The aim of this study was to assess preoperative ultrasound imaging as a tool to predict cephalic vein cut down failure for TIVAD insertion” Staszewicz et al (2019).

Abstract:

BACKGROUND: Surgical venous cut down is a method for totally implantable venous access device (TIVAD) insertion. The main drawback of this technique is its higher failure rate when compared with the percutaneous approach, which is mostly related to anatomic variations of the cephalic vein. The aim of this study was to assess preoperative ultrasound imaging as a tool to predict cephalic vein cut down failure for TIVAD insertion.

METHODS: Ultrasound and operative reports of a cohort of patients undergoing TIVAD insertion by cephalic vein cut down were reviewed. Ultrasound venous (vein visibility, diameter, length, subcutaneous depth, vein path, and subclavian junction visibility) and patient variables were tested by logistic regression as predictors of TIVAD insertion failure.

RESULTS: One hundred sixty consecutive patients underwent cephalic vein cut down for attempted TIVAD insertion. An inability to visualize the vein on the preoperative ultrasound examination (odds ratio, 4.39; 95% confidence interval, 1.57-12.30; P < .05) and depth of the vein (odds ratio, 1.07; 95% confidence interval, 1.00-1.15; P = .042) were predictors of failure of TIVAD insertion by cephalic vein cut down. CONCLUSIONS: Preoperative ultrasound examination allows identifying patients at risk of failure of TIVAD insertion by cephalic vein cut down. Preoperative ultrasound examination constitutes an efficient tool for choosing the most appropriate surgical approach and improving patient comfort.

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