POS-606
CAN WE IMPROVE ENDOTHELIAL INJURY TO PREVENT VASCULAR ACCESS THROMBOSIS FOR HEMODIALYSIS?
Piccone Saponara, L1*, Castro Fernandez, P1, Uribe Heredia, NG2, Ferrer Garcia, G2, Anaya Fernandez, S3, Carreño Parrilla, A4, Ugarte Camara, M1, Olazo Gutierrez, E1, Garcia Conejo, G1, Vozrjadoviy Poyatos, C1
1Hospital General Ciudad Real, Nephrology, Ciudad Real, Spain, 2Hospital General Guadalajara, Cardiology, Guadalajara, Spain

Introduction: Vascular access (VA) for hemodialysis is essential for kidney patients because of its associated morbidity and mortality as well as for its impact on quality of life. Thrombosis is the main complication of an arteriovenous fistula (AVF). The main cause is the previous stenosis, which occurs due to the hyperplasia of the neointima of the vessel, that conditions the appearance of thrombosis. The efficacy of different approaches has been studied to reduce the incidence of thrombosis in AVFs and increase their survival. We determine those factors involved in vascular access thrombosis for hemodialysis.

Methods: This is a cross-sectional descriptive study. We include all the AVFs performed in our center during the period between 2000 and 2020. Demographic variables (age, sex), CKD etiology and associated comorbidity factors were collected. We determine the factors involved in thrombosis of AVFs. The statistical analysis was executed with SPSS 25.0. The categorical variables are expressed as percentages and were compared using the Chi2 test. The quantitative variables are expressed as mean +/- standard deviation, and the T-Student or U Mann Whitney were used to compare them. We performed multivariate analysis using logistic regression. We establish statistical significance for a value of p <0.05.

Results: We include 622 AVFs performed in 482 patients. 86.8% were autologous. 66.6% were male, with an average age of 65.4 ± 14 years. The most frequent CKD etiology were diabetic nephropathy (30.2%), unknown etiology (18%), and glomerular etiology (16.6%). 91.2% had high blood pressure (HBP) and 47.9% diabetes mellitus (DM). 48.7% received antplatelet therapy and 15.6% anticoagulation prior to the creation of the AVF. VA thrombosis was documented in 23%. The univariate analysis showed statistical significance for ischemic heart disease (p = 0.05), peripheral vascular disease (p = 0.05), antplatelet therapy (p = 0.038), high phosphorous levels (p = 0.033), high PTH levels (p = 0.024) and C-reactive protein (p = 0.021). When performing the multivariate analysis using logistic regression, antplatelet therapy (OR: 0.62 95% CI 0.41-0.93 p = 0.023), and statin treatment (OR: 0.58 95% CI 0.36-0.93 p = 0.025) are protective factors for VA thrombosis.

Conclusions: In our study, antplatelet therapy prior to the creation of the VA decreased the probability of AVF thrombosis by 38% and the statin treatment decreased the probability of AVF thrombosis by 42%.

No conflict of interest

POS-607
COMPARISON OF LUNG ULTRASOUND AND BIOIMPEDANCE IN ASSESSMENT OF EXTRACELLULAR VOLUME IN HEMODIALYSIS PATIENTS
PUTINTSEVA, A1*, Zhdanova, I2, Tsukanova, E1, Fadeeva, J4, Kayukov, I1, Essaian, A1
1Federal State Public Enterprise Nikiforov’s All-Russian Center for Emergency and Radiation Medicine of the Emergencies Ministry, dialysis, Saint-Petersburg, Russia; 2Federal State Public Enterprise Nikiforov’s All-Russian Center for Emergency and Radiation Medicine of the Emergencies Ministry, dialysis, Saint-Petersburg, Russia; 3Federal State Public Enterprise Nikiforov’s All-Russian Center for Emergency and Radiation Medicine of the Emergencies Ministry, dialysis, Saint-Petersburg, Russia; 4LPPC-“Helix Severny”, Functional diagnostics, Saint-Petersburg, Russia

Introduction: The aim of this study was to compare the lung ultrasound (LUS) and bioimpedance analysis (BIA) as methods to assess the hydration status (fluid status) in program hemodialysis (PHD) patients.

Methods: The comparative analysis was performed in 75 patients aged 24 to 82 years (37 women, 38 men) who’re on PHD 3 times a week with a treatment length of more than 3 months. The research didn’t involve patients with cardiac pacemakers and permanent catheters as vascular access. To assess the extracorporeal lung water (EVLW) we performed LUS using the Siemens Acuson X150 ultrasound system with a CH5-2 curvilinear transducer and the Bodyscan Multiscan 5000 multifrequency bioimpedance spectroscopy (BIS) monitor able to measure in the frequency range of 5-1000K Hz. Both researches were conducted in patients before and 30 minutes after the hemodialysis (HD) session in the second and third sessions of a week. Ultrasonic measurements were performed by summing LUS comets or B-lines along four anatomical lines (parasternal, mid-clavicular, anterior, middle, and posterior axillary lines) from the II to the V intercostal space on the right and from the II to the IV intercostal space on the left. The quantitative assessment of B-lines (B-lines score, BLS) was performed according to Picano E. et al. [2006], where the absence of EVLW, overhydration (OH) of the 1st degree corresponded to 5-14 BLS, OH of the 2nd degree corresponded to 15-30 BLS, and OH of the 3d degree corresponded to >30 BLS with an insignificant, moderate and pronounced amount of EVLW (respectively).

The hydration status assessment by BIS was based on the overhydration (OHY) index, indicator the total body water, extra- and intracellular water, and the body composition. According to the Henry C. Lukaski et al. [2019] research the patient’s fluid status classified as normohydration (-1.0 to 1.0 L), OH (moderate >1.0 to <2.5 L, pronounced >2.5 L) and dehydration (≤ -1.0 L). The LUS didn’t allow to assess the state of dehydration. Therefore, the normohydration by LUS was associated with the sum of normo- and dehydration by BIS. We used SPSS Statistics 21.0 software for statistical processing of the data.

Results: Data of the fluid status in 75 PHD patients using LUS and by BIS before and after a HD-session coincided in 28 patients, partially coincided in 18 patients before the HD-session and in 23 patients after and didn’t coincide in 6 patients. In 75 patients, a statistically significant correlation was revealed between BLS and OHY before (Rs=0.33, p<0.01) and after (Rs=0.39, p<0.01) the HD-session. A direct and statistically significant correlation between BLS and OHY indicators was revealed in 46 patients, whose results were almost identical before the HD-session (Rs=0.566, p<0.01) and in 51 patients after (Rs=0.682, p<0.01).

Conclusions: BIA remains the gold standard for the assessment of over-, normo- and dehydration in PHD patients. LUS is a simple and adequate method for assessing the hydration status in PHD patients and it is comparable to BIA in assessing over- and normohydration. However, the LUS doesn’t allow to diagnose the dehydration.

No conflict of interest

POS-608
CLINICAL OUTCOMES OF HEMOPERFUSION USING HA130 CARTRIDGE AMONG MAINTENANCE HEMODIALYSIS PATIENTS IN ST. LUKE’S MEDICAL CENTER-QC AND GAT ANDRES MEMORIAL MEDICAL CENTER: A CROSS-SECTIONAL STUDY
QUIBO-GALVADORES, FJ1*, Crisostomo, A3
1St. Luke’s Medical Center- Quezon City, Nephrology, Quezon City, Philippines

Introduction: Despite the advancement in blood purification technology, the mortality rate of maintenance hemodialysis patients is still high with cardiovascular disease as the leading cause of death. This study aimed to compare the clinical outcomes of patients who underwent hemoperfusion using HA-130 cartridge with hemodialysis to those with hemodialysis alone among maintenance hemodialysis patients in St. Luke’s Medical Center Quezon City dialysis unit and Flora V Valisno De Sorio Dialysis Center of Gat Andres Bonifacio Medical Medical Center from August 2018–May 2019.

Methods: This cross-sectional study included 183 patients who underwent hemodialysis (HD) and hemoperfusion (HP) using HA-130 cartridge and 156 patients on hemodialysis alone. Serum phosphorous, albumin, hemoglobin, erythropoietin(EPO) dose, Kt/V, hospitalizations, and mortality were compared from baseline, at the start and end of hemoperfusion when appropriate and between these two groups.