

Corelation Between Serum Sclerostin Levels And Carotid Intima Media Thickness In Chronic Kidney Disease Patients Undergoing Maintenance Hemodialysis

by Taufik Indrajaya

Submission date: 20-May-2021 09:11AM (UTC+0700)

Submission ID: 1589972458

File name: C_KIDNEY_DISEASE_PATIENTSUNDERGOING_MAINTENANCE_HEMODIALYSIS.pdf (239.26K)

Word count: 1108

Character count: 6325

Methods: This is a 9-week cross-sectional and analytical study, from August 01 to September 31, 2017, at the hemodialysis unit of Aristide Le Dantec University Hospital. Included were consenting patients over the age of 18 who had been on chronic hemodialysis for more than 3 months and no history of hospitalization in the last month. Without modifying the clinically established dry weight, we measured weight and total body water by using Tanita's bathroom scale (SF-BIA technology) before and after hemodialysis session for 6 successive sessions. These measures were compared with results from clinical measures. Comparison of the repeated measurements was performed using a Student's t-test on paired samples and the agreement was evaluated by linear regression and Brand-Altman analysis.

Results: 264 measurements were performed in 22 patients. The average age was 46.6±13.1 years, with 54.5% of men and an average duration of dialysis of 92.3 ± 46.8 months. During the hemodialysis session, there was a significant reduction in weight (65±17.1 kg pre-dialysis compared with 62.9±17.0 kg post-dialysis, $p < 0.0001$) and total body water (TBW) measured by BIA (TBW_{BIA} = 36.3±7.1 L pre-dialysis versus 33.0±6.8 L post-dialysis, $p < 0.0001$) or calculated by the Watson equation (TBW_{Watson} = 35.8±6.9 L pre-dialysis against 35.2±6.8 L post-dialysis, $p < 0.0001$). This finding was expected and we guessed that the impedance in our patients was higher at the end than at the beginning of the session since the electrical conduction decreases when there is less water. We found a strong linear correlation and a concordance between the two TBW measurements in predialysis. This correlation remained high in non-concordance postdialysis with a mean of -2.2 differences, a very wide agreement limit (-5.9 and +1.5), and a significant difference in measurements.

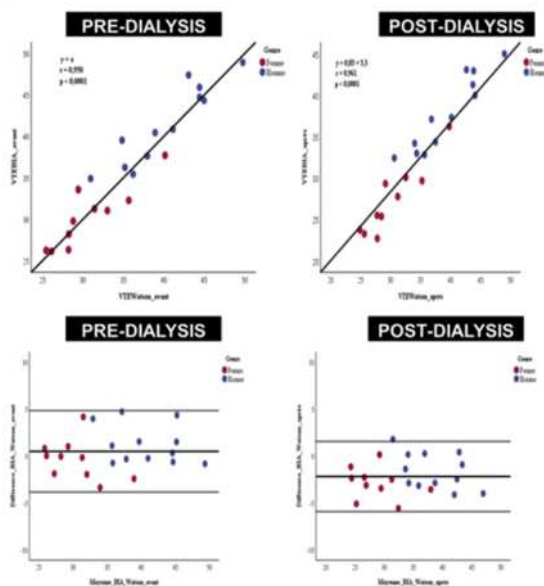


Figure 1. Linear correlation between the Watson equation and the BIA for TBW before and after dialysis and Bland Altman chart. **Conclusions:** These results demonstrate the reproducibility, reliability and repeatability of impedancetric measurements in our chronic hemodialysis patients.

SAT-264
CORRELATION BETWEEN SERUM SCLEROSTIN LEVELS AND CAROTID INTIMA MEDIA THICKNESS IN CHRONIC KIDNEY DISEASE PATIENTS UNDERGOING MAINTENANCE HEMODIALYSIS

PERMANA, A¹, Effendi, I², Indrajaya, T³, Bahar, E⁴, Ali, Z⁵, Suhaimi^{1,5}, Slamet, S⁵, Stiawan, I⁵, Jonata, A⁵
¹Medical faculty Sriwijaya university Palembang Kidney and hypertension division, ²Mohammad Hoesin Hospital Palembang Indonesia, ³Medical Faculty Sriwijaya University Kidney and Hypertension division Mohammad hoesin Hospital Palembang Palembang Indonesia, ⁴Medical Faculty Sriwijaya University Cardiovascular division Mohammad Hoesin Hospital

¹Palembang Indonesia, ⁴Medical faculty Sriwijaya university anatomy Palembang Indonesia, ⁵Medical Faculty Sriwijaya University Kidney and Hypertension division Mohammad Hoesin Hospital Palembang Indonesia, ⁶Medical faculty Sriwijaya University Kidney and Hypertension Mohammad Hoesin Hospital Palembang Palembang Indonesia

Introduction: Chronic kidney disease is associated with high risk of cardiovascular mortality due to bone mineral disorders. Sclerostin is an inhibitor of Wnt signaling which increase vascular calcification in patients with chronic kidney disease. The purpose of this study is to determine the correlation between serum sclerostin and carotid intima media thickness (CIMT) in patients with chronic hemodialysis
Methods: a cross-sectional study was done in hemodialysis unit Mohammad Hoesin Hospital Palembang during Januari-Juli 2019
Results: There were 40 patients included, with mean sclerostin levels 216.68±127.76 pg/ml. There were 30 patients with high sclerostin levels considered high if above 162 pg/ml). CIMT thickening was present in 11 patients. There was no significant correlation between serum sclerostin and CIMT in patients (r=-0.32; p=0.847). Multivariate linear regression analysis showed that hemodialysis vintage was a significant predictor for thickening of CIMT

Conclusions: Although there is no significant correlation between serum sclerostin and CIMT, however, hemodialysis vintage may associate with CIMT in patients with chronic hemodialysis

SAT-265
THE ASSOCIATION BETWEEN UREMIC PRURITUS AND SERUM LEVEL OF FIBROBLAST GROWTH FACTOR 23 IN HEMODIALYSIS PATIENTS

RAMEZANZADEH, E¹, Alizadeh, N², Azimi, S², Monfared, A¹
¹Urology Research Center- Razi Hospital- School of Medicine- Guilan University of Medical Sciences- Rasht- Iran Nephrology Rasht Iran, ²Dermatology Research Center- Razi Hospital- School of Medicine- Guilan University of Medical Sciences- Rasht- Iran Dermatology Rasht Iran

Introduction: Chronic itch (CI) in hemodialysis (HD), often termed uremic pruritus (UP), is a frequently experienced, tormenting and challenging symptom. Fibroblast growth factor-23 (FGF23) is a phosphaturic factor that is released from bone. A variety of bone diseases can occur in renal diseases. There has been an ongoing discussion about whether CI in chronic kidney disease is brought about by the common disturbance of calcium/phosphate homeostasis. This study aimed to investigate the association of FGF23 with UP among HD patients.

Methods: In this cross-sectional study patients receiving maintenance HD in four referral medical centers were enrolled. Serum FGF23 levels were determined by the enzyme-linked immunosorbent assay methodology. The various characteristics of pruritus were assessed using an interview questionnaire.

Results: Among the 237 study participants, 54.01% had UP. Serum FGF23 level was not different between the patients with and without UP (413.17 ±416.97 vs. 410.81 ±444.49, P = 0.85). Those with UP were on longer duration of dialysis (p= 0.02). Those UPs administrating allopurinol or sevelamer hydrochloride, revealed higher means of FGF23 level (p= 0.03, p=0.01). FGF 23 was correlated with parathyroid hormone among UPs (p= 0.02, r= 0.41). A multivariate linear regression analysis showed that administration of atorvastatin was an independent predictor of UP (p= 0.03, 95% CI: 0.256 - 0.954, ODD's Ratio= 0.499).

Conclusions: No association between FGF23 and UP was found in this study. Although the risk of UP in atorvastatin users was lower, more precise studies are recommended to evaluate the anti-inflammatory and anti-pruritic effects of statins in patients with uremic pruritus.

SAT-266
PHOSPHATE KINETICS IN TWICE PER WEEK HEMODIALYSIS SESSIONS IN INDIAN PATIENTS WITH ENDSTAGE RENAL DISEASE

RAO S, N¹, Chandra, A¹, Kulshreshta, MR²
¹Dr.Ram Manohar Lohia Institute of Medical Sciences- Lucknow- India Nephrology Lucknow India, ²Dr.Ram Manohar Lohia Institute of Medical Sciences- Lucknow- India Biochemistry Lucknow India

Introduction: In patients with endstage renal disease, control of serum phosphorus levels is primarily achieved by a combination of oral phosphate binders and removal by hemodialysis. In India, a majority of patients receive twice per week hemodialysis and previous data on dietary phosphorus intake in Indian dialysis patients is lacking. This study examines phosphate kinetics during twice a week hemodialysis alongwith an assessment of dietary energy, protein and phosphorus intake in an Indian hemodialysis population.

Corelation Between Serum Sclerostin Levels And Carotid Intima Media Thickness In Chronic Kidney Disease Patients Undergoing Maintenance Hemodialysis

ORIGINALITY REPORT

20%
SIMILARITY INDEX

0%
INTERNET SOURCES

20%
PUBLICATIONS

0%
STUDENT PAPERS

PRIMARY SOURCES

1 A. PERMANA, I. Effendi, T. Indrajaya, E. Bahar, Z. Ali, N. Suhaimi, S. Slamet, I. Stiawan, A. Jonata. "SAT-264 CORELATION BETWEEN SERUM SCLEROSTIN LEVELS AND CAROTID INTIMA MEDIA THICKNESS IN CHRONIC KIDNEY DISEASE PATIENTS UNDERGOING MAINTENANCE HEMODIALYSIS", *Kidney International Reports*, 2020 **20%**
Publication

Exclude quotes On
Exclude bibliography On

Exclude matches < 5 words