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JULY 06-07, 2017   KUALA LUMPUR, MALAYSIA

Clinical profile of patients with chronic kidney disease under hemodialysis in BPKIHS

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Background: Study was conducted to see the clinical profile of patients with chronic kidney disease under hemodialysis. The number of patients with chronic kidney disease is increasing in developing countries as well because of the increased prevalence of diabetes and other risk factors. Likewise the number of hemodialysis cases will increase in Nepal because of the government policy to make hemodialysis free for chronic kidney disease.

Objectives: The objective is to study the clinical profile of patients with chronic kidney disease under hemodialysis and to know common complications in hemodialysis and its associated factors.

Materials & Methods: Hospital based prospective cross-sectional study performed in dialysis of BPKIHS over 4 weeks. Sixty two patients with chronic kidney disease undergoing maintenance hemodialysis were enrolled.

Results: Median age of patient was 50 years with male (61.3%) and female (38.7%). 41.9% had hypertension and 38.7% diabetes in the past. Diabetic nephropathy (37.1%) followed by hypertensive nephropathy (30.6%) and chronic glomerulonephritis (20.6%) were the predominant causes of chronic kidney disease. Maximum patients were getting twice weekly (37.1%) dialysis followed by weekly (30.6%) and every 2 weeks (21%). Commonest complications during dialysis were chills and rigor, backache, hypotension and chest pain respectively. The study showed increasing age was associated with more complications during dialysis with maximum complications (59.3%) in 41-60 years with p value of 0.013. Similarly complications were more in female than male (p-0.574). Complications increased with decrease frequency of dialysis maximum with irregular dialysis (P-0.30).

Conclusions: Complications during hemodialysis is common and mostly manageable if intervened timely and is associated with age, gender and frequency of dialysis.

Biography
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Effectivity of Chronic Kidney Disease Epidemiology collaboration (CKD-Epi) and modification of diet on renal disease (MDRD) as determination of chronic kidney disease's stage: An evidence-based case report

Vidhia Umami and Zharifah Fauziyyah Nafisah
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Staging of Chronic Kidney Disease (CKD) is based on the Glomerolus Filtration Rate (GFR). Every stage has its own treatment. Once the GFR lowers, there could be occurence of many complications and they must be treated as soon as possible. The gold standard of GFR count is complicated, needs long time, and expensive. Therefore, there are some equations to result estimated GFR using some variabels: age, gender, ras, and serum creatinine, named Modification of Diet on Renal Disease (MDRD) and Chronic Kidney Disease Epidemiology Collaboration (CKD-Epi$_{SCr}$). Since 2012, there has been a variabel added to the CKD-Epi equations, which is cystatin C. It is still questionable, which equation between MDRD, CKD-Epi using serum creatinine (CKD-Epi$_{SCr}$), cystatin C (CKD-Epi$_{CysC}$), and both of them (CKD-Epi$_{SCr-CysC}$) will have the biggest effectifity, especially for Asian ras to determine the stage of CKD. The literature search was done in PubMed, Cohcrane, and Science Direct using five keywords and either its abbreviations or accronyms. Using inclusion and exclusions criteria, three final articles were generated. Then, critical appraisal was done based on validity, importance, and applicability criteria. The article from Feng J *et. al.*, Zhu Y *et. al.*, and Zhang M *et. al.* with Randomized Controlled Trial (RCT) design showed that the three articles were valid, using the gold standard an Technetium-Diethylenetriamine Pentaacetic Acid (Tc-DTPA) imaging. The CKD-EpiCysC and CKD-EpiSCr-CysC equations have the best sensitivity, which are good for screening CKD while the MDRD and CKD-EpiSCr have the best specificity, which are good for diagnosis confirmation of CKD. The best accuracy belongs to CKD-EpiCysC equation, making it great for the real stage of CKD. The best precision belongs to MDRD equation, so it will be great for the evaluation and monitoring of the patient's disease.

Biography

Vidhia Umami has completed her Specialist program in Internal Medicine, University of Indonesia in December 2012. She was also graduated from Faculty of Medicine University of Indonesia, for her Medical Doctor in August 2005. She is now in Consultant program in Nephrology and Hypertension at Internal Medicine Faculty of Medicine, University of Indonesia, Cipto Mangunkusumo General National Hospital. She worked at several hospitals in Indonesia and now actively work in Bahkti Asih Hospital, Tangerang and also in Cipto Mangunkusumo General Hospital. She is a member of Indonesian Medical Association, Indonesian Society of Internal Medicine, Indonesian Society of Nephrology, Indonesian Society of Hypertension, and Indonesian Transplantation Society. She has published numerous articles and posters in several conferences throughout the world.

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HRT-free management of premature andropause with advanced organ-specific peptide therapy

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European Wellness Academy, Germany

Management of early andropause is one of the important issues in andrology. Early or premature andropause is associated with such symptoms as loss of libido and morning penile erection, erectile dysfunction, demonstration of low testosterone levels, and ultimately male infertility. Needless to mention that reduction of sexual hormonal expression plays a pivotal role in aging process. Genetics, previous illnesses, certain medical procedures, and environmental factors are the leading etiologic factors of premature andropause development. Premature andropause is often responsible for cognitive decline, dyslipidemia, diabetes, obesity, fatigue, and loss of muscle bulk. Biochemical signs of premature andropause are reduction of basal and free testosterone levels at 15% or more below normal range. Conventionally this condition is treated with testosterone replacement therapy. However, testosterone replacement may carry risk of cardiac hypertrophy, prostate hyperplasia and aggravate symptoms in men with prostate cancer. The objective of this study was to assess efficacy of biohormonal therapy using a combination of organ-specific peptides-extracts (Mito Organelles™, SBI, MF+, Germany) from hypothalamus, pituitary gland, adrenals, testicles and liver as a safer alternative to the testosterone replacement. The duration of the treatment is 4 months and does not require continuous prolonged drug intake. Organ-specific peptide therapy has high efficacy rate with no adverse reactions observed. Most of the patients had dramatic improvement of symptoms and increase of testosterone levels. None of the observed patients had need in further testosterone replacement. Obtained preliminary results are promising and such therapeutic approach needs further studies and evaluation of late results and outcomes.

Biography

Dmitry Klokol, upon completion of Medical Degree and further specialization in General Surgery has proceeded with PhD in Surgery in Institute of Emergency and Reconstructive Surgery and Post-doctoral study in the Field of Regenerative Medicine and Cell Therapy. He has vast clinical, academical and research experience in surgery, anti-aging, regenerative, complementary medicine and cell therapy. He has published more than 50 articles, 2 books and is a Member of the Editorial Board in one of American journals. At present, he is Head of Medical Advisory Board in International Biomolecular Research Company and Medical Director of European Wellness Centers.

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The significance of choosing the right solution for Peritoneal Dialysis

Shyalini Jeevakaran
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Peritoneal Dialysis (PD) is one of the treatment modality used for end stage renal disease in nephrology patients. Choosing the right peritoneal solution for PD is of paramount importance because it will improve the patient's condition by improving patients' clinical outcomes and in effect decrease hospital stay. When wrong solution is used then the patient safety will be compromised. In addition, the right PD solution can eliminate any progression of end stage renal disease. A needs assessment was conducted and included: surveys with nursing staff (N=22), nephrology residents and fellows (N=10), informal interviews with nursing staff, and chart auditing. Results from the needs assessment indicate that nurses need a review workshop regarding PD. Nephrology residents and fellows also indicated difficulty in understanding the patients' ultra-filtration documentation in the chart. Understanding the 24 hour ultra-filtration documentation is crucial to identify the effectiveness of current PD treatment. As a result, PD workshop was held with 30 nurses. PD workshop for nurses about the PD therapy and the importance of choosing the right PD solution improved practice. Great feedback was obtained from nurses and nephrology residents about the workshop. By identifying the right solution, the nurses were able to collaborate with nephrologists with confidence when deciding the right solution for PD therapy. This will lead to better patients care, decrease hospital stay, improves patients' safety, decrease hospital readmission and increase patients' satisfaction about the care provided. As a result, the nurses also gain confidence in their practice and this will improve employment satisfaction.

Biography

Shyalini Jeevakaran has completed her Bachelor's Science degree in Nursing in Canada. She has been working as a Nurse for 13 years in Canada.

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Serum cystatin as a marker of CIS platinum induced acute kidney injury in patients with malignancy

Alaa Sabry, Maysaa Elsayed Zaki and Mohamed Farouk Akl
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Objective: Acute kidney injury is a common complication among patients with malignant disease receiving platinum-based chemotherapy including cisplatin and its analogues. Even mild increase in serum creatinine is associated with significant morbidity and mortality. Early biomarkers are required to detect acute kidney injury earlier in these patients for possibility of early therapeutic intervention. In this study, we investigated the ability of urinary cystatin C as an early marker of AKI induced by cisplatin and its analogues.

Methods: The study was designed as a prospective observational study. The study included 132 patients who have malignant diseases and attended to Clinical Oncology and Nuclear Medicine Department, Mansoura University Hospital, Dakahlia, Egypt for receiving platinum-based chemotherapy. Serum creatinine level was measured and urine samples were collected in days 0, 2, 5 of each chemotherapy cycle.

Outcome: Acute kidney injury as defined by KDIGO (2012) based on serum creatinine.

Results: A total of 132 patients were included in the study, and 35 of them (27%) developed AKI. Urinary cystatin C levels were measured in AKI day sample and in the two preceding samples. There was significant increase in urinary cystatin C in the AKI day sample (P value=0.018) and the preceding sample (P value=0.009) compared to the sample taken before both of them. There was no significant increase in urinary cystatin C level in the AKI day sample compared to the preceding sample (P value=0.433).

Conclusion: Urinary cystatin C rises significantly before rising of serum creatinine indicating its early detective ability of cisplatin-induced AKI compared to serum creatinine.

Biography

Alaa Sabry is an assistant professor Mansoura Urology and Nephrology centre Mansoura University, Mansoura –Egypt. Alaa Sabry is an assistant professor Mansoura Urology and Nephrology centre in nephrology at Sheffield kidney institute-Sheffield in the year 1996, followed by a Bachelor's Degree M.B.B.C.H in the 1990.He worked in UNC, Mansoura University as Resident, Assistant lecture, and finally as assistant professor of nephrology from 1993 till 2006. As an Assistant Professor, he is a recipient of many awards and grants for his valuable contributions and discoveries in major area of research. He has experience in different modalities of dialysis Haemodialysis, peritoneal dialysis, plasmapharesis, His perfusion, Hemofiltration, Slow continuous therapies for acute and chronic cases. He has excellent experience in insertion of femoral, subclavian and internal jaguar vein catheter for intermittent haemodialysis and ultrasonic renal biopsy. His research interests, as an Assistant Professor lay Different modalities of dialysis, Haemodialysis, peritoneal dialysis, plasmapharesis. He is the Editor-in-Chief/Editorial Board Member of many peer reviewed journals and his area of expertise, as an Assistant Professor credits him/her with many publications in national and international journals. He is committed to highest standards of excellence and it proves through his authorship of many books.

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Elements of dialysis nursing practice associated with successful cannulation: Result of a survey

Maria Teresa Parisotto, Francesco Pelliccia, Aileen Grassmann and Daniele Marcelli Fresenius
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Introduction: Vascular Access (VA) cannulation is an essential skill for dialysis nurses: Failure to correctly repeat this operation day after day may result in serious complications for the patients.

Aim: The aim of this study was to investigate if the different aspects of Arteriovenous Fistula (AVF) and Graft (AVG) cannulation have an effect on the development of acute access complications which may, in the medium-long term, affect the survival of the vascular access.

Methods: In April 2009, a cross-sectional survey was conducted in 171 dialysis units located in Europe, the Middle East, and Africa to collect details on VA cannulation practices. Information on cannulation retrieved from the survey comprised fistula type and location, cannulation technique, needle size, application of arm compression at the time of cannulation, needle and bevel direction, needle rotation and needle fixation.

Results: In total, 10,807 cannulation procedures of an equivalent number of patients were observed and included in the current evaluation. Out of all observed cannulation procedures, 367 showed some kind of complication, the most frequent (33.8%) being the need for multiple cannulations. In summary, the following were associated with a significantly higher odds ratio for acute complication: prescription of 16-17 gauge needles, of back-eye needles, the use of rope-ladder cannulation technique, the insertion of the venous needle as first needle and the rotation of the arterial needle.

Conclusions: This study highlights critical steps in the process of cannulation potentially affecting the lifespan of the vascular access and stressing the need for additional research aimed to improve the practice.

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Impact of diuretic therapy on renal outcomes of Chronic Kidney Disease patients

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Diuretic therapy has been mainstay of treatment in Chronic Kidney Disease (CKD) patients, primarily for hypertension and fluid overload. Apart from their beneficial effects, diuretic use is associated with adverse renal outcomes. Current study aimed to determine outcomes of diuretic therapy. A prospective observational study was conducted by inviting pre-dialysis CKD patients. Fluid overload was assessed by Bioimpedance Analysis (BIA). A total 312 patients (mean age 64.5 ± 6.43) were enrolled. Among 144 (46.1%) diuretic users, furosemide and hydrochlorothiazide (HCTZ) were prescribed in 69 (48%) and 39 (27%) patients respectively, while 36 (25%) prescribed with combination therapy (furosemide plus HCTZ). Changes in BP, fluid compartments, eGFR decline and progression to RRT were assessed over a follow-up period of 1 year. Maximum BP control was observed with combination therapy (-19.3 mmHg, $p<0.001$) followed by furosemide (-10.6 mmHg with 80 mg thrice daily ($p<0.001$)), -9.3 mmHg with 40-60 mg ($p<0.001$) & -5.9 mmHg with 20-40 mg ($p=0.02$) while HCTZ offered minimal SBP control (-3.7 mmHg with 12.5-25 mg ($p=0.04$)). Decline in extracellular water (ECW) ranged from -1.5 L ($p=0.01$) with thiazide diuretics to -3.8 L ($p<0.001$) with combination diuretics. Decline in eGFR was maximum (-3.4 ml/min/1.73 m2, $p=0.01$) with combination diuretics and least with thiazide diuretics (-1.6 ml/min/1.73 m2, $p=0.04$). Progression to RRT was observed in 36 patients. It is cautiously suggested to discourage the use of diuretic combination therapy and high doses of single diuretic therapy. Prescribing of diuretics should be done by keeping in view benefit versus harm for each patient.

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Palliative nursing care of End Stage Renal Disease (ESRD) patients

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Introduction: The study determined the delivery of palliative nursing care of ESRD patients in selected hemodialysis centers in Region I, Philippines. It also identified the level of satisfaction on the quality of life of ESRD patients. This study involved (n= 80) hemodialysis nurses and (n= 252) ESRD patients as respondents of the study.

Methods: The study used descriptive research and utilized weighted mean, Pearson r and spearman rank correlation.

Results: Results of the study showed the level of palliative care competencies of nurse respondents along; (a) physical domain, (b) psycho-social domain (c) spiritual domain; (d) ethico-legal domain and found out that nurses perceived themselves "highly competent". The level of supportive care competencies by hemodialysis nurses along; (a) philosophy of care (b) end of life care and death management; (c) loss grief bereavement support (d) professional development is found to be "highly competent", respectively. Moreover, the level of quality of life of ESRD patients along; (a) Physical need is "moderately satisfied"; (b) psycho-social needs is found to be "highly satisfied"; while (c) spiritual needs is "highly satisfied"; A statistically significant positive correlation (df=78 r=0.87, p≤0.001) was found between palliative nursing care competencies and supportive care rendered to ESRD patients. In contrast, the level of palliative nursing competencies is negatively correlated (df=330 rs=-0.4, p=0.006) with the quality of life of ESRD patients.

Conclusion: Academic plan was suggested to enhance the course curriculum of nursing in palliative care for ESRD patients.

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Prevalence and factors associating with erectile dysfunction in end stage renal disease patients undergoing hemodialysis in Indonesia

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Background & Aim: Erectile dysfunction (ED) is caused by a combination of organic and psychological factors, but little is known about the prevalence of ED in End Stage Renal Disease (ESRD) patients undergoing hemodialysis. ED can sometimes become distressing for the patient and reduce quality of life. The aim of this study is to identify the prevalence and to also see whether age and Diabetes Mellitus (DM) has an association with erectile dysfunction in ESRD patients undergoing hemodialysis.

Methods: This is a multicenter cross sectional study that took place in 4 hemodialysis clinics in Jakarta from October to December 2016. We evaluated patients who had undergone hemodialysis for ≥ 1 year. Erectile dysfunction was measured using International Index of Erectile Function (IIEF-5) Questionnaire. Bivariate analysis was done using Mann-Whitney test.

Results: Data was collected from a total of 85 patients. The mean age of the patients was 51.2 (28-77) years. DM was present in 28 (32.9%) of the patients. There were 52 (61.1%) of the patients aged ≥ 50 years. Mild, mild to moderate, moderate and severe ED was present in 4 (4.7%), 14 (16.4%), 9 (10.5%), 50 (58.8%) patients respectively. ED was significantly higher in patients aged ≥ 50 years (p=0.006). There was no significant association between ED and DM (p=0.254).

Conclusion: ED is extremely prevalent among ESRD patient undergoing hemodialysis. Patients with age ≥ 50 years were associated with high prevalence of ED. DM does not contribute to the risk for ED.

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Renal amyloidosis: An update and focus on newly described entities

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Amyloidosis is a systemic protein folding disease where insoluble 7-12 nm fibrils having a β-pleated sheet architecture are deposited in the extracellular space in different tissues. Depending on the amyloid precursor protein, there are different types of systemic and organ specific amyloidosis. Differentiating between the different types is crucial, because subsequent management depends on the type and extent of the amyloidosis. When the kidneys are involved, patients often present with proteinuria. Amyloidosis is seen in up to 5% of adult patients with nephrotic syndrome. Proper interpretation of findings on a kidney biopsy is crucial. Pathologic diagnosis requires special stains, immunofluorescence and electron microscopy. Mass spectrometry is sometimes necessary for definite characterization of some rare types of amyloidosis and is an eligibility criterion for targeted therapy in some clinical trials. Immunoglobulin light chains (AL) and serum amyloid A protein (AA) form the basis of most common forms of amyloidosis, accounting for up to 90% of cases. While AL amyloidosis is often associated with lymphoproliferative disorders, AA amyloidosis is commonly seen with chronic inflammatory disorders including infections. Several other amyloidogenic proteins have recently been described and associated with particular histopathologic features. These include leukocyte chemotactic factor 2 (ALECT2), apolipoprotein A-IV and gelsolin. LECT2 amyloidosis is particularly seen in patients of specific ethnicities. Apolipoprotein A-IV amyloidosis shows a peculiar predilection to deposition in the medulla. This lecture will help to educate the audience about common forms of amyloidosis and gain further insight about newly described entities.

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What changes the quality of life in a hemodialysis patient - A machine learning approach

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Shifa International Hospital, Pakistan

Statement of the Problem: Lifestyle of hemodialysis patients has a significant impact on their quality of life (QOL). Physical, psychological, social, environmental, and financial factors play an important role in determining the QOL. Several studies identify the most significant correlates with a better QOL in these patients. Because, there has been no study specifically aiming at predicting a change in QOL using modern machine learning techniques, therefore, the purpose of this study is to produce a classification model for the most important positive and negative predictors for the QOL in hemodialysis patients.

Methodology & Theoretical Orientation: This is a prospective cohort study of patients on at least 3 months of hemodialysis. By the first interim analysis, a total of 78 patients were administered a proforma containing questions about demographics and the validated Urdu version of WHO BREF questionnaire for the QOL assessment by a MBBS qualified doctor on day 0 and 30. Statistical analysis was performed using SPSS version 24, while machine learning algorithms including the classification tree were generated using Orange.

Findings: A total of 78 patients were enrolled and analyzed for the first interim analysis (42 males, 36 females). The domain means of WHO BREF questionnaire for QOL were: Physical=12.9 (SD=3.7), Psychological=15.0 (SD=3.4), Social=15.2 (SD=2.75), Environmental=16 (SD=2.9) respectively. Linear regression model (p<0.000, R2=0.418), showed monthly income (p<0.000) and serum albumin (p<0.000) to be positively and significantly associated with better QOL. Among machine learning algorithms (classification tree and Naïve Bayes models), classification tree was the most accurate (AUC=83.3%).

Conclusion & Significance: Machine learning algorithms can be used to classify patients into those with higher probabilities of having a given change in QOL in future. This can in turn be used to risk stratify patients and for better utilization of health resources.

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Relationship between glycated hemoglobin and macrominerals in renal dialysis patients of Hail, Saudi Arabia

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Essential minerals have significant role in the glucose metabolism and energy production inside the cell. Imperfect mineral metabolism have been associated with the increased mortality of renal dialysis patients, but their effects in these patients are less characterized. The literature suggested that the incidence of renal dialysis patients in Saudi Arabia showed rapid increase over the last 3 decades. In the present study, we examined the correlations between levels of minerals (serum calcium, phosphorus and magnesium) and HbA1c in diabetic and non-diabetic renal dialysis patients of Hail region. Total 76 blood samples of renal dialysis patients (diabetic and non-diabetic) were analyzed by using biochemical methods. As expected, no significant relationship was observed (p>0.05) in baseline parameters such as age, sodium, potassium, bilirubin, creatinine, urea and glucose, in both diabetic and non-diabetic renal dialysis patients. The results also showed that there is no significant relationship between calcium and phosphorus, calcium and magnesium as well as magnesium and phosphorus in non-diabetic renal dialysis patients; however, in diabetic patients calcium and phosphorus have minor significant association (p=0.057). Further, there was no significant relationship between phosphorus and HbA1c in both types of renal dialysis patients. However, in diabetic renal dialysis patients there was significant relationship (p<0.05) between calcium and HbA1c as well as magnesium and HbA1c. These preliminary results indicate the supportive role of calcium, magnesium and Hb1Ac in the better management of diabetes. The supplementation of calcium and magnesium might be beneficial to manage energy level associated with weakness in the diabetic patients.

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Nutritional status and quality of life in end stage renal disease patients undergoing hemodialysis in Indonesia

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Background & Aim: Malnutrition is a major problem in End Stage Renal Disease (ESRD) patients undergoing hemodialysis and this may occur due to several factors such as inadequate nutritional intake, increase losses or and to an increase in protein catabolism. The aim of this study is to assess the relationship between nutritional status and Quality of Life (QoL) in ESRD patients undergoing hemodialysis.

Methods: This is a multicenter cross sectional study that took place in 4 hemodialysis clinics in Jakarta from October to December 2016. Nutritional status was measured using Subjective Global Assessment (SGA) Questionnaire. Quality of life was measured using World Health Organization-Quality of Life (WHO-QOL) Questionnaire containing 4 domains related to physical health, psychological, social relationships and environmental. Analysis was done using One-way ANOVA or Kruskal-Wallis, depending on the distribution of the data.

Results: There were a total of 116 patients. The mean age of the patients was 52.7 (25-84) years. There were 78 (67.2%) male. The mean BMI of the patients were 22.9 (14.1-32.6) kg/m^2. 36 (31%) patients had BMI<18.5 kg/m^2 and 25 (21.6%) patients had BMI>25 kg/m2. There were 48 (41.3%) patients classified as moderately malnourished and 11 (9.5%) of the patients classified as severely malnourished. There was significant association between level of nutritional status and physical health domain (p<0.001). The mean difference in physical health domain values between normal nutrition and severely malnourished is 18.9 (p<0.001). The other domains did not have any significant association with nutritional status.

Conclusion: Malnutrition can lead to poorer physical health related quality of life. By improving the nutritional status of the patients, we can increase the QoL of the patients.

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Haemodialysis catheter related blood stream infection (CRBSI)

Imad Amer
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Intravascular haemodialysis catheters are essential in the management of critically & chronically ill patients suffering from acute injury and chronic renal failure. However, hemodialysis catheter is often complicated by CRBSI, which are associated with increased morbidity, duration of hospitalization, and additional medical costs. The objectives that were taken in to consideration include assessing the effectiveness of infection control practice within the unit, comparing infection rates with the international rate as identified by CDC, identify the causes of vascular catheter infections, developing a standardized surveillance system for monitoring hemodialysis vascular access infections, educate and enhance the staff awareness about prevention and control of catheter related infections and reduce patient morbidity & mortality rates. FOCUS PDCA quality improvement methodology was used for achieving the above objectives in the unit. As per the new changes implemented in Dubai hospital renal unit, improvement has been achieved related to the CRBSI, Quality and continuity of patient care were enhanced, patient's skills and knowledge for self-care enhanced. Positive influence on patient/family attitudes like more co-ordination between multidisciplinary team, enhanced patients and staff satisfaction, reduced CRBSI below the international rate as identified by CDC were observed.

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Dialysis unit strategic plan

Imad Amer
Dubai Hospital Kidney Centre, UAE

An organization strategic plan is that the process of envisioning an organization's future and developing the necessary goals, objectives, and action plans to achieve that future, from where the business is to where the organization wants it to go. It is the work of the managers of the business and the team and all people in the corporation to understand the direction and mission of the business. The strategic planning process implementation will, lead to improved communication, facilitates effective decision-making, better selection of tactical options and leads to a higher probability of achieving the organization goals and objectives. A comprehensive unit specific strategic plan covers organization's major goals, policies, and action sequences into a cohesive whole, and support to identify where an organization is going over the next year or more. And how it's going to get there and how it'll know if it got there or not. Methods used for discussion are mainly oral power point presentation. The key points that came as findings such as mission, vision purpose, goals and objectives of the organization defined to the organization's constituents and communicated. Effective use is made of the organization's resources by focusing the resources on the key priorities and it provides clearer focus for the organization and building strong teams, also it increases productivity and solves major problems in the organization. A strategic plan can be summarized simply as a guide or map. It has a starting point, (today's conditions and environment). It has an ending point, where the organization wants to be, in the future, it has a process that answers the question of how is the best way to be successful as defined by the stakeholders and allowed by the customers and embraced by the employees.

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Clinical spectrum of crescentic glomerulonephritis - A single centre experience

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Background: Rapidly Progressive Glomerulonephritis (RPGN), the most common cause of rapidly progressive renal failure (RPRF), usually has extensive crescent formation. Hence, RPGN is also called Crescentic Glomerulonephritis (CrGN). CrGN is a histological term, defined as the presence of crescents in >50% of glomeruli. There is limited data on the etiology, clinical and histopathological spectrum of Crescentic Glomerulonephritis (CrGN) in adult Indian population.

Objective: To study the clinical and histopathological profile of patients with CrGN.

Design & Methods: A retrospective descriptive study was conducted at Department of Nephrology, SMS Medical College & Hospital, Jaipur. Patients aged >18 years, with CrGN (defined as the presence of crescents in >50% of glomeruli) biopsied in 2015 & 2016 were included in the study.

Results: Out of 323 renal biopsies done at our centre in the years 2015 & 2016, 32 patients had CrGN. Immune-complex glomerulonephritis (ICGN) was the most common etiology (n=26; 81.25%) found followed by pauci-immune glomerulonephritis (Pauci GN; n=4; 12.50%). The most common etiology of ICGN was IgA Nephropathy (n=7, 21.80%). This was followed by C3 glomerulopathy (n=6, 18.75), Lupus Nephritis (LN; n=4; 12.50%), Post-infectious glomerulonephritis (PIGN; n=4; 12.50%), unclassified (n=4; 12.50%) followed by MPGN (n=1; 3.12%). Two cases of anti-GBM disease (n=2; 6.25%) were detected, one of which was also pANCA positive. Histopathological correlation was done with clinical parameters. The mean age was 32 years (range-9 yrs to 74 yrs). The mean duration of symptoms at the time of presentation was 32 days. Amongst the ICGN group, 57.69% of patients and 25% patients with Pauci GN were hypertensive at presentation. Gross Hematuria was present in 30.76% of patients with ICGN and in 25% of patients with Pauci GN. Anuria was found in 34.6% of patients with ICGN and in 50% of patients with Pauci GN. RRT was required in 65.38% and in 75% of patients with ICGN and Pauci GN, respectively. Mean S. Creatinine level at presentation was 5.06 mg/dl & 7.17mg/dl for ICGN and Pauci GN, respectively. The difference between the percentages of total crescents amongst the two groups was not found to be statistically significant. However, the percentage of cellular crescents was significantly higher in the ICGN group as compared to the Pauci GN (32.93% vs. 8.57%; p=0.0150). On the other hand, the percentage of fibrous crescents was significantly higher in the Pauci GN group than in the ICGN group (36.22% vs. 10.08; p=0.0050). It was also found that the percentage of interstitial fibrosis/tubular atrophy was significantly higher in the Pauci GN group than in the ICGN group (43.33% vs. 17.95; p=0.0052).

Conclusion: The most common cause of Cr GN in our centre was found to be ICGN, out of which IgA nephropathy was the most common etiology, followed by C3 glomerulopathy. The patients with ICGN had a higher proportion of cellular crescents than those with Pauci GN.

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Multidisciplinary approach to predialysis patient

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The prevalence of chronic kidney disease has reached epidemic proportions with 10% to 12% of the population and 50% of the eldery showing signs of kidney dysfunction. Today, the different stages of disease progression to dialysis are recognised and influence the risks and conditions associated with kidney disease itself, such as anaemia, malnutrition and bone disease which affect both morbidity and mortality. Treatment is comprehensive and requires proactive protection while reducing the risk of cardiovascular complication. Timely referral of patients ensures adequate time for the proper preparation of these patients for a form of replacement therapy in the form of dialysis or transplantation. Educating patients before dialysis in order to increase "health literacy" results in a number of benefits for patients, including: Delaying the onset of dialysis, reducing morbidity and mortality, avoiding complications of kidney disease, preparing patients for the start of dialysis and increasing the quality of life of these patients.

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Circulating vascular endothelial growth factor in type 2 diabetes mellitus with diabetic nephropathy

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Mechanisms underlying the development of diabetic kidney disease are complex. Among the many potential pathogenic mechanisms responsible for the development of diabetic kidney disease, the angiogenic growth and survival factor, Vascular Endothelial Growth Factor (VEGF) has been suggested to be an important player. The aim of this study was to evaluate circulating vascular endothelial growth factor level in diabetic nephropathy and to assess whether its level is related to the severity of diabetic nephropathy in type 2 diabetic patients. 38 type 2 diabetic patients and 8 healthy subjects of matched age, sex and BMI served as a control group in the study. The studied patients were categorized into three groups according to urinary albumin excretion as follows: Group 1: Comprised of 13 normoalbumiuric (UAE <30 mg/24 h) type 2 diabetic patients; Group 2: Comprised of 12 microalbumiuric (UAE 30–299 mg/24 h) type 2 diabetic patients and; Group 3: Comprised of 13 macroalbumiuric (UAE ≥300 mg/24 h) type 2 diabetic patients. Sera were separated by centrifugation and kept frozen at (-20°C) for analysis of serum total VEGF by enzyme immunoassay (EIA) method using Accucyte® human VEGF kits supplied by Accucyte® (USA). Fundus examination, electrocardiograph and abdominal ultrasound were done. There was significant increase in serum VEGF in nephropathic group compared to non nephropathic group (7.546±3.579 versus 19.344±11.649, P=0.0001). There was significant increase in serum VEGF in macro-albuminuric subgroup compared to micro-albumiuric subgroup (26.046±11.973 versus 12.083±5.396, P=0.001). There was significant increase in serum VEGF in non nephropathic group, nephropathic group and in all patient series compared to control group (7.546±3.579, 19.344±11.649, 15.307±11.151 and 2.737±1.056 respectively). There was significant correlation between serum VEGF, UAE (P=0.69, R=0.0001), (serum creatinine (P=0.45, R=0.024). The results of the present study on a quiet homogeneous group of diabetics with regard to age, sex, BMI clarified that VEGF may be a good index for early detection and determination of the severity of diabetic nephropathy due to type 2 diabetes.

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Ser-660 phosphorylation of protein kinase C beta II (PKCβII) by mammalian target of rapamycin complex 2 (mTORC2) regulates high glucose (HG)-induced mesangial cell hypertrophy

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Protein kinase C beta II (PKCβII) has been implicated in diabetic nephropathy (DN). Mesangial cell (MC) hypertrophy is a pathologic feature of DN. PKCβII undergoes phosphorylation at the hydrophobic motif site Ser-660 for its activity. We have shown that mTOR complex 1 (C1) regulates MC hypertrophy. How activation of PKCβII by Ser-660 phosphorylation fits into mTOR signaling to control MC hypertrophy is not known. HG significantly increased phosphorylation of PKCβII at Ser-660 in a PI 3 kinase-dependent manner. siRNAs against PKCβII, dominant negative PKCβII and nonphosphorylatable mutant of PKCβII, PKCβIIS660A, blocked mTORC1 activity due to lack of PRAS40 phosphorylation, resulting in significant inhibition of HG-induced MC protein synthesis and hypertrophy. Also, PKCβIIS660A attenuated phosphorylation of Akt at Ser-473, a putative mTOR complex 2 (C2) site. Specific inhibition of mTORC2 by shRNAs against rictor or Sin1, two exclusive and required components for its activity, suppressed HG-induced phosphorylation of PKCβII Ser-660 and Akt Ser-473, resulting in attenuation of mTORC1 activity leading to inhibition of MC hypertrophy. Constitutively active (CA) Akt or CA mTORC1 reversed sh Rictor- or shSin1-mediated inhibition of HG-induced MC hypertrophy. Furthermore, CA PKCβII reversed the shRictor- or shSin1 induced inhibition of HG-stimulated Akt Ser-473 phosphorylation and MC hypertrophy. Finally, we show increased phosphorylation of PKCβII Ser660, PRAS40 and Akt Ser-473 in association with activation of mTORC1 in renal cortices of OVE26 mice with type 1 diabetes. These results provided the first evidence that HG-induced activation of mTORC2 phosphorylates and activates PKCβII to increase the phosphorylation of Akt at Ser-473 to finally activate mTORC1 to induce MC hypertrophy. Thus, we uncovered a specific role of mTORC2 for Akt/mTORC1 activation *via* PKCβII Ser-660 phosphorylation.

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