TRANSLUMBAR CATHETER. AN UNCONVENTIONAL OPTION FOR HEMODIALYSIS

WCN24-AB-2581

Universidad de Guadalajara

Introduction

Conventional venous catheters are usually placed in jugular or femoral veins to provide access for hemodialysis (HD). Stenosis, thrombosis, or both, of those vessels further reduces options. We present an unconventional inferior vena cava catheterization as a feasible option in patients with exhaustion of vascular accesses.

Methods

Three patients with end-stage kidney disease (ESKD) receiving hemodialysis treatment with loss of peritoneal cavity, exhaustion of vascular accesses and need for urgent HD with access devices that do not work in ordinary sites were included. The objective is to evaluate the translumbar approach as a life-saving HD vascular access in patients with non-functional access at ordinary sites. Complications were evaluated. Patency of the inferior vena cava is required to allow puncture, passage of dilators and catheter to the right atrium with computed tomography guidance.

Results

Inferior vena cava catheters with computed tomography were successfully inserted in three patients. They were followed until presence of catheter dysfunction or death by any cause. Catheter viability was observed a mean of 132 days (IR 33 – 306 days). **Mean blood pump velocity was 390,0±44,7 ml/min. The average ultrafiltration volume was 2.7 L/session.** No major complications were observed during insertion or the post-insertion period or the first month, except for pain in the lumbar region in one patient. No recirculation data was observed. Long-term complications were observed in one patient presenting infectious endocarditis which required catheter removal. One of the patients died after 1 month by other cause.

Table 1. Medical History

	Case 1	Case 2	Case 3
Age (years)	33	46	34
Gender	Female	Male	Female
Time in HD (years)	7	5	7
Cause of CKD	Not determinated	Diabetic kidney disease	Not determinated
Comorbidities	Hypertension	DM2, Hypertension	Anemia, BMD
History vascular access	9 catheters, 1 AVF	10 catheteres	13 catheteres, 1 AVF

DM2 = diabetes mellitus type 2, BMD= Bone mineral disease, CKD = chronic kidney disease, AVF = arteriovenous fistula.

Fig. 1. Oblique sagittal reconstruction showing catheter in inferior vena cava with terminal tip in right atrium.

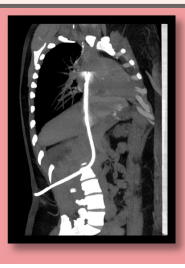
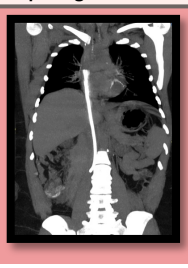


Fig. 2. Coronal reconstruction showing catheter in inferior vena cava with terminal tip in right atrium.



Conclusion

Translumbar vascular access is a new, effective and life-saving HD approach, without major complications. It is indicated when there are life-threatening dialysis urgency criteria in CKD patients with veins unavailable to provide HD access. Further studies are recommended for further evaluation of this technique.

ISN WCN'24 APRIL 11-14, 2024 BUENOS AIRES ARGENTINA

Hosted by SAN SLANH

Authors:
Cristian Josue Ramos Mares (1), Héctor Leonardo Pazarin Villaseñor (1), Renato Parra Michel (1), Javier Soto Vargas (1), José de Jesús Gutiérrez Hernández (1), Hugo Bonifacio Espinoza (1), Juan Oziel Romero Tafoya (1), David Antonio Juárez Flores (1), María Elena Gallardo Rodríguez (1), Brenda Guadalupe Rosales Torres (1), Diana María Reyes Martínez (1), Paulina de Niz Hernández (1), Carolina Covarrubias Castellón (1), José Antonio Barbarin Sosa (1), Karen Ivette Cortés Montenegro (2), Sergio Ernesto Martínez Ortiz (2).