USEFULNESS OF GNRI AS A PREDICTOR OF MORTALITY AND MALNUTRITION SCREENING TOOL IN ELDERLY PD PATIENTS

Archana Sinha*, Narayan Prasad, Amit Gupta, R K Sharma, Dharmendra Bhadauria, Anupama Kaul

Department of Nephrology and Dietetics, Sanjay Gandhi Postgraduate of Medical Sciences, Lucknow

Introduction: Protein-energy malnutrition is common and highly prevalent in PD patients. The worldwide elderly (≥65 years old) dialysis population has grown significantly and is expected to have more co morbid conditions and shorter life expectancies than the general elderly population. Therefore, a simple and reliable method of nutrition screening that could be done easily is required for monitoring various clinical outcomes in elderly PD patients.

Objective of study: We undertook this study to evaluate the usefulness of the Geriatric Nutritional Risk Index (GNRI) as a nutrition screening tool and as a prognostic factor in predicting all-cause and cardiovascular (CV) mortality in elderly PD patients.

Methods: The GNRI was calculated as: GNRI = [14.89 × albumin (g/dl)] + [41.7 × (body weight/ideal body weight)]. Bodyweight/ideal body weight was set to 1 when the patient's body weight exceeded the ideal body weight. The ideal body weight in the present study was calculated by the formula of Lorentz, as used in the original GNRI equation.

Patients were classified into three groups based on GNRI values

Group1: lower tertile (GNRI<85.1)
Group2: middle tertile (GNRI 85.1-89.4)
Group3: high tertile (GNRI >89.4)

Various clinical outcomes were then compared between these groups.

Results: Seventy elderly (age ≥ 65 years) ESRD patients (mean age 69.4 ± 4.5, diabetic 47, male 62) on PD were prospectively followed for 21.7 ± 15.3 months. Based on SGA, 7 (10%) had normal nutritional status, 54 (77.1%) had mild to moderate malnutrition, and 9 (12.9%) had severe malnutrition.

Patients in lower tertile had significantly lower SGA score (2.9 ± 1.2 vs 3.6 ± 1.1 vs 4.0 ± 1.5, P < 0.015), serum albumin (2.8 ± 0.4 vs 3.3 ± 0.3 vs 3.6 ± 0.3, p < 0.001) and GFR (6.7 ± 1.8 vs 8.4 ± 2.7 vs 8.5 ± 3.4, p = 0.042) as compared to middle and high tertile groups. Significantly higher number of patients died in lower tertile (69.6% vs 42.9% vs 30.8%, p = 0.022) compared to middle and high tertile.

The mean patient survival (patients months) in lower, middle and high tertile was 24.1 (95% CI 14.5-33.6); 30.8 (95% CI 21.6-40.1); and 45.2 (95% CI 35.6-54.8), p = 0.003 respectively. The relative risk for all cause mortality was significantly higher [RR = 2.3 (1.2-4.3), P = 0.007] in lower tertile compared to high tertile. The relative risk for cardiovascular (CV) mortality was significantly higher in lower tertile compared to middle tertile [RR = 2.5 (0.94-6.7), P = 0.044] and high tertile [RR = 3.1 (1.2-8.4), P = 0.015].

On multivariate cox hazard analysis, SGA [HR = 0.71 (95% CI 0.51-0.99), P = 0.046] and GNRI [HR = 0.92 (95% CI 0.86-0.99), P = 0.026] were the significant factors predicting all cause mortality. On adjusted cox proportion multivariate hazard analysis for CV mortality, SGA [HR = 0.47 (95% CI
0.28-0.79), P=0.005] and GNRI [HR = 0.87 (95% CI 0.79-0.96), P=0.007] were found to be significant factors. On comparing GNRI with SGA, sensitivity, specificity, PPV and NPV was 76.7%, 40%, 88.5% and 22% respectively. Accuracy of test was 71.4%.

**Conclusion:** GNRI seems to be a very simple method to be used as a malnutrition screening tool in elderly PD patients. GNRI may be considered as a reliable predictor for all-cause mortality and CV-mortality in the elderly PD population.

**Retrospective analysis of peritoneal catheter placement techniques: Single centre experience**

Dogra PM, Shanmugraj G, Hooda AK, Mukherjee A

Command Hospital, Kolkata

**Background:** The incidence of end stage renal disease is on the increase in India. The majority of patients are from villages who have a limited access to hemodialysis due to distance and time factor. Peritoneal dialysis (PD) is the preferred available option of renal replacement therapy for such significant number of end-stage kidney disease patients. Viability of a PD catheter (PDC) is always a concern and acts as the limiting factor. The ease of PD catheter placement and its success depends upon the experience and sensitivity of the physician and surgeon to the disease.

**Methods:** We carried out a retrospective analysis of the outcomes of 138 PDC insertions at our center, comparing all percutaneous PDC insertions between January 2012 and March 2015 (group P, n=48) with all surgical PDC insertions between January 2012 and March 2015 (group S, n=90). The data was analysed for catheter survival, patient survival, procedure related complications and technique success.

**Results:** Compared with group P patients, significantly more patients were in group S. The open surgical placement of catheters were further analysed with comparison between the operators, i.e., nephrologist versus surgeon. More exit-site leaks occurred in group P than in group S. The overall incidence of peritonitis was comparable in both groups. The catheter migration rates were less in open surgical technique. Technical survival at 3 months was significantly better for group S than for group P at 3 months and 6 months. No life-threatening complications attributable to the insertion of the PDC occurred in either group.

**Conclusions:** Our analysis demonstrates equally successful outcomes of percutaneous PDC placement compared with open surgical placement. The catheter migration and flow failures were less with open surgical technique.

**First-Year Outcomes of Incident Peritoneal Dialysis Patients**


Sri Venkateswara Institute of Medical Sciences, Tirupati, AP.

**Introduction:** Patterns of early outcomes in peritoneal dialysis (PD) are not well studied and dialysis providers need to establish a baseline of key outcomes for continuous quality improvement initiatives.

**Materials and methods:** A prospective cohort study of the incident PD patients from Sri Venkateswara Institute of Medical Sciences from January 1 2013, to June 2015. The following outcomes- death, hospitalization, peritonitis, and switch to hemodialysis (HD) within the first year on PD therapy were studied.

**Results:** Of 67 incident PD patients, there were 38 first year significant events. These events include, peritonitis 15 (39.4%), coronary artery disease 11 (28.9%), systemic
infection 5 (13.1%), exit site infection 2 (5.2%), and one (2.6%) each event of inguinal hernia, altered sensorium due to drug overdose, catheter migration, anaemia and suicide. There were 9 deaths. The causes of deaths were CAD in 5 (55.5%), systemic infection in 2 (22.2%) and one (11.1%) death each due to peritonitis and suicide. The CAD were clustered between 6 and 9 months after initiation of PD and peritonitis had a bimodal frequency during first one month and in sixth month after initiation of PD.

**Conclusions**: An increased focus to identify patients at greatest risk for peritonitis was required as it remains a cause of hospitalization throughout the first year of PD. The mortality due to CAD was significant and corrective measures were to be implemented in the first six months of PD.

**Treatment of Pediatric AKI with intermittent Peritoneal Dialysis at Osmania General Hospital, experience and outcome.**

**AUTHOR**: Dr. Alla Hima Deepti, Dr. Manisha Sahay, Dr. Kiranmai, Dr. Sharmas Vali.

Osmania General Hospital, Afzalgunj, Hyderabad, Telangana State.

**Background**: Acute renal failure is defined as sudden deterioration in renal function with accumulation of detrimental uremic toxins in blood with associated fluid and electrolyte imbalances. Infectious diseases, herbal medication intake, prematurity contribute to the majority of the cases of renal failure in children in our country as opposed to the developed countries. Though there are limited options of RRT for the pediatric population, outcome is usually favourable if we intervene in time. Intermittent peritoneal dialysis has been used as the main form of RRT at our centre for treatment of dialysis dependant acute renal failure in children.

**Aim of the Study**: To assess the outcome and its correlation with the underlying disease in children with acute renal failure treated with intermittent/acute peritoneal dialysis.

**METHODS**: We studied 71 children, below the age of 12 years, with acute renal failure, RPRF or acute deterioration of CKD who were dialysis dependant and treated with intermittent peritoneal dialysis at our unit at Osmania General Hospital from August 2014 to August 2015. Renal biopsy was done when indicated.

**Results**: Of the 71 children, 18 were below 1 month of age, 16 were between 1 month and 1 year, 10 belonged to 1-4 years age group, and 27 were in the 5-12 years age group. Girls constituted 37% of the total. 17 children had expired out of the 71 (23.9%). The most common cause of AKI was sepsis (26/71) i.e 37%. Post renal causes (PUV/stricture urethra) were seen in 11 children (15%). VUR with complicated UTI was the cause of AKI in 9 children (12.6%). HUS was seen in 3 children. On an average about 50 cycles of acute peritoneal cycles were given. Renal biopsy was done when indicated and showed HUS, vascular lesions and glomerular disease.

**Conclusion**: Intermittent peritoneal dialysis is an excellent and safe form of renal replacement in pediatric AKI, especially if they do not respond to conservative management. Children tolerate PD well unlike hemodialysis wherein the hemodynamic shifts are large and maybe detrimental. Sepsis was found to be the most common cause of acute renal failure in our unit. The main cause of mortality in these children was due to delayed presentation at the hospital or inadequate treatment at primary centres. Hence pediatric AKI should be recognised as an emergency and managed aggressively.

**NON INFECTIOUS COMPLICATIONS OF CHRONIC AMBULATORY PERITONEAL DIALYSIS**
Authors: Dr Siddharth V Lakhanl, Dr N.K. Hase, Dr Tukaram Jamale.

Seth G.S and K.E. M Hospital Parel, Mumbai.

Background: Non-infectious complications of chronic ambulatory peritoneal dialysis (CAPD) are increasing in importance in parallel to reduced peritonitis rates.

Aims: Study non-infectious complications of CAPD and their impact on the catheter survival.

Methods and materials: To evaluate the non-infectious complications, we retrospectively studied 44 patients who were in our CAPD program over a period from 2003 to 2015.

Results And Discussions: The demographic profile of 44 (29 males; 15 females) patients, the mean age was 45 years. Diabetic nephropathy was the commonest cause of ESRD (12/44). The duration of CAPD ranged from 2 to 144 months. Non-infectious complications were observed in (22/44) patients. Ultrafiltration failure is the most common non-infectious complication, observed in (15/44) patients. 5/44 patients had hernia, 4/44 had pain during inflow and outflow, blocked catheters in 3/44, most common cause of blocked catheters is omental wrapping. Scrotal swellings and hydrothorax is present in 2 patients each and 1 patient each had pancreatitis and gastroesophageal reflux. The catheter had to be removed in (9/44) cases. Peritonitis was cause for removal of catheter in 5/44, and in rest catheter malposition 2 and hernia 1 and catheter blockage 1. Catheter reinsertion was done in seven patients. Mean catheter survival is 27.25 months.

Conclusions: Prevention, early recognition, and appropriate management of these complications are important because of associated patient morbidity and technique failure and catheter survival.

{[ Dr Siddharth Lakhanl, 3rd year DM NEPHROLOGY resident, KEM hospital, Mumbai sid_lakhanl@yahoo.co.in Contact no: 9867710219]}

1H NMR based metabolome can differentiate bacterial and fungal peritonitis and predict relapsing peritonitis

Narayan Prasad, Anupam Guleria, Nitin Bajpai, C L Khetrapal, Atul Rawat, Dinesh Kumar, Amit Gupta,
Centre of Biomedical Research, Lucknow, Uttar Pradesh, India
Department of Nephrology, SGPGIIMS, Lucknow, Uttar Pradesh, India

Key words: NMR; metabolites; peritoneal dialysis; peritonitis; pd effluent

Introduction and aims: Conventional microbiological culture methods for the diagnosis and identification of microorganisms are inherently slow and inefficient and in many cases culture yield is negative despite clinical evidences of infection. It is important to rapidly differentiate bacterial and fungal peritonitis as treatment line of both are different. Presently, the diagnosis of relapsing peritonitis depends on the reappearance of full blown peritonitis after stopping antibiotics, which not only delays the treatment but also increases the cost and morbidity. Bacteria and fungus may have different metabolome as one is prokaryotic and another is eukaryotic microorganisms. We aimed the study to differentiate the fungal and bacterial peritonitis based on this NMR metabolome and serial monitoring of metabolome in predicting relapsing peritonitis.

Material and methods: Five normal PD fluid (Dianeal, Baxter, India), 13 PD effluent from normal prevalent adult PD and 45 PD effluents from 15 patients with bacterial peritonitis including 3 who relapsed and 3 fungal peritonitis PD effluents
were included in the study. The half amount of PD effluent of all patients sample were subjected to total and differential leukocytes count and culture by standard PD effluent culture technique to diagnose bacterial and fungal peritonitis and half amount was immediately frozen at a temperature of -80°C for NMR analysis. Relapsing peritonitis was defined by an episode that occurs within 4 weeks of completion of therapy of a prior episode with the same organism or a sterile episode.

**1H NMR Spectroscopy**: Five samples of 2.5% unused normal dianeal PD fluid, 13 samples of PD effluent from normal PD patients after 6 hours of dwell, and 45 samples from 15 patients with peritonitis and 3 samples of PD effluent of fungal peritonitis were subjected for **1H NMR Spectroscopy**. High Resolution NMR spectra were recorded at 298 K on a Bruker Avance III 800 MHz spectrometer (equipped with Cryoprobe). Standard relaxation edited 1D 1H NMR spectra were acquired using the Carr-Purcell-Meiboom-Gill (CPMG) pulse sequence [-recycle delay-π/2-(τ-π-τ)n-acquisition], with simple pre-saturation of the water peak, a total spin-spin relaxation time of 160 ms (n=400 and 2τ=400 s), and a recycle delay (RD) of 5 sec. Each spectrum consisted of the accumulation of 64 scans and lasted for approximately 8 minutes. To confirm the assignment of marker peak, two-dimensional (2D) 1H-1H total correlation spectroscopy (TOCSY) and 1H-13C heteronuclear single quantum coherence (HSQC) spectra were acquired for all the samples.

**Results**: Five unused normal PD effluent and 13 normal PD effluents after 6 hours of dwell did not show any peak at NMR spectra between 0.45 to 0.65 ppm while all the 15 cases of bacterial peritonitis showed peak at NMR spectra between 0.45 to 0.65 ppm and these peaks were disappeared after treatment with resolution of peritonitis at end of 1 week and 2 weeks of antibacterial therapy except for 3 cases in whom peak was persisting despite absence of clinical and laboratory evidences of peritonitis and all these patients presented with relapsing peritonitis within 2 weeks of stopping antibiotics. The three cases who had culture positive fungal peritonitis also did not show any peak at this region on NMR spectra. The absence of marker spectra between 0.45-0.65 ppm of NMR in presence of clinical evidence of peritonitis suggest fungal peritonitis, thus quickly differentiating it from bacterial peritonitis. (figure 1). The signal between 0.45 and 0.65 ppm might represent cumulative NMR signal from transmethylen protons of cyclopropane ring moiety (as per the assignment of cyclopropane ring reported earlier and also depicted in Figure 1).

**Conclusion**: The cyclopropane signal at 0.6 ppm could be used as metabolomic marker to differentiate bacterial from fungal peritonitis and persistence of this signal at 2 weeks even after completion of therapy could be used as predictor of relapsing peritonitis.

An Unusual Cause of Ultrafiltration failure in a Peritoneal Dialysis child – A CASE REPORT

Prabhakar Arunasalam, Sampath Kumar Krishnaswamy, Andrew Rajiv, Saravanan R Meenakshi Mission Hospital and Research Centre Madurai

Abstract:

**Background**: Ultrafiltration failure is not common in CAPD patients in the starting phase of dialysis. Pleuro peritoneal
leak is a rare cause of ultrafiltration failure in the early phase of CAPD. Pleuroperitoneal leak is an uncommon complication of continuous ambulatory peritoneal dialysis (CAPD), with an estimated incidence of 1.6%. It should be suspected in these patients when they present with recurrent unilateral pleural effusions and/or acute shortness of breath following dialysate infusion.

Case: 8 years old boy who was diagnosed as a case of malignant FSGS reached ESRD within 3 years of treatment. Initially child was initiated on Hemodialysis and stabilised. CAPD catheter was inserted a week after stabilisation of child. Child was initiated on CAPD exchanges a week later. Meanwhile he was treated with alternate day Hemodialysis. Child developed positive fluid balance after 1.5% dialysate which was kept for half an hour. Then 2.5% dialysate was initiated to remove the fluid. But the child was deteriorated. Clinically child developed right sided pleural effusion and breathless. 4.25% dialysate was initiated to diagnose ultrafiltration failure. Child become more breathless and Right sided pleural effusion was rapidly increasing. Chest radiography confirmed the same. Pleural tapping was done for symptomatic relief. Analysis of the pleural fluid was transudative with low LDH, cell count, low proteins. Unusually high blood sugars when compared to plasma glucose. Hence pleuro peritoneal leak was suspected. CAPD exchanges were stopped for 2 weeks. Meanwhile child was maintained on Hemodialysis. 2 weeks later child was reinitiated on CAPD there is no recurrence of breathlessness and ultrafiltrate well with 1.5% dialysate. After that child was on CAPD till now for the past 4 years without further pleural leak.

Conclusion: 1. Continuous ambulatory peritoneal dialysis patients presenting with acute shortness of breath and/or recurrent unilateral pleural effusion should be investigated for pleuroperitoneal leak.

2. Right sided pleural leak is common.

3. 50% of patients we can resume PD after temporary interruption of exchanges.

Comparative analysis of prophylactic antibiotics in peritoneal dialysis catheter insertion surgery - Retrospective analysis of a Single centre

Dogra PM, Shanmugraj G, Hooda AK, Mukherjee
A Command Hospital, Kolkata

Background: The incidence of end stage renal disease is on the increase in India. The majority of patients are from villages who have a limited access to hemodialysis due to distance and time factor. Peritoneal dialysis (PD) is the preferred available option of renal replacement therapy for such significant number of end-stage kidney disease patients. Viability of a PD catheter (PDC) is always a concern and acts as the limiting factor. Every episode of peritonitis has an adverse effect on the viability of CAPD programme. Prophylactic antibiotics have a major role in preventing peritonitis.

Methods: We carried out a retrospective analysis of the outcomes of 140 PDC insertions at our center, comparing all PDC insertions (percutaneous and surgical) between January 2012 and March 2015. Data was analysed for prophylactic cephalosporin (n=64) and prophylactic cephalosporin with Vancomycin (n=75). The patients were divided into Percutaneous Vancomycin + cephalosporin group (PVC, N=47), Surgical Cephalosporin group (SC, n=63) and Surgical Vancomycin + Cephalosporin group (SVC, n=29) The data was analysed for peritonitis episodes, catheter survival and patient survival at 1 month, 3 months and 6 months.

Results: More number of patients were in SC group as compared with others. Primary implantation peritonitis rates were SC -3.17%, PVC-2.12%, SVC-0%. Peritonitis rates at
end of 1 month was SC-0%, PVC-3% and SVC-1.3%. Catheter survival at 1 month was SC-100%, PVC-93.88%, SVC-100%. Catheter survival at 3 months is SC-100%, PVC-95.5%, SVC-100%. Further sub analysis is being done.

Conclusions: Our analysis demonstrates that prophylactic antibiotics should be given. The peritonitis rates were comparable between cephalosporin alone and with additional vancomycin. Primary insertion peritonitis was seen in PVC group as against others. Catheter survival at 1 month and 3 months is comparable. The peritonitis rates were more during the monsoon season in east India as compared to rest of the seasons.

ROLE OF ICODEXTRIN IN CAPD PATIENTS- A SINGLE CENTRE EXPERIENCE

Prabhakar Arunasalam, Sampath Kumar Krishnaswamy, Andrew Rajiv, saravanan R Meenakshi Mission Hospital and Research Centre Madurai

ABSTRACT:

Aim: Icodextrin is a starch-derived glucose polymer that causes sustained ultrafiltration in long dwells in peritoneal dialysis. Our aim was to look for advantages of Icodextrin in CAPD patients and its major short comings.

Materials and Methods: Our study is a retrospective one. The patients who were on CAPD from June 2009 to May 2014 in our unit who were prescribed Icodextrin for various reasons with a regular follow up for minimum of 6 months formed the study group.

Results: There were a total of 74 patients. Mean age of our study population was 57.2 yr. Male:Female- 42:31. Major Indication for icodextrin initiation was Fluid overload and Better blood sugar control [45% and 35%] Others were for membrane protection [10%] and recurrent peritonitis[10%].

Majority of the patients were diabetic (69.8%). Mean time duration between CAPD initiation and prescription of Icodextrin was 15.9 months. Mean time on Icodextrin therapy was 9.9 months. Mean average blood sugar before Icodextrin was 307mgs/dl. Post icodextrin mean average blood sugar was 160 mgs/dl (P<0.001). Majority of patients belonged to high transporters (83.5%). 72.6% of patients achieved the goal of indication for initiation of Icodextrin. Major reasons for dropouts were financial burnout (53%), death (22%), technique failure (13%) and intolerance to high ultrafiltrate volume (11%). Icodextrin was discontinued in 2.7% of patients due to peritonitis.

Conclusion:

1. Icodextrin is a useful tool in diabetic patients and those with high transporter status.
2. Both improved Ultrafiltration status and blood sugar control were seen in the majority of patients.
3. Financial burden is the major reason for discontinuation.

Tuberculous peritonitis diagnosed with the help of 18 FDG PET/CT scan


Sri Venkateswara Institute of Medical Sciences, Tirupati, AP.

A 35-year-old gentlemen, type 2 diabetes mellitus, hypertension with diabetic nephropathy and nonproliferative diabetic retinopathy underwent peritoneal dialysis catheter insertion about eight months ago. He was on automated peritoneal dialysis at home. He presented with the complaints of fever of one week duration. It was of low grade, intermittent, associated with evening rise of temperature and
not subsided with antipyretics. There was history of pain abdomen with cloudy dialysate, 4 days prior to admission.

On admission patient was conscious, with pallor on systemic examination and no palpable lymph nodes. Dialysate bag was cloudy on the day of admission and there was no evidence of exit site or tunnel infection. He was started on intraperitoneal antibiotics after sending specimen for cultures. The serial dialysate total leucocyte cell count was 420, 320 and 280 cells/µL. The differential count was 85% lymphocytes on day 1, and 100% lymphocytes on days 2 and 3. Gram stain of dialysate fluid revealed no organisms were detectable. Cultures of dialysate sent on day 1 and day 3 revealed no growth and tuberculous PCR was negative on day 1 and day 3.

With a suspicion of tuberculosis, 18 FDG PET/CT scan was performed. It revealed multiple enlarged pre tracheal, para tracheal and pre vascular lymph nodes of 1.5 x 1.8 cm with abdominal lymphadenopathy in periportal region with right minimal pleural effusion. There was increased tracer uptake in mediastinal lymphnodes and in the manubrium sterni. Patient was started on antituberculous drugs. Within 24 hours there was clearing of the dialysate. The total leucocyte count decreased from 100 to 30 to 10 cells/µL.

*Pediococcus pentosaceus* peritonitis: The first case report from India

Shefali Gupta ¹, Kashi Nath Prasad ¹, Richa Misra¹, Narayan Prasad², Amit Gupta²

¹Department of Microbiology, ²Department of Nephrology, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, India

**Background:** *Pediococcus pentosaceus* is a Gram positive coccus commonly found in plant materials, ripened cheese, and a variety of processed meats. It is generally regarded as a harmless organism. We report a first case of peritonitis due to *P. pentosaceus*.

**Case presentation:** A 71 year old female patient with chronic kidney disease (CKD) stage 5 secondary to type 2 diabetes mellitus of 15 years duration was started on continuous ambulatory peritoneal dialysis (CAPD) at our institute. Two weeks later she presented with complaints of high fever and cloudy peritoneal effluent since 2 days. The patient was admitted to nephrology ward and the PD fluid was sent for microbiological investigations (cell count, Gram stain and culture). A presumptive diagnosis of CAPD peritonitis due to Gram positive cocci was made and empirical treatment with ceftazidime and vancomycin was started. White blood cell count in PD fluid was 960/cu mm. Gram stain of the fluid showed plenty of Gram positive cocci. PD fluid culture grew Gram positive cocci identified as *Pediococcus pentosaceus* by automated identification system (Phoenix ID, BD Biosciences). This isolate was resistant to vancomycin and sensitive to ampicillin, amikacin, ciprofloxacin and doxycycline. Patient was subsequently treated with ciprofloxacin and doxycycline. The PD catheter was removed and the patient switched to hemodialysis. Subsequent cultures of PD fluid were sterile. The patient recovered and was discharged in stable condition.

**Conclusion:** *P. pentosaceus*, once considered as an environmental contaminant can cause infection, especially in the immunocompromised and extremes of age including PD patients. Since the organism is naturally resistant to vancomycin, its timely identification can lead to better clinical outcome.

**Employment status of patients receiving maintenance dialysis- peritoneal and haemodialysis; a cross sectional study.**

Sangeetha Lakshmi B, Jayagopal, Chaitanya V, Hari Krishna
Reddy M, Anil CVP Kumar, Sulochana N, Hema M, Latha Margarate, Ram R, Siva Kumar V

Sri Venkateswara Institute of Medical Sciences, Tirupati

**Aim:** To study the employment status of our patients on maintenance dialysis-haemodialysis and peritoneal dialysis.

**Materials and Methods:** A cross-sectional study in our patients undergoing maintenance peritoneal and haemodialysis was conducted to study the employment status with special reference to patient characteristics, treatment modality and comorbidities. The socioeconomic status was estimated by Kuppuswamy socioeconomic status scale and Karnofsky performance scale was used to estimate performance of the patient.

**Results:** The number of haemodialysis and peritoneal dialysis patients included in the study were 155 and 69 respectively. Of 69 patients on peritoneal dialysis 23 were on automated peritoneal dialysis (APD) which included 2 patients on institutional APD. The mean age (± SD) in haemodialysis and peritoneal dialysis were 54.1±14.2 years and 55.8±11.3 years. The proportion of males in haemodialysis and peritoneal dialysis were 70.3% and 81% respectively. The proportion of diabetics in haemodialysis and peritoneal dialysis were 41.2 % and 60.8% respectively. The proportion of illiterates in haemodialysis and peritoneal dialysis were 18.6% and 15% respectively. The Karnofsky performance scale in haemodialysis patients was 80 in majority (60%) patients and in peritoneal dialysis patients was in 90 in majority (63.7%). The proportion of patients in employment haemodialysis and peritoneal dialysis before initiation of dialysis were 51.6% and 47% respectively. The blue collar and white collar jobs were performed by 52.5% (42 out of 80) and 47.5% (38 out of 80) in haemodialysis. The blue collar and white collar jobs were performed by 58.9% and 41.0 % in peritoneal dialysis. The blue collar and white collar jobs were performed by 64% (16 out of 25) and 36% (9 out of 25) of patients in CAPD. 50% each of APD patients had performed the blue collar (7 out of 14) and white collar (7 out of 14) jobs. The proportion of patients changed in haemodialysis after initiation of dialysis (45) when compared to before (80) was significant (p=0.002). The proportion of patients changed in peritoneal dialysis after initiation of dialysis (20) when compared to before (39) was significant (p=0.013). The change of job after initiation of dialysis was observed in 56.2% (45 out of 80) in haemodialysis and 51.2% (20 out of 39) in peritoneal dialysis (p= 0.6959). The number of patients who changed their jobs in CAPD and APD were 76% (19 out of 25) and 14.2% (2 out 14) respectively (p= 0.0008 ). The change of blue collar job after initiation of dialysis was observed in 59.5 % (25 out of 42) in haemodialysis and 95% (19 out of 20) in peritoneal dialysis (p=0.0058). Of the 19 patients of peritoneal dialysis who changed the blue collar job, only 2 were on APD and remaining were on CAPD (17 patients). Of white collar job performers (38 patients) in haemodialysis nine patients (23.6%) changed the job. Of white collar job performers (16 patients) in peritoneal dialysis only one (1; 6.25%) changed the job and that patient was from CAPD. The comparison of white collar job performers between haemodialysis and peritoneal dialysis was not significant (p = 0.2495). The median distance the haemodialysis patients had to travel from work place to home is 3.5 km and work place to dialysis centre is 7.0 km. The factors which influenced the change of job for all the patients were males, age between 50 and 60 years, poor Karnofsky performance scale, low middle and low socioeconomic categories on Kuppuswamy socioeconomic status scale, higher comorbidities and educational status.

**Conclusions:** Loss of employment was significant after initiation of dialysis in haemodialysis and peritoneal dialysis patients in comparison to the employment status in the predialysis phase. The fall of employment was similar in
home and institutional dialysis modalities. The loss of employment was more in CAPD over APD. The loss was more in blue collar jobs in peritoneal dialysis over haemodialysis. In peritoneal dialysis majority of white collar employees continued their employment in comparison to haemodialysis.

**ACUTE PERITONEAL DIALYSIS Vs SUSTAINED LOW EFFICIENCY DIALYSIS IN CRITICALLY ILL PATIENTS REQUIRING RENAL REPLACEMENT THERAPY**

Bhaskar Dat, Krishan Lal Gupta, t, Vivek Kumar, Manish Rathi, Navneet Sharma, Raja Ramachandran

Department of Nephrology, Postgraduate Instit. of Med Edu. and Research, India

**Objectives:** Comparison of intermittent peritoneal dialysis (IPD) with sustained low efficiency dialysis (SLED) with AKI.

**Methods:** In an observational cross-sectional study we treated 33 critically ill patients with AKI requiring requiring renal replacement therapy (RRT), with either IPD (utilizing rigid catheters, manual exchanges and open drainage) in 17 patients and SLED in 16 patients. APACHE II score was calculated and expected mortality estimated. Primary outcome was patient and renal survival (defined as no further requirement of RRT). Secondary outcomes were improvement in clinical and biochemical parameters (acidosis, encephalopathy, fluid overload, hyperkalemia), length of hospitalisation, composite cost of hospital stay and dialysis session as well as complications of both dialytic modalities. Small solute clearance in terms of weekly KT/V was compared.

**Results:** Both groups were well matched for co-morbidities, APACHE-II score and need for mechanical ventilation or inotropes. Expected mortality was similar in both groups. Patient survival in IPD group was 23.5% at discharge, 11.75% at 28 days and 5.87% at 90 days as compared to 12.5%, 6.25% and 6.25% respectively in SLED group (p=0.79). Renal survival was 41.1% in IPD as compared 12.5% in SLED group (p=0.11). There was no difference in improvement in clinical and biochemical parameters although PD group t improvement in urine output in (p=0.08) better ultra-filtration (p=0.016). Weekly KT/V was significantly better with SLED (P<0.001) and cost of PD session (over 24 Hrs) was also significantly higher than SLED (p=0.02).

**Conclusion:** Intermittent PD was comparable to sustained low efficiency dialysis in critically ill patients requiring RRT and there was trend towards better urine output and improvement in renal function in PD group. PD however lagged behind SLED in terms of small solute clearance and was costlier option. Randomised studies are needed to confirm the findings of this study.