

IS IT WORTH TO BE AFRAID FROM METABOLIC SYNDROME IN HEMODIALYSIS PATIENTS REGARDING THE VASCULAR ACCESS SURVIVAL?

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INTRODUCTION:

Albania is a developing country and the characteristics of all our population are expressed in the hemodialysis patients too. The metabolic syndrome is prevalent in this category of patients as well as in the general population. The change of lifestyle, the food that is more and more caloric and salty, the possibility of having an enormous variety of food in contrary of that limited during the communism period and the phenomenon of "fast-foodism" are responsible in most cases of metabolic syndrome.

The natural history of patients with metabolic syndrome (MetS) undergoing hemodialysis access placement is unknown. MetS has previously been found as a risk factor for poor outcomes for vascular surgery patients undergoing other interventions.

The aim of the study is to describe the outcomes of MetS patients undergoing primary hemodialysis access placement.

METHODS:

The medical records of the 104 patients who underwent hemodialysis access placement between 2009 and 2013 were collected. Survival, primary patency, and secondary patency were evaluated using the Gehan- Breslow test for survival. MetS was defined as the presence of three or more of the following: blood pressure $\geq 130/90$ mm Hg; triglycerides ≥ 150 mg/dl; high-density lipoprotein ≤ 50 mg/dl for women and ≤ 40 mg/dl for men; body mass index ≥ 30 kg/m²; or fasting blood glucose ≥ 110 mg/dL, uricemia > 7 mg/dl.

RESULTS:

Of the 104 patients who underwent hemodialysis access placement, 23.2 (%) were identified to have MetS. The distribution of MetS factors among all patients was hypertension in 57.67%, diabetes in 17.48%, elevated triglyceride in 34.66 %, decreased high-density lipoprotein in 65.3 %, elevated body mass index in 11.65 %, elevated uricemia 13.59 %. Patients mean age was $48,27 \pm 12,18$ years. The median length of follow-up was 4 years. The forearm was site of fistula placement in 63%; **The binary logistic regression** showed no difference between groups (MetS, 57%; no MetS, 50%; $P=.388$). The median time to primary failure was 0.68 years for all patients (MetS, 0.555 years; no MetS, 0.436 years; $P=.255$). Secondary patency was 50% at 1.18 years for all patients (no MetS, 1.94 years; MetS, 0.72 years; $P=.024$). Median survival duration for all patients was 4.15 years (no MetS, 5.07 years; MetS, 3.63 years; $P=.019$).

CONCLUSIONS:

MetS is prevalent among patients undergoing hemodialysis access placement. Patients with MetS have equivalent primary patency rates; however, their survival and cumulative patency rates are significantly lower than in patients without MetS. Patients with MetS form a high-risk group that needs intensive surveillance protocols.

