DO HEMODIALYSIS PATIENTS USING VENOUS CATHETER NEED A DIFFERENT NUTRITIONAL APPROACH?

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Introduction and Aims: Poor clinical outcomes in maintenance hemodialysis (HD) patients with venous catheters (VC) have been reported. On the other hand, both lower prevalence of inflammatory markers and infection rates in patients with arteriovenous fistula (AF) have been described. However, the association between vascular accesses and nutritional status has been less investigated. The aim of this study was to investigate the relationship between vascular access, nutritional status and body composition, assessed through bioimpedance spectroscopy (BCM®).

Methods: In this transversal multicenter study, 3758 maintenance HD patients with mean age of 69.8±14.6 years, 42.8% female and with mean HD time of 76.6±60.3 months were enrolled. Patients were divided into 3 groups depending on the type of vascular access: 2522 (67.6%) patients had arteriovenous fistula, 670 (17.9%) graft and 541 (14.5%) VC. One-way ANOVA analysis was performed and a p<0.05 was considered significant.

Results: Regarding HD adequacy and biochemical parameters, patients using VC as vascular access presented lower Kt/V (p<0.001), Urea Reduction Ratio (p<0.001), hemoglobin (p<0.001), albumin (p<0.001), normalized Protein Catabolic Rate (p<0.001), total cholesterol (p<0.001), creatinine (p<0.001) and higher C-reactive protein (p=0.03) comparing to other groups. Moreover, having a VC was associated with lower Lean Tissue Index (p<0.001) and Body Cell Mass Index (p<0.001) and higher Fat Tissue Index (p<0.001).

Conclusions: According to these data, HD patients with VC presented higher inflammatory markers and worst nutritional status parameters. Therefore, these patients may need a different nutritional approach in order to improve their nutritional status.