

uptake in home dialysis, (ii) the proportion of time spent on home dialysis and (iii) home dialysis survival (patient and technique).

METHOD: All adults ≥ 18 years old who had dialysis treatment during 2017–9 in mainland France were included. Mixed-effects regression models were built to explore factors including patient characteristics or residence and dialysis network associated with outcomes.

RESULTS: During 2017–9, 7728/78 757 (9.8%) patients underwent dialysis at least once at home for a total of 120 594/1 508 000 (8%) months. The heterogeneity in dialysis networks regarding the uptake or total time spent on home dialysis was marginally explained by patient characteristics or residence and dialysis-network factors. Heterogeneity was less for home dialysis survival. These results were similar when the analysis was restricted to home peritoneal dialysis or home hemodialysis. Income inequity and housing were associated with reduced home dialysis uptake and reduced proportion of time on home dialysis. Home dialysis use was not affected by the number of self-care HD units in the administrative district of residence.

CONCLUSION: Our results suggest that to increase home dialysis use in France, one should focus on home dialysis uptake rather than survival. Financial incentives and a quality improvement program should be implemented at the dialysis-network level to increase home dialysis use.

MO685 BRAIN OXYGENATION ASSESSED BY NEAR-INFRARED SPECTROSCOPY DURING A MENTAL TASK AND A MILD PHYSICAL STRESS IN HEMODIALYSIS AND PERITONEAL DIALYSIS

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BACKGROUND AND AIMS: Cognitive impairment is highly prevalent in end-stage kidney disease (ESKD) individuals. Brain oxygenation is a parameter that plays major role in cognitive function. This study aimed to examine for the first time changes in brain oxygenation during a mental and a mild physical task in hemodialysis (HD) and peritoneal dialysis (PD) patients.

METHOD: A total of 63 ESKD patients (≥ 18 years old) were enrolled in this cross-sectional study. Patients were allocated in two groups according to dialysis modality ($n = 29$ HD and $n = 34$ PD). All participants underwent a mental (countdown from 100 to 0 by 7, performed twice) and a mild physical task (a 3-min intermittent handgrip exercise at 35% of maximal handgrip strength). Changes in brain oxygenation [oxy—(O₂Hb), deoxy—(HHb) and total—(tHb) hemoglobin] during the two tasks were continuously recorded via near-infrared spectroscopy (NIRS, Artinis).

RESULTS: Age, sex and dialysis vintage did not differ between the two groups. The average response in brain oxygenation during the mental task (O₂Hb change from rest: 1.51 ± 1.68 versus 1.60 ± 1.82 μmol , in HD and PD, respectively, $P = 0.841$), as well as the duration needed for task completion (191.53 ± 124.27 versus 200.19 ± 118.84 s, $P = 0.781$) were similar between groups. Furthermore, the average response in brain oxygenation during the handgrip exercise also did not differ between the groups (O₂Hb change 1.20 ± 1.03 versus 1.49 ± 0.95 μmol , respectively, $P = 0.262$). In the total cohort, the average response in brain oxygenation during handgrip exercise was inversely correlated with dialysis vintage ($P < 0.05$).

CONCLUSION: Dialysis modality does not appear to have an impact on brain oxygenation, as HD and PD patients presented similar responses during a mental and a mild physical task. Dialysis vintage may negatively affect brain oxygenation in ESKD individuals.

MO686 EFFECTIVENESS OF SARS-COV-2 VACCINATION IN PERITONEAL DIALYSIS PATIENTS

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BACKGROUND AND AIMS: Chronic kidney disease (CKD) patients, especially those on renal replacement therapy, have a higher risk of infection and worse clinical outcomes after coronavirus disease 2019 (COVID-19) than the general population. Thus, this population must be promptly immunized against COVID-19. We aimed to assess the humoral response after two doses of severe acute respiratory syndrome coronavirus 2 (SARS-CoV2) vaccine in peritoneal dialysis (PD) patients. We also aimed to identify potential factors associated with vaccine response and the prevalence of COVID-19 in a PD unit.

METHOD: We conducted a single-center, retrospective study to evaluate the immunogenicity in terms of antibody response after COVID-19 vaccination. Three types of vaccine [BNT162b2 messenger RNA vaccine (Pfizer-BioNTech), messenger RNA-1273 (Moderna) and ChadOx1 nCoV-19/AZD1222 (AstraZeneca)] were administered in the PD unit. The detection of anti-spike IgG antibodies (with a cutoff of 0.8 U/mL) was done at least after 21 days of the two vaccine doses. We also evaluated the presence of COVID-19 infections, hospital admissions (including in intensive care unit) and deaths.

RESULTS: This study enrolled 70 prevalent patients. We excluded patients with only one vaccine dose ($n = 4$), those who did not consent to the collection ($n = 5$) or were vaccinated before starting PD ($n = 11$). Among the 50 patients included, the mean age was 59 ± 15 years, 60% were male and the dialysis vintage was 22.1 (IQR 6–34.3) months. Six (12%) patients were receiving immunosuppressive therapy and 16 (32%) had diabetes. The mean interval between administration of the second vaccine dose and antibodies evaluation was 7.2 ± 0.7 months. Overall, after two doses, there was a significant increase in antibody level, with median of 1495 (IQR 37.8–546.8) U/mL. Only two (4%) patients did not increase their antibody level (remained seronegative). History of immunosuppressive therapy was associated with no response after two doses (91.7% versus 8.3%, $P = 0.012$). There were two COVID-19 infections after the complete vaccination, with mild symptoms (one with hospital admission). Furthermore, there were no intensive care unit admissions or deaths.

CONCLUSION: We found that immunization against COVID-19 was effective in generating an overall humoral response and in preventing severe disease in CKD patients on PD, which emphasizes the importance of the vaccination against COVID-19 in this population. These results also suggest the impact of the immunosuppressive therapy on vaccine response in PD patients.

MO687 POSITIVE ASSOCIATION OF SERUM GALECTIN-3 LEVEL WITH THE PERIPHERAL ARTERIAL DISEASE IN PATIENTS WITH PERITONEAL DIALYSIS

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BACKGROUND AND AIMS: Galectin-3 expressed by epithelial cells, endothelial cells and macrophages, with multiple biological abilities, including cell proliferation, differentiation, growth and inflammation; it also participates in cardiovascular development. Peritoneal dialysis (PD) was an independent predictor for further mortality in uremic patients with subclinical peripheral arterial disease (PAD). The aim of this study was to evaluate the relationship between serum values of galectin-3 levels and ankle-brachial index (ABI) values in PD patients.

METHOD: Fasting blood samples were obtained from 92 PD patients. ABI values were measured using an ABI-form device. Serum galectin-3 concentrations were determined by commercially available enzyme-linked immunosorbent assays. Left or right ABI values < 0.9 were included in the low ABI group.

RESULTS: A total of 19 PD patients (20.7%) were in the low ABI group. Compared with patients in the control group, patients in the low ABI group had higher prevalence of diabetes ($P = 0.010$), older age ($P = 0.009$), higher serum fasting glucose ($P = 0.001$), triglyceride ($P = 0.021$), C-reactive protein ($P < 0.001$), galectin-3 level ($P < 0.001$), while lower total clearance of creatinine ($P = 0.028$). Multivariable logistic regression analysis of the factors significantly associated with PAD revealed that serum galectin-3 level [odds ratio: 1.148, 95% confidence interval (CI): 1.032–1.227, $P = 0.011$] and C-reactive protein level (increase 0.1 mg/dL, odds ratio: 1.324, 95% CI: 1.101–1.592, $P = 0.003$) were the independent predictor of PAD in PD patients. The area under the curve plotted to estimate the optimal level of galectin-3 predicting PAD in PD patients by the receiver-operating characteristic curve analysis was 0.844 (95% CI: 0.753–0.911, $P < 0.001$).

CONCLUSION: High serum level of C-reactive protein and galectin-3 were found to be independent risk factors for predicting PAD in PD patients.

MO688 PERITONEAL PROTEIN CLEARANCE, INFLAMMATION, NUTRITION AND OVERHYDRATION IN PD PATIENTS: LOOKING FOR THE CULPRIT

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