

CENTRAL VENOUS ACCESS: CONVENTIONAL SELDINGER VERSUS ULTRASOUND-GUIDED TECHNIQUE TO REDUCE ASSOCIATED COMPLICATIONS IN A SCHOOL HOSPITAL

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- Hypertension and diabetes are the main comorbidities and risk factors for complications related to the placement of central venous accesses, these complications are extremely frequent when performed by the conventional Seldinger technique.
- Through this study, an attempt was made to establish the frequency and reduction of complications when comparing placement by internal medicine resident using conventional marking techniques of seldinger versus ultrasound guided in emergency service in 76 patients.
- The results through the chi square test with a p value of 0.05, showed successful placement:
 - Increases the chance of success when using Ultrasound by 57% (RR: 1.57) successful placement rate was achieved with the use of ultrasound of 91.6% versus 52% in patients with conventional technique.
 - The Reduction of risk of arterial complications with the use of ultrasound was 26% (RR: 0.74),
 - The reduction risk of pneumothorax with ultrasound was 86% (RR: 0.14)
 - The reduction of infectious complications with Ultrasound was 86% (RR: 0.14).
 - Time required for placement of the central venous access was significantly shorter with ultrasound when analyzed with U-Mann Whitney with P value: 0.002.
 - There were 6 catheter-associated infections per thousand catheter days in the conventional technique group versus 1 in the Ultrasound group (with an average hospital days associated with infection of 11.2).
 - The main associated comorbidities HBP, DM-2, Cancer and Obesity, with higher prevalence in the ultrasound placement group.
- Ultrasound considerably reduced the number of mechanical, vascular or infectious complications associated with placement of central venous accesses, becoming a valuable tool for internal medicine resident physicians.