52.29±14.32 yrs. in Non HD group Vs. 54.83±13.19yrs for HD group. eGFR preprocedure was 29.19±34.85ml/min in non HD group whereas 7.87±8.47 ml/min in HD group. eGFR at 1 month and 3 months' post deobstructive procedure were not significantly different in both groups (Non HD group 38.02±29 and 32.49±23.96 vs HD group 33.82±28.37 and 34.96±31.08 respectively). Amongst all comorbidities studied, presence of CKD (71.22% in HD group whereas 41.58% in non HD group) and smoking significantly influenced outcome. Uremic symptoms were the most common cause to initiate HD {94.96%}. Hyperkalemia was the single important indicator for need to dialyze patients {14.74% in non HD group vs 30.72% in HD requiring group}. Interestingly 3 patients of non HD group required dialysis within 1 month of deobstruction whereas 72.66% patient in the HD group did not require dialysis after procedure. 15.82 % patient required ≤3 session dialysis after procedure and < 5% required > 3 session HD post procedure. Need for HD influenced Anesthesia requirement {Local 47.48% in HD group vs 31.58% in Non HD group, 5.04% spinal in HD group vs 17.37% in non HD group}. There was overall increased perioperative bleeding in non HD requiring group 56.32% vs 43.17% in HD group. 44% having > 500 ml blood loss vs 27.34% in HD group and Hemoglobin drop > 2 gm/dl post procedure 8.95% in non HD group vs. 13.67% in HD requiring group. Renal recovery {eGFR > 50% of preprocedure level} was not significantly different in both groups at 1 month and 3 months' post procedure. No difference in rehospitalization rates was noted within 1 month of procedure. All-cause Mortality in 6 months was also not different within 6 months of the procedure with 1 death in non HD group and 3 deaths in HD requiring group.

Among the 36 patient who required dialysis only after deobstructive procedure 70% had CKD Hb< 10 gm/dl and were oliguric . Dialysis was required due to uremic symptoms in 83.3% . Relative risk of dialysis requirement post procedure is 11.34 times more for patients who required preprocedure dialysis than who did not.

Table (1): Pre procedure required HD Vs baseline parameters

Parameter	Non HD (N = 190)	HD (N = 139)	p-value
Age (in yr.)	52.29 ± 14.32	54.83 ± 13.19	0.101
Male	146 (76.84%)	109 (78.42%)	0.735
Sr. Creatinine mg/dL	4.68 ± 2.98	10.34 ± 4.89	<0.001
Days of Hospitalization	6.76 ± 4.59	9.41 ± 5.77	<0.001
CKD State	79 (41.58%)	99 (71.22%)	<0.001
Number of dialysis required After procedure 1M			
1- 3	2 (1.05%)	26 (18.70%)	-
>3	2 (1.05%)	6 (4.32%)	-

Table (2): Pre procedure required HD Vs Outcome parameters

Outcome Parameters	Non HD (N = 190)	HD (N = 139)	p-value
eGFR at admission {ml/min/m2BSA}	29.19 ± 34.85	7.87 ± 8.47	<0.001
eGFR 1 months	38.02 ± 29	33.82 ±28.37	0.253
eGFR 3 months	32.49 ± 23.96	34.36 ± 31.08	0.707
Hyperkalemia	28 (14.74%)	42 (30.22%)	0.001
Metabolic Acidosis	77 (40.53%)	73 (52.52%)	0.031
eGFR at 1 month > 50% baseline	139 (73.16%)	109 (78.42%)	0.052
eGFR at 3 month > 50% baseline	62 (32.63%)	62 (44.6%)	0.200
Death within 6 months	1 (0.53%)	3 (2.16%)	0.186

Conclusions: Dialysis before deobstructive procedure plays no significant role in renal recovery after the procedure. Presence of chronic kidney disease, Hyperkalemia and uremic symptoms were determinants for need for dialysis before procedure. There is increased risk of perioperative bleeding in patients who are not dialyzed and undergo deobstructive procedure. Local anesthesia is preferred for patients who undergo dialysis. Days of hospitalization post procedure were more in dialysis requiring group.rs

I have no potential conflict of interest to disclose.

I did not use generative AI and AI-assisted technologies in the writing process.

WCN25-1583

PREVALENCE AND RISK FACTORS OF INTRADIALYTIC HYPERTENSION IN MALAYSIAN HAEMODIALYSIS PATIENTS: A MUTLI-CENTRE OBSERVATIONAL STUDY

Yusuf Abu Shamsi*[1], Rozita Mohd[2], Mohd Shawal Faizal Mohamad[1], Nazarudin Safian[2], Mohd Asyiq Rafali[2], Kuan Yee Lim[2], Wan Rohaslizan Wan Daud[1]

[1]Medical, Hospital Canselor Tuanku Muhriz, Kuala Lumpur, Malaysia; [2]Faculty of Medicine, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia

Introduction: Intradialytic hypertension (IDH) is a complication among haemodialysis patients, linked to increased cardiovascular morbidity and mortality. Despite its significance, the prevalence and contributing factors of IDH in the Malaysian dialysis population remain unexplored. The aetiology involves factors like extracellular fluid overload, electrolyte imbalances, and activation of the sympathetic nervous system and the renin-angiotensin-aldosterone system (RAAS). Given demographic variations, understanding IDH in Malaysia is important. This study aims to determine the prevalence of IDH in Malaysian haemodialysis patients and explore potential contributing factors to improve management strategies.

Methods: A prospective cross-sectional study was conducted among 80 haemodialysis patients at three dialysis centres (one in-hospital, two standalone) over 6 months in 2023. Patients were reviewed for six consecutive dialysis sessions to assess IDH, defined as an episode of increase in systolic blood pressure (SBP) >10 mmHg from pre- to post-dialysis, with post-dialysis SBP >150 mmHg, instead of the KDIGO definition of IDH in at least four out of six sessions. All patients received a dialysate sodium concentration of 140 mmol/L and a temperature of 37°C, with calcium concentrations of 1.5 mmol/L (22.5%), 1.25 mmol/L (42.5%), and 1.0 mmol/L (35%). Data collected included demographics, comorbidities, dialysis parameters, antihypertensive use, interdialytic weight gain (IDWG), ESA dosing, and laboratory results. Mann-Whitney U and Chi-square tests compared variables between groups.

Results:

		IDH	No IDH	*p*-value
Age (mean ± SD)		57.6 ± 11.2 years	55 ± 14 years	0.39
Gender	Male	15 (53.6%)	31 (59.6%)	0.60
	Female	13 (46.4%)	21 (40.4%)	
Risk factors	Dialysis vintage, years (median, IQR)	7 (9)	3.5 (8)	0.29
	Hypertension	23 (82.1%)	45 (86.5%)	0.59
	No hypertension	5 (17.9%)	7 (13.5%)	
	Diabetes	16 (57.1%)	31 (59.6%)	0.83
	Non-Diabetes	12 (42.9%)	21 (40.4%)	
	>2 antihypertensive	8 (28.6%)	11 (21.2%)	0.46
	<2 antihypertensive	20 (71.4%)	41 (78.8%)	
	Average interdialytic weight gain (median, IQR)	2.20 (1.0)	2.18 (1.1)	1.0
	Albumin (Median, IQR)	38.5 (5.1)	38 (5)	0.65
	Average ESA dose per session (Median, IQR)	1833 IU (1333IU)	1833 IU (1333IU)	1.0
	Predialysis SBP, mmHg (mean ± SD)	157 ±17	155 ±25	0.76

Comparison of demography and clinical characteristic among patients with or without IDH

Among the 80 patients, 35% (n = 28) had at least one episode of IDH during six sessions, though none met the KDIGO definition of IDH in at least four out of six sessions. The mean age in the IDH group was 57.6 ± 11.2 years, compared to 55 ± 14 years in the non-IDH group (p = 0.39). The median dialysis vintage was longer in the IDH group (7 years, IQR 9) versus the non-IDH group (3.5 years, IQR 8), though not statistically significant (p = 0.29). Antihypertensive use differed, with 42.9% of the IDH group on beta-blockers versus 23.1% in the non-IDH group, suggesting a trend towards significance (p = 0.06). Other antihypertensives (ACE inhibitors/ARBs, calcium channel blockers, alpha-blockers) were similar between groups. The median IDWG was 2.20 kg (IQR 1.0) in the IDH group and 2.18 kg (IQR 1.1) in the non-IDH group (p = 1.0), and the median ESA dose was 1833 IU (IQR 1333 IU) in both groups (p = 1.0). These findings suggest that dialysis vintage and beta-blocker use may warrant further investigation in larger cohorts.

Conclusions: In this cohort, 35% of patients experienced at least one IDH episode, though none met the KDIGO definition. The lack of

patients meeting the guideline criteria may reflect well-controlled baseline blood pressure in the cohort. The small sample size could limit the ability to detect significant differences. Minimal IDWG suggests extracellular fluid overload is not a primary factor, unlike in other studies and the higher prevalence of beta-blocker use in the IDH group raises questions about antihypertensive medication types and their dialysability, warranting further study. This contradicts the finding of a recent meta-analysis by Hartono et al., which showed significant blood pressure reduction during dialysis with beta-blockers usage. Overall, these findings suggest the need for larger studies to identify significant clinical characteristics contributing to IDH, enabling the development of better management strategies tailored to local practices and patient characteristics.

I have no potential conflict of interest to disclose.

I used generative AI and AI-assisted technologies in the writing process.

During the preparation of this work the author(s) used ChatGPT in order to compose the scientific writing for better readability and appropriate language style. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the publication.

WCN25-1653

COGNITIVE IMPAIRMENT IN HEMODIALYSIS PATIENTS IN A TERTIARY CARE HOSPITAL IN SOUTH INDIA (COGNI-HD STUDY)

Mansi Pahwa*[1], ATHUL THOMAS[2], Appaswamy Thirumal Prabhakar[3], Thanusha Prasad[3], Vanitha Babu[2], Jeethu Joseph Eapen[2], Joseph Johny[2], Nisha Jose[2], Santosh Varughese[2], Succena Alexander[2], Vinoi George David[2], Selvin Sundar Raj[2]

[1]Department of Nephrology, Christian Medical College, Vellore, Vellore, India; [2]Nephrology, Christian Medical College, Vellore, Vellore, India; [3]Neurology, Christian Medical College, Vellore, Vellore, India

Introduction: Cognitive impairment (CI) is common in hemodialysis (HD) patients and prevalence is estimated to be 30-60%. In normal aging, the most affected domains are memory and executive dysfunction. Studies showed that HD patients had lower cognitive test scores in all domains predominantly in orientation and attention. Chronic kidney disease (CKD) -induced neuro-inflammation has been proposed as a critical mechanism responsible for neurological dysfunction. Mild cognitive impairment (MCI) is defined as The Montreal Cognitive Assessment (MoCA) scores of < 26, or < 21 in dexterity impairment and <18 in visual impairment. A cut-off score of 26 and 21 showed excellent sensitivity of 94% and 90% in detecting MCI and dementia respectively.

Methods: Patients $\geq$ 18 years with written informed consent were enrolled prospectively from our HD unit with dialysis vintage of 3 months or more after exclusion of Delirium using the Short Confusion assessment method (CAM) test. Clinical data were collected from history and all biochemical and hematological assays as a part of routine follow-up in the HD unit. All patients underwent MoCA test which is a one-page 30-point screening test administered 10 minutes before the initiation of HD. In HD patients MoCA < 25 is suggestive of CI as per the current available literature.

Results: 122 patients were enrolled in the study. Mean (SD) age was 49.3 (16.2) years. 87(71.3%) were males. In terms of education, 64 (52.5%) HD patients were graduates, 2(1.6%) were illiterates and the remaining 56(45.9%) attended minimum of secondary level. Occupationally, 34 (28%) patients were involved in professional work, 38(31%) were unskilled workers and 50(41%) were unemployed. 50 (41%) patients had Type 2 diabetes mellitus with mean(SD) duration of 17(7) years, 76(62%) patients had hypertension with mean (SD) duration of 12(9.36) years. Mean (SD) serum calcium, serum albumin, phosphorous, intact PTH levels were 8.73(0.70), 4.05 (0.47), 4.79 (1.35) and 462(419). Single HD Kt/v mean value was 1.44 with mean Urea reduction ratio (URR) being 66.6%.

The mean (SD) MoCA in our cohort was 25.4($\pm$3.64) and minimum value of 13 and maximum being 30. Different domains of MoCA are shown in Table 1.

The univariate analysis using linear regression correlation showed significant correlation of MoCA scores with age ($p < 0.001$), employment status ($p<0.002$), education ($p < 0.001$), serum albumin ($p = 0.038$) and Diabetes Mellitus ($p = 0.017$). On multivariate analysis, no significant correlation was found between MoCA and other variables.

Domains of Montreal Cognitive assessment

	N	Mean	Median	Mode	SD	IQR	Minimum	Maximum
Visuospatial	122	3.83	4.00	5.00	1.211	2.00	1	5
Attention	122	5.03	6.00	6.00	1.292	2.00	1	6
Language	122	2.39	2.00	3.00	0.674	1.00	0	3
Delayed Recall	122	3.57	4.00	5.00	1.477	2.00	0	5
Orientation	122	5.80	6.00	6.00	0.529	0.00	3	6
MOCA Total	122	25.44	26.00	27.00	3.643	4.00	13	30

Conclusions: Cognitive impairment is more common in HD patients. Serum albumin level, age, education, employment status and diabetes mellitus can influence cognition. As per our cohort analysis, cognition was intact in most of our HD patients. Periodic assessment with MOCA score and identifying patients with cognitive impairment early would improve quality of life in hemodialysis recipients.

I have no potential conflict of interest to disclose.

I did not use generative AI and AI-assisted technologies in the writing process.

WCN25-1746

FIRST PRESENTATION OF G6PD DEFICIENCY IN AN ELDERLY PRESENTING WITH METHEMOGLOBINEMIA - A CASE REPORT

Smita Priyadarshini*[1], SCIENTHIA SANJEEVANI[1], NIKUNJ KISHORE ROUT[1], ASWINI PATTANAIK[1], ASHIM KUMAR MAHALI[1], VARSHA YADAV[1]

[1]NEPHROLOGY, kalinga Institute of Medical Sciences, BHUBANESHWAR, India

Introduction: Glucose-6-phosphate dehydrogenase (G6PD) deficiency is an X-linked genetic disorder characterized by low levels of the G6PD enzyme.Glucose-6-phosphate dehydrogenase (G6PD) is an enzyme which is found in the cytoplasm of cells. It helps in preventing cellular damage from reactive oxygen species (ROS).1 G6PD is the catalyst in the rate-limiting first step of the pentose phosphate pathway, which uses glucose-6-phosphate to convert nicotinamide adenine dinucleotide phosphate (NADP) into its reduced form, NADPH. In red blood cells, NADPH is critical in preventing damage to cellular structures caused by oxygen-free radicals.G6PD deficiency can induce methemoglobinemia by inhibiting NADPH-flavine reductase, which prevents the reduction of methemoglobin.Methemoglobin is unable to bind to oxygen, and the remaining oxyhemoglobin develops heightened oxygen affinity and diminished delivery, leading to tissue hypoxia.

Methods: We report a case of severe hemolysis due to G6PD deficiency manifesting immediately after dialysis as methemoglobinemia in a 70 year old female never known to have any previous hemolytic episodes or previously diagnosed of G6PD deficiency.

Results: a 70 yr old female who presented with a history of fever for 2 days associated with cough, shortness of breath and drowsiness . She was a known case of type 2 Diabetes Mellitus, hypothyroidism, dementia and chronic kidney disease. She was undergoing maintainance hemodialysis for 2 years.

On examination, patient was drowsy but arousable , obeying commands , GCS-10/15 , PR – 90/min , BP -140/80mm hg ,SpO2 90% at room air, B/l Pitting oedema and pallor was present. Chest examination revealed bilateral basal crepts. Her initial investigation showed Hb – 10.2 , TLC -28.2,PLT- 188 , Urea – 142 , Sr Creatinine – 8.9 , Na – 124, K – 3.8. On day 3, patient underwent her scheduled hemodialysis, soon thereafter, she developed cyanosis of the extremities, which was confirmed by pulse oximetry (SO2 = 79%).In the ABG, spO2 was 98.6% and methHb was 13.1%.Her serials investigation showed a drop in hemoglobin level from 10.2 to 5.9mg/dl. A diagnosis of methemoglobinemia was made on the basis of the gap between the oxygen saturation on the monitor and on the ABGs and raised met-Hb% as measured by the blood gas analysis machine. She was further evaluated for hemolysis.Quantitative G6PD assay demonstrated a low G6PD level of 3.0U/gm.The onset of hypoxia and hemolytic crisis immediately after hemodialysis led to the suspicion of dialysis-associated methemoglobinemia.We tested our filtered water used for dialysis for nitrates and chlorine which came within acceptable limits. There were two more patients who underwent hemodialysis the same day but did not develop methemoglobinemia. Our patient was managed with 100% oxygen, ascorbic acid and blood transfusion was given. Patient