?

Regina Grigolli Cesar[a] and **Mayara Gonçalves Marques**[a]
[a]Shahid Beheshti University, Brazil

Objective: To investigate the effectiveness of ultrasound-guided central venous catheterization when compared to the conventional procedure.

Method: A prospective cohort study was carried out over a 9-month period from February to October 2016 involving 144 inpatients at PICU of Irmandade Santa Casa de São Paulo Hospital, undergoing central venous catheterization. The patients were matched in pairs of identical patients according to the levels of potentially intervening variables (age, nutritional status, puncture site, professional experience), differing only as to the central venous catheter (CVC) technique: ultrasound-guided (USG-CVC) or conventional (C-CVC). Discarding data from non-paired patients, the remaining did forming 47 pairs, matched as two related samples: USG-CVC and C-CVC groups. Success parameters: number of puncture attempts; time spent at CVC; success rate and complications.

Results: In the USG-CVC group, the number of attempts (mean=2.04) and the time spent at catheterization (mean=11.89 minutes) were lower ($t=2.34$, $df = 46$, $t0.95=2.02$, $p<0.05$) and ($t=2.34$, $df=46$, $t0.95=2.02$, $p<0.05$), respectively, when compared to the results obtained for the control group (C-GVC), (mean=3.21) and (mean=28.26 minutes), respectively. As to success, there was observed a significant difference ($F(1, 46)=16.6$; $Q(1)=12.5$, $p < 0.05$) when considering only one trial (USG-CVC=27/47; C-CVC=9/47), but no significant difference ($F(1, 46)=3.76$; $Q(1)=3.56$, $p>0.05$) when considering several attempts. Complications were found less frequently in the USG-CVC group (3/47) than in the CVC-C (13/47), ($F(1, 46)=8.24$; $Q(1)=7.14$, $p < 0.05$).

Conclusion: USG-CVC was found to be more effective than the conventional technique, especially regarding success at the first puncture attempt.

Biography

Regina Grigolli Cesar is working in Pediatric Intensive Care Unit, Department of the Santa Casa de São Paulo, School of Medicine, São Paulo, Brazil. Her main interest is on Pediatric research. Her current reserach work is on Ultrasound-guided central venous catheterization.

reginautiped@uol.com.br

Notes: