

Kidney & Nephrology 2017



15th Annual Congress on

Kidney: Nephrology & Therapeutics

August 28-30, 2017 Philadelphia, USA

Scientific Tracks & Abstracts

Day 1

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Hypophosphatemia in users of Cannabis

Peter Edward Cadman
University of California, USA

Cannabis has been legalized for medical and recreational use in several states, making physicians more aware of the drug's potential toxicities. First described in 2004, the cannabinoid hyperemesis syndrome (CHS) has been recognized as a significant cause of hospitalization among drug users. Relatively little, however, has been written about electrolyte or acid-base disturbances in CHS. Between 2011 and 2014, six men were treated for CHS at the VA Medical Center in San Diego, CA and found to have significant hypophosphatemia (range <1 to 1.3 mg/dL). The six cases will be presented and possible causes of hypophosphatemia discussed. In half of the patients, serum phosphate levels normalized spontaneously within hours, suggesting redistribution of phosphate as a potential mechanism. Hyperventilation, which can lead to phosphate redistribution was observed in two-thirds of the patients and may have contributed. Hypophosphatemia is a feature of CHS in some patients.

Biography

Peter Edward Cadman has received his MD from Columbia University, College of Physicians and Surgeons and completed his Internal Medicine Residency and Nephrology Fellowship at the University of California, San Diego (UCSD). As an Associate Clinical Professor of Medicine at UCSD, he holds a dual appointment with both the Division of Nephrology and Hypertension and the Division of Hospital Medicine. He works as a Staff Nephrologist and Hospitalist, acting as a Clinical Educator for Medical students, Residents and Nephrology fellows. To date, he has authored or contributed to 12 different publications.

pcadman@ucsd.edu

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Bariatric surgery for obese live kidney donors: An analysis of risks and benefits

Jorge Ortiz

University of Toledo, USA

Background & Aim: Obesity can be a barrier to live donor selection and there are reports of obese live kidney donors (OLKDs) undergoing bariatric surgery prior to donation. While this practice has potential promise, the risks associated with it are unclear. Thus, our aim was to evaluate the advantages and disadvantages of this practice.

Design: Risks and benefits were ascertained from the literature. Analysis of costs and benefits was performed to provide objective data for each scenario.

Results: Live kidney donation is associated with superior outcomes compared to deceased donation. However, live donors are at risk of complications that could be exacerbated by obesity. Higher donor body mass index (BMI) has been associated with inferior recipient outcomes. Bariatric surgery (BS) results in decreased mortality and can induce sustained weight loss. Our cost-benefit analysis revealed a benefit-to-cost ratio of 3.64 for BS prior to live donation by OLKDs. We found ratios of 3.19 and 0.97 for live donation with an obese donor and a deceased donor, respectively.

Conclusions: Our results suggest that BS for an OLKD has the potential to increase the number of live donors and improve outcomes. However, more data is required; thus we recommend a registry of patients who have undergone both procedures.

Biography

Jorge Ortiz has completed his Residency in General Surgery at North Shore University Hospital. He did his Fellowship at the University of Miami Jackson Memorial Hospital. He is currently an Associate Professor of Surgery at the University of Toledo, College of Medicine and Life Sciences. He has published dozens of papers in reputed journals.

Jorge.Ortiz@UToledo.Edu

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Cannulation technique influences arteriovenous fistula and graft survival

Maria-Teresa Parisotto
Fresenius Medical Care, Germany

Introduction & Aim: There is a close link between the availability of a well-functioning vascular access and patient survival on hemodialysis. Every effort should be made to maintain the functionality of the vascular access for long-term use. Practices of access cannulation vary from clinic to clinic, mainly for historical reasons. The aim of this study is to investigate the impact of cannulation technique on the survival of the arteriovenous fistula (AVF) and grafts (AVG).

Methods: In April 2009, a cross sectional survey was conducted in 171 dialysis units located in Europe, Middle East and Africa to collect details on vascular access cannulation practices. On the basis of this survey, a cohort of patients was selected for follow-up, inclusion being dependent on the availability of corresponding access survival/intervention data in the clinical database. Access survival was analyzed using the Cox regression model (adjusted for within country effects) defining as events the need for first surgical access survival intervention. Patients were censored for transplantation, death, loss of follow-up or end of the study period (March 31, 2012). Results were adjusted for age, gender and diabetes mellitus.

Results: Out of the 10,807 patients enrolled for the original survey, access survival data was available for 7,058 (65%) of patients, these residing in Portugal, UK, Italy, Turkey, Romania, Slovenia, Poland and Spain. Mean age was 63.5±15.0 years; 38.5% were female; 27.1% were diabetics; 90.6% had a native fistula and 9.4% had a graft. Access location was distal for 51.2% of patients. During the follow-up, 51.1% were treated with antiaggregants and 2.8% with anti-coagulants. Prevalent needle sizes were 15 G and 16 G for 63.7% and 32.2% of the patients, respectively (14 G: 2.7%, 17 G: 1.4%). Cannulation technique was area for 65.8% and rope-ladder for 28.2% and the direction of puncture was antegrade for 57.3%. Median blood flow was 350-400 mL/min.

Conclusions: The study revealed that area cannulation technique, despite being the most commonly used was inferior to both rope-ladder and buttonhole for the maintenance of vascular access functionality. With regard to the effect of needle and bevel direction, the combination of antegrade position of arterial needle with bevel up or down was significantly associated with better access survival than retrograde positioning with bevel down. There was an increased risk of access failure for graft versus fistula, proximal vs. distal location, right arm vs. left arm and the presence of a venous pressure greater than 150 mmHg. The higher HR associated with a venous pressure greater than 150 mmHg should open a discussion on currently accepted limits.

Biography

Maria Teresa Parisotto has obtained her Nursing Diploma in 1974 and the Nursing Management Diploma in 1976 at the Nursing School Ospedale San Carlo, Milan, Italy. She has worked as a Nurse Manager in a Dialysis Unit, Ospedale San Paolo, Milan, Italy. In 1980, she left the hospital and started working as an Application Specialist and Marketing Director Peritoneal Dialysis afterwards in Fresenius Medical Care, Italy. In 1999, she moved to Fresenius Medical Care Headquarters at Bad Homburg, Germany, as Director of Peritoneal Dialysis for Europe, Middle East and Africa. From 2006 to 2016, she has worked in Fresenius Medical Care Deutschland GmbH, NephroCare Coordination as Director Nursing Care Management for Europe, Middle East and Africa. Currently, she is working at Fresenius Medical Care Deutschland GmbH, Care Value Management as Chief Nurse Advisor. Her main areas of interest and experience are vascular access cannulation and care, hygiene and infection control, dialysis processes analysis, safety in dialysis. Her publications focused on peritoneal dialysis, hemodialysis safety and quality and vascular access cannulation and care.

Maria-Teresa.Parisotto@fmc-ag.com

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Graft survival following deceased donor kidney transplantation with rATG vs basiliximab (BAS) induction therapy in recipients at risk of delayed graft function and/or acute rejection

Edward Drea

Sanofi Cambridge, United States

Introduction: Studies show conflicting results regarding the long-term impact of induction therapies on kidney graft survival. The srtr database was analyzed for patients transplanted 01/2000–12/2009 who met the inclusion criteria of a prior multicenter study (risk of delayed graft function and/or acute rejection; NEJM 2006; 355: 1967) and received rATG (thymoglobulin®) or BAS induction therapy.

Methods: Registry analysis identified 90,851 deceased donor kidney graft recipients; 51,561 had risk factor status entries and met the increased risk inclusion criteria used in the prior study (NEJM 2006; cold ischemia time [cit] > 24 h, additional risk factors if cit < 24 h). Graft survival was compared for patients with and without each risk factor; Patients with functioning grafts lost to follow-up were excluded. Adjusted Kaplan-Meier survival curves were generated for each risk factor, with other covariates fixed at population means. Hazard models included rATG vs BAS induction.

Results: Of 51,561 patients receiving induction therapy, 35.7% received rATG and 17.4% received BAS. The proportion of patients receiving rATG increased from 14.2% (2000) to 53.3% (2009) ; The proportion receiving BAS declined from 30.2% (2000) to 14.5% (2009). One-year graft survival was 90.7% vs 89.9% for rATG vs BAS, respectively (p=0.02); 5-year graft survival was 69.3% vs 66.7% for rATG vs BAS, respectively (p<0.001). Improved survival for rATG vs BAS was maintained at longer follow-up.

Conclusion: Analyses suggest improved graft survival for rATG vs BAS induction therapy in transplant patients at risk of delayed graft function/rejection.

Biography

Edward Drea completed his BSc and received his doctorate in pharmacy from the University of Iowa. Since then, he has accrued a multitude of pharmacy and pharmaceutical industry experience, including leading a number of clinical trials in oncology and transplantation medicine. He is presently Director of Medical Managed Care at Sanofi Genzyme. In his current position, He provides comprehensive medical and scientific information in connection with Sanofi products and assists in the development of medical communications and publications related to health outcomes research. He has served as a clinical manuscript reviewer for The Annals of Pharmacotherapy for 28 years

Edward.Drea@sanofi.com

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Role of retrograde intra-renal surgery in management of large renal stones

Rajinder Yadav

Fortis Superspeciality Hospital, India

Objective: Retrograde intra-renal surgery (RIRS) is considered as a minimally invasive procedure for management of renal stones with minimal morbidity. Our objective is to demonstrate its effectiveness in management of large, multiple and staghorn stones in our institution.

Methods: A prospective study was done of 274 patients who presented to us with renal and upper ureteric stones and were managed with RIRS. Pre-operatively, stone size and laterality were assessed on NCCT KUB and X-ray KUB. Intra-operative parameters were assessed such as; operative time, need for ureteric dilatation and intra-operative complications. Post operatively, X-ray KUB/USG KUB was done before stent removal.

Results: Out of 274 patients, 185 patients were male and 89 were female. 83 patients had single stone and 191 patients had multiple stones. 25 patients were pre stented in view of septicemia or renal impairment. 47 patients had renal impairment at the time of presentation, which improved in all patients and returned to normal value in 36 patients. 85 patients underwent bilateral RIRS and 189 underwent unilateral RIRS. 175 patients had more than 2 cm sized stones. Six patients had residual stones out of which, three patients underwent URS, two patients underwent RIRS and one patient underwent ESWL.

Conclusion: RIRS is feasible in case of large stone burden, like partial and complete staghorn stones along with multiple stones. Our study demonstrates its effectiveness in large stone burden with additional procedure required in < 3% patients.

Biography

Rajinder Yadav had completed his MCh in Urology from AIIMS in 1980. He joined as Sr. Lecturer at PGI Medical College, Rohtak. He had established and developed many departments of Urology and MIS in various hospitals in Delhi. He was Chairman of Urology & Renal Transplant in BLK and Max Hospital. He is the Director of Urology & Kidney Transplant at Fortis Healthcare, a premier healthcare organization. He had performed more than 30,000 surgeries including endoscopic, laparoscopic/retroperitoneoscopic surgeries, kidney transplants, more than 1,000 RIRS and around 1,500 laser prostatectomies (Holmium, KTP, Thulium & Diode).

drrajinderyadav@yahoo.com

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Q fever and renal disease

Ana Raquel Fernandes
Centro Hospitalar de Setúbal, Portugal

Coxiella burnetii (*C. burnetii*) causes a zoonotic disease – Q fever. This bacterium is highly resistant to harsh environmental conditions and causes an uncharacteristic clinical syndrome. Q fever may be acute or chronic and renal manifestations of the disease are more common in the chronic forms. There is a few reports of acute kidney injury due to *C. Burnetti* and most of them were reported in chronic forms of the disease. We are going through renal manifestations of the disease and we are going to review a case of acute Q fever manifested by recurrent fever and acute kidney injury with nephrotic syndrome.

Biography

Ana Raquel Fernandes has completed her Master's from Faculdade de Ciências Médicas da Universidade Nova de Lisboa, Portugal. She is a 5th year Resident in Nephrology, at Centro Hospitalar de Setúbal. She has published five papers in reputed journals and is a Reviewer at International Journal of STD & AIDS.

anar.fernandes@sapo.pt

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Access to the kidney during percutaneous nephrolithotomy

Morshed Salah

Al Wakra Hospital, Qatar

Percutaneous Nephrolithotomy (PCNL) is the first-line treatment modality for the management of kidney stones larger than 2 cm in diameter. The creation of a percutaneous renal access is the most important step in PCNL and the adequacy of the access directly influences the success and complication rates of this procedure. Several techniques have been used for guidance for entrance to the collecting system, including fluoroscopy, computed tomography (CT) and ultrasonography (US), however access under fluoroscopy is the most commonly used. The aim of this presentation is to emphasize the importance of the renal access, mainly the monoplanar technique, during PCNL. The access under fluoroscopy control can be performed either under biplanar or monoplanar guidance. Biplanar access is based on the cephalad-caudad and mediolateral movements of the needle; the depth of the needle is adjusted with using fluoroscopic imaging in 30 degree and vertical positions. Monoplanar access is based on the intensive movement of the kidney and the retraction of the targeted calyx under fluoroscopy on a vertical plane only. The monoplanar access technique is a safe method, it decreases puncture and radiation time, it minimizes the patient's, the surgeon's and staff's direct exposure time to radiation and it has similar success rates as the biplanar access technique.

Biography

Morshed Salah has completed his MD in 1992 from University Medical School of Pecs, Hungary and his Post-graduate studies on Urology in 1996 and PhD studies from University of Debrecen, Hungary in 2001. He has received his Master's degree in Health Services Management from University of Debrecen, Hungary in 2007. He has worked as an Assistant Professor and Consultant Urologist in University of Debrecen, Hungary from 2002-2012. From 2012 to 2016, he has worked as a Consultant in Hamad Medical Corporation, Qatar and from 2016 to till date as a Senior Consultant. He is also an Assistant Professor of Clinical Urology in Weill Cornell of Medical College, Qatar from 2013 to till date.

morshed.salah@gmail.com

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Acute intoxication treatment; efficacy of haemoperfusion with macro adsorbent resin

Darío Jiménez Acosta, Aguilar Ana, Jiménez Fernando, Dueñas Anunciata, Castillo María, Morales Miguel, Sadva Diego, Paredes Gustavo, Pazos Ernesto, Trujillo Freddy and Rhon Jaime
Universidad Central del Ecuador, Ecuador

Introduction: Acute intoxication is an important cause of admission to intensive care unit in Ecuador; 8% of patients who needed renal replacement therapy developed by DIALNEF group since 2014 were by acute poisoning. The haemoperfusion with macro adsorbent resin offers advantages to clear toxins with medium molecular weight, high bound proteins and lipophilic characteristics.

Objective: To evaluate the role of early haemoperfusion as a therapy in severe acute intoxication. Mortality was primary outcome.

Methodology: A case and controls study was delivery in poisoning patients with neurologic deterioration by drugs with high bound proteins. Group 1 (n: 25 patients) were in haemoperfusion by 3 hours with MG-150- 250 macro adsorbent resin cartridge after general treatment for detoxifications versus group 2 (n: 25 patients) patients without access to haemoperfusion treatment. APACHE and SOFA scores were used to severity evaluation.

Results: Severity score APACHE II was G1:19 and G2: 15 (p:0.03) and SOFA G1:8.9 and G2:6 (p:0.02). UCI stay was G1:3.5 and G2: 5.4 days (p:0.11). Mortality in G1: 0 and G2: 5 (p=0,018).

Conclusions: The present study shows benefits of haemoperfusion in patients with severe acute intoxications. In addition, it shows how dramatically decreases the mortality in patients with high APACHE 2 score. Also, it was effective because decrease the permanence either in intensive care unit and hospitalization, therefore the cost is reduced. Haemoperfusion is a suitable technic for effective treatment in poisoning patients and clearance of high bound protein drugs.

Biography

Darío Jiménez Acosta has completed his Medical graduate from Universidad Central del Ecuador and Post-doctoral studies from Eugenio Espejo hospital and Nephrology mini fellowship at University of Colorado at Denver. He is Head of Nephrology Department at Enrique Garcés Hospital, Medical Director of Dialnef Critical Care Nephrology and Medicine Professor at Universidad Central del Ecuador.

djdariorjac@yahoo.com

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Evaluation of arterial hypertension in chronic kidney patients on hemodialysis and peritoneal dialysis

Rodrigo de Oliveira Pierami

Pontifical Catholic University of São Paulo, Brazil

High Blood Pressure (HBP) is a common finding in patients with chronic kidney disease on dialyses. This research analyzed the relation between blood pressure (BP) and hydration status (HS) in chronic kidney patients under hemodialysis (HD) and peritoneal dialysis (PD) in a Brazilian Dialysis Center. Demographic data, BP, number of antihypertensive drugs (NAD) and HS by bioimpedance exam were collected from 89 patients (69 in HD; 20 in PD). There were findings of 55.1% of men, age between 57.6±16.4 years old, Caucasian ethnicity (80.9%), usage of 2.4±1.2 hypotension drugs in HD, 1.7±1.4 in PD. Systolic Blood Pressure (SBP)<140 mmHg in 27.5% patients before HD, in 40.6% after HD and in 55% under PD. Diastolic Blood Pressure <90 mmHg in 81.2%, 79.7% and 85% respectively. 43.8% with mean blood pressure (MBP)>100 mmHg (86.9±9.9 mmHg) and OH 0.5±2.5 liters. 56.2% with MBP>100 mmHg (114.7±11.9 mmHg; p=0.0001) and OH of 1.5±2.7 liters (p=0.06 between the groups). When pre-dialysis SBP and HS were combined, the patients were stratified in 4 groups: Group-1; 40.4% HBP can relate to hyperhydration; Group-2; 24.71%, HBP is independent of hyperhydration; Group-3; 19.1%, in which 9% are hypohydrated and low blood pressure; Group-4; 15.7%, in which 12.3% are normohydrated and normotensive and 3.4% are hyperhydrated, though normotensive or arterial hypotension. HS was normal in 22.5%. In this research, there was noted the difficulty of controlling BP in these patients despite the use of expressive NAD and no relation between HS and MBP.

Biography

Rodrigo de Oliveira Pierami is currently a Medical student at Pontifical Catholic University of São Paulo, Brazil. He is a Former Member of Vital Brazil Student Council and Organizer of the XVI International Journey of Geriatric and Gerontology (2015). He did Internship at Hôpital Saint Vincent de Paul, Université Catholique de Lille, France (2016).

rodrigopierami@gmail.com

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A rare case of association between Fabry's nephropathy and membranous glomerulonephritis: New perspectives on pathophysiology and follow-up of Fabry's disease

Daniel Santos Rocha Sobral Filho
Federal University of Piauí, Brazil

Fabry disease (FD) is a rare X-linked disorder resulting from the deficiency of alpha-galactosidase A enzyme. Microalbuminuria is the initial manifestation of renal involvement, progressing to end-stage renal disease. From one case, we followed the patient's response to enzyme replacement therapy (ERT) and the evolution of its manifestations. A 61 years old male was referred to nephrologist to investigate generalized edema and massive proteinuria. He referred a previous diagnosis of cardiomyopathy and heart failure treatment. Physical examination revealed widespread edema. Complementary tests showed nephrotic proteinuria, hypoalbuminemia and dyslipidemia. Renal biopsy revealed membranous glomerulonephritis (MN) and FD association. Anti-phospholipase-A2-Receptor autoantibodies were positive, revealing the unprecedented association between idiopathic MN and Fabry nephropathy, reinforces the hypothesis that Fabry's nephropathy may modify podocyte antigens, leading to idiopathic MN. Others FD manifestations were found: cornea verticillata, hypertrophic cardiomyopathy and supratentorial microangiopathy. The α -Gal activity was reduced, associated with lyso-Gb3 accumulation. Genetic analysis identified an unreported hemizygous mutation in exon 7 of the GLA gene. The patient experienced decreased edema and clinical stabilization with the institution of fortnightly ERT with agalsidase alfa, with complementary exams showing preservation of renal function with reduction in proteinuria and increased serum albumin. Family screening identified six close relatives with FD on oligosymptomatic stage. This study recognized an unknown association between MN and FD and an unreported genetic mutation. It's also serving as the basis for the development of a database that aims to allow the follow-up of these patients, making possible the analysis of clinical data and of its evolution.

Biography

Daniel Santos Rocha Sobral Filho is a Medical Student at Federal University of Piauí, Teresina - Piauí – Brazil and has Scholarship of the Program of Scientific Initiation of the Federal University of Piauí. He participates in researches in nephrology, focusing on genetic nephropathies.

danielsobralfilho@hotmail.com

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Medicare telehealth service and nephrology: Policies for eligibility and payment

Stephanie Frilling

Social & Scientific Systems Inc, USA

There are just over 80 professional physician or practitioner services that may be furnished via telehealth, defined by Medicare as interactive audio and video telecommunications systems that permit real-time communication between a beneficiary at the originating site and the provider at the distant site. These services include 16 nephrology billing codes for furnishing end-stage renal disease services for monthly monitoring and assessment, and two billing codes for chronic kidney disease education. In recent years, many mobile health devices and other web based tools have been developed in support of monitoring, observation and collaboration for people living with chronic disease. However, digital health devices often do not meet telehealth conditions for coverage as currently required under Medicare. The criteria for furnishing telehealth nephrology services, as well as, all other Medicare telehealth services are set forth in section 1834(m) of the Social Security Act. Telehealth services are paid under Medicare part b, when furnished via a telecommunications system that substitutes for an in-person encounter. The presentation will review the statutory and program guidance that govern Medicare telehealth services, defines payment policy terms, (such as originating site and distant site) and clarifies payment policies when telehealth services are furnished, discuss innovation and other technological advancements in telehealth and nephrology, and Medicare's program authority and other statutory initiatives for enhancing the telehealth benefit.

Biography

Stephanie Frilling, MBA, MPH, is currently the Program Lead for the skilled nursing facility value-based purchasing program and the monitoring and valuation lead for CMS's value incentives quality reporting programs. As a program lead, she is responsible for overseeing all aspects of regulatory and health policy issues for these programs, which are operated by the Centers for Quality Standards and Quality. During her tenure at CMS, she has also served as the Program Lead for the end-stage renal disease quality incentive program, and as a subject matter expert for the physician fee schedule and the end-stage renal disease prospective payment system, and has extensive payment experience with Medicare payment and quality programs. She holds an MBA, MPH and is currently pursuing a Doctorate in Bioethics from Loyola of Chicago.

sfrilling@s-3.com

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Endovascular management of immature fistulas by interventional nephrologists in Algeria

Mohamed Amine Rahil

Bachir Ben Nacer Hospital, Algeria

Objectives: Percutaneous transluminal angioplasty (PTA) has proven to be valuable for management of dysfunctional fistula; KDOQI guidelines acknowledged the time and the role of interventional angioplasty for treatment of vascular access dysfunction.

Methods: Between September 2014 and March 2016, 28 dysfunctional and 2 thrombosed immature fistulas were treated by PTA and or collateral veins ligation. Angiography was performed by ultrasound guided puncture of the brachial artery and stenosis was performed after cannulation of the vein. The balloon size was between 5 to 10 mm. Collateral veins ligation was performed surgically after ultrasound marker. Thrombosed immature fistula was treated by manual catheter-directed aspiration. Dilatation induced rupture was treated by balloon tamponade and no stent was used.

Results: An underlying stenosis was diagnosed in all cases except one. 11 (36%) of them were located in the vein area (VA), 8 (26%) in the juxta anastomotic outflow area (JAOA), 4 (14%) in JAOA and in the fistula anastomosis (FA), 3 (10%) in JAOA and VA, 2 (7%) in JAOA, FA and artery stenosis (AS), 1 in JAOA with collateral vein and one only with a collateral veins without stenosis. The initial success rate of the endovascular procedure was 90%. Dilation-induced rupture occurred in five cases (16%) but stents were not necessary. The rate of significant clinical complications was 6% (pseudoaneurysm). Primary and secondary patency rates at 1 year were 50% and 70%, respectively.

Conclusions: Early Doppler ultrasound enables identification of underlying areas of stenosis or collateral veins in nonmaturing fistulas, which can be safely and effectively treated with angioplasty, vein ligation or both. With continued surveillance and repeat interventions, functional patency can be sustained in the majority of fistulas.

Biography

Mohamed Amine Rahil is an Interventional Nephrologist from Algeria. After an interventional nephrology internship in UC Davis, California, he perfected his approach of endovascular treatment for immature fistula and central vein stenosis; he also takes in charge of children and adult for PD catheter and tunneled catheter placement. He presented several communications in several international societies (Vascular access society, international society of hemodialysis) to show how nephrologists help nurses to cannulate difficult fistula by ultrasound guided needling.

mohamedamnerahil@gmail.com

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Day 2

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Use of C4d biomarker as a diagnostic tool to classify membranoproliferative glomerulonephritis

Nirupama Gupta

University of Florida, USA

Background: Membranoproliferative glomerulonephritis (MPGN type I, II, III) was reclassified in 2013 as MPGN and C3 glomerulopathy (C3G) based on classical or alternative pathway complement activation.

Objectives: To evaluate whether C4d, a component of the classical pathway could be a diagnostic tool in differentiating between MPGN and C3G.

Methods: We conducted a retrospective study of 15 MPGN type I, II, III and 13 minimal change disease (MCD) patients from 2000 to 2012. Formalin-fixed paraffin-embedded kidney tissues were stained for C4d using an immunoperoxidase method.

Results: Using the 2013 C3G consensus classification, the 15 MPGN types I, II, III biopsies were re-classified as MPGN (8) and C3G (7). Based on C4d immunohistochemical staining, of the 8 biopsies diagnosed as MPGN, 4 had classical pathway involvement [C1q (+), C3 (+), C4d (+)]; two had lectin pathway involvement [C1q (-), C3 (+), C4d (+)]; and, two were reclassified as C3G because the absence of C4d and C1q suggested the presence of the alternative pathway [C1q (-), C3 (+), C4d (-)]. Three of seven C3G biopsies presented classical pathway and were reclassified as MPGN. The alternative pathway was present in one of the other 4 considered to be C3G; the other two C3G biopsies likely involved the lectin pathway. The one case of dense deposit disease had lectin pathway involvement.

Conclusions: This study reports that C4d staining may help to differentiate between MPGN and C3G. In addition, the lectin pathway seems to play a role in the pathogenesis of these glomerulopathies.

Biography

Nirupama Gupta has completed her MD degree from the University of South Florida in 2009, Pediatrics Residency at Yale-New Haven Hospital in 2012 and Pediatric Nephrology Fellowship at University of Florida in 2015. Her clinical research interests include glomerulopathies, childhood hypertension and BK virus infection. As a Junior Faculty, she started the Pediatric Hypertension Clinic at University of Florida in 2015. She has given a CME talk on Pediatric Hypertension to community pediatricians and has lectured to medical students and residents on various nephrology topics

peacock7@ufl.edu

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Comparison of topical Chlorhexidine and Mupirocin for the prevention of exit-site infection in incident peritoneal dialysis patients

Htay Htay^{1,2}, David W Johnson^{2,3,4}, Sin Yan Wu¹, Elizabeth Ley Oei¹, Marjorie Wai Yin Foo¹ and Jason Chon Jun Choo¹¹Singapore General Hospital, Singapore²Princess Alexandra Hospital, Australia³University of Queensland, Australia⁴Translational Research Institute, Australia

Objective: Prevention of exit site infection (ESI) is of paramount importance to peritoneal dialysis (PD) patients. The aim of this study was to evaluate the effectiveness of chlorhexidine in the prevention of ESI in incident PD patients compared with mupirocin.

Methods: This retrospective, pre-test/post-test observational study included all incident PD patients at Singapore General Hospital from 2012 to 2015. Patients received daily topical exit-site application of either mupirocin (2012-2013) or chlorhexidine (2014-2015) in addition to routine exit-site cleaning with 10% povidone-iodine. The primary outcome was ESI rate during the 2 time periods. Secondary outcomes were peritonitis rate, times to first ESI and peritonitis, hospitalization rate and infection-related catheter removal. Event rates were analyzed using Poisson regression and infection-free survival was estimated using Kaplan-Meier and Cox regression survival analyses.

Results: The study included 162 patients in the mupirocin period (follow-up 141.5 patient-years) and 175 patients in the chlorhexidine period (follow-up 136.9 patient-years). Compared with mupirocin-treated patients, chlorhexidine-treated patients experienced more frequent ESIs (0.22 vs 0.12 episodes/patient-year, $p=0.048$), although this was no longer statistically significant following multivariable analysis (incidence rate ratio [IRR] 1.78, 95% confidence interval [CI] 0.98-3.26, $p=0.06$). No significant differences were observed between the 2 groups with respect to time to first ESI ($p=0.10$), peritonitis rate ($p=0.95$), time to first peritonitis ($p=0.60$), hospitalization rate ($p=0.21$) or catheter removal rate (0.03 vs. 0.04/patient-year, $p=0.56$).

Conclusions: Topical exit-site application of chlorhexidine cream was associated with a borderline significant, higher rate of ESI in incident PD patients compared with mupirocin cream.

Biography

Htay Htay is a Nephrologist at Department of Renal Medicine, Singapore General Hospital. She was graduated from University of Medicine, Myanmar and received Master of Medicine (Internal Medicine) from the National University of Singapore. She has completed her basic specialist training in Internal Medicine and advanced specialist training in Nephrology at Singapore General Hospital. She has also completed her Fellowship training at Nephrology Department, Princess Alexandra Hospital, Brisbane, Australia. She is a Member of Royal College of Physician, International Society of Peritoneal Dialysis and Singapore Society of Nephrology

htay.htay@singhealth.com.sg

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Nutritional status assessment in dialysis patients

Ravi Shankar Bonu

Manipal Hospitals, India

Nutritional status assessment in dialysis patients is very important since malnutrition in dialysis is common and increases morbidity and mortality. The commonly used methods such as; BMI, anthropometry are not accurate for assessing the nutritional status in dialysis patients because of their altered fluid status. However, adding subjective global assessment (SGA) or malnutrition inflammatory score (MIS) to anthropometry may provide better information. The fat mass, fat free mass (lean body mass) are the two most important parameters of nutrition and can be abnormal even with normal body weight in dialysis patients. DEXA scan, CT, MRI which are relatively simple methods to perform but involve expertise to analyze the data are a bit more expensive and expose patients to ionizing radiation. More accurate methods such as deuterium oxide and total body potassium estimation are complex, and used as advanced tools. Bioimpedance analysis (BIA), a relatively simpler, cheaper, bedside and user friendly tool has become more popular in the recent past in assessing the nutritional status in dialysis patients. In our experience, bioimpedance analysis yielded body composition parameters which correlated well with BMI and anthropometric parameters in a subset of our dialysis patients. In addition, we found that subjective global assessment is also a less expensive method and provided nutritional as well as functional status in our dialysis patients. We conclude that, in our experience, bioimpedance analysis and subjective global assessment are simple tools and are complementary to anthropometry for nutritional assessment in dialysis patients.

Biography

Ravi Shankar Bonu has completed his MBBS from Andhra Medical College, Vishakapatnam, Andhra Pradesh, India. He did his MD in Internal Medicine from PGIMER, Chandigarh, India. He has done DM (Nephrology) training at Osmania General Hospital, Hyderabad, India. He also had a short stint at Toronto General Hospital, Toronto, Canada in 2007. Currently, he is a Senior Consultant at Manipal Group of Hospitals, Bangalore, India. He has 20 years of experience in Nephrology and has been a Teacher for Nephrology Training Programme in India and he has publications in national and international journals

ravibonu@yahoo.co.in

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Non-convulsive status epilepticus due to fentanyl intoxication in hemodialysed patients: Two case reports and review of the literature

Daniela Pogliani

ASST Valle Olona UO Nefrologia e Dialisi, Italy

The management of the pain therapy (ischemic pain, neoplastic pain) in hemodialysis patients has become a frequent challenge in the last years. These patients often require the prescription of major analgesic drugs such as opioids like Fentanyl, in order to control the pain. It is necessary to pay attention to the correct dosage and to the half-life of these drugs that results prolonged in the chronic renal insufficiency. The main side effect of opioids is respiratory depression and is well known, but to date in the literature reports about other less frequent side effects, like epilepsy or status epilepticus are lacking. We report two cases of chronic hemodialysed patients who developed a generalized non-convulsive status epilepticus secondary to fentanyl intoxication administered for the pain therapy. These cases required a synergic team management implicating the nephrologists, the neurologist and the intensivist. The generalized non-convulsive status epilepticus could be an important and serious side effect of fentanyl in hemodialysis patients and it is therefore necessary a sharp monitoring of the pain therapy in these subjects.

Biography

Daniela Pogliani has completed her MD from Università Milano-Bicocca, Milan and Post-doctoral studies from the same university. She is specialized in Nephrology. She currently works in a Nephrology and Dialysis Unit in a Public Hospital, Gallarate, Italy. She has been co-author of up to 11 papers in reputed journals and is a Member of the Editorial Board of the *Giornale Italiano di Nefrologia*.

d.pogliani@tin.it

Notes:

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Successful cyclosporin a therapy for diffuse mesangial sclerosis associated with WT1 mutations

Koji Nagatani

Uwajima City Hospital, Japan

Wilms' tumor suppressor gene 1 (WT1) mutations are found in Denys-Drash syndrome, Frasier syndrome and isolated diffuse mesangial sclerosis; these mutations lead to the occurrence of diffuse mesangial sclerosis (DMS) and focal segmental glomerulosclerosis. Nephrotic syndrome (NS) caused due to DMS is unresponsive to drug therapy and is characterized by rapid progression to end-stage renal disease. Here, we report a case of a 3 years and 5 months old girl with NS caused due to DMS who responded favorably to cyclosporin A (CsA) and angiotensin-I converting enzyme inhibitor (ACE-I). The light microscopic findings of the renal biopsy before CsA therapy revealed the early stage of DMS, which showed small glomerulus with diffuse mesangial matrix increase and mesangial hypercellularity and hyperplastic podocytes. However, prominent epithelial proliferation was not found in the specimen. CsA therapy induced a dose-dependent decrease in her urinary protein/creatinine ratio and resulted in partial remission of NS and maintenance of normal renal function for over 3 years. The second biopsy at 3 years old revealed the improvement on the light microscopic findings. CsA may be effective for DMS with WT1 mutations, if therapy is started before creatinine levels increase and in the early stage of DMS. In children with WT1 mutation, CsA therapy may prevent prompt progression to end-stage renal disease.

Biography

Koji Nagatani has completed his graduation from Hamamatsu University, School of Medicine, Shizuoka, Japan in 1998 and belonged to Ehime University Graduate School of Medicine, Department of Pediatrics. He is a Member of The Japanese Society for Pediatric Nephrology, Japanese Society of Nephrology, International Pediatric Nephrology Association and International Society of Nephrology. He is the Director of Department of Pediatrics, Uwajima City Hospital, Japan

kojinagatani44@gmail.com

Notes:

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Ulinastatin: Is it a new therapeutic option for AKI?

Sonia Gupta

Kidney Care Hospital & Research Centre Udaipur, India

Background: In critically ill patients with AKI, unacceptably high mortality rates reaching up to 50-80% in all dialyzed ICU patients are seen despite the availability of intensive renal support. At present there is no specific or targeted therapy for AKI. The exact molecular pathophysiology of AKI is complex and also multifactorial. Ulinastatin is a multifunctional Kunitz type serine protease inhibitor; it has been shown to exhibit significant renoprotective effects in various models of mechanical and chemical injury. Our premise regarding the use of molecule in AKI was based on the fact that this molecule acts at multiple levels in the sepsis conundrum and can act to stop the cascade and thereby halt the “storm”.

Aim: The aim of our study, done in a semi urban nephrology set up, was to find out if using ulinastatin in patients with AKI has any beneficial result on the outcomes in patients with AKI. Ours is a retrospective comparative study done in patients with AKI who were critically ill.

Method: We studied a total of 280 patients with AKI who needed ICU care in our hospital in the period between May 2012- Dec 2015. Out of these, 140 patients received Injection ulinastatin 3 doses a day for 5 days, against a similar number of control patients. We included those patients with AKI who had SOFA scores more than 8. We recorded the age and the etiologies of the patients. We recorded the length of stay, need and duration of renal replacement therapy, time to stoppage of renal replacement therapy, need for mechanical ventilation, mortality and post AKI recovery and progression to CKD.

Results: The patients who received ulinastatin had a shorter stay in the ICU ($p < 0.01$ vs control group); also the time to stoppage of renal replacement therapy was shorter ($p < 0.05$). The recovery to renal function was seen in 84% ($n=118$). The progression to CKD was seen in 11% ($n=10$; 20 in control group), of patients. The average number of sittings of dialysis needed were 11 (range 3-20), less number of dialysis were needed in the ulinastatin group. The overall mortality was 26% ($n=72$, 39 in the control group).

Biography

Sonia Gupta has completed her medical education along with the specialization in Nephrology from Institute of Kidney Diseases in Ahmedabad, India. At present, she runs her own kidney hospital Kidney Care Hospital & Research Center Udaipur. She has more than 15 publications to her credit and tries to focus on delivering affordable quality nephrology care to her patients.

drsoniagupta18@gmail.com

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Retrograde intrarenal surgery for urinary stone disease in patients with solitary kidney: A retrospective analysis of the efficacy and safety

Shinnosuke Kuroda

Yokohama City University Medical Center, Japan

Objectives: To compare outcomes of retrograde intrarenal surgery for urolithiasis between patients with solitary kidneys and patients who have single-side urolithiasis with bilateral kidneys.

Methods: We retrospectively analyzed outcomes of retrograde intrarenal surgery in solitary kidney patients (group A) carried out during 2007-2014 and in patients with bilateral kidneys with comparable stone burdens (group B). Stone-free status was defined as no residual fragment on computed tomography 1 month later.

Results: There were 19 patients in group A (mean age 62.5±18.4 years, range 14-76 years). The mean stone diameter and burden were 6.0 mm (range 3-24 mm) and 10.42±6.92 mm, respectively. The stone-free rate was 94.7% and no repeat procedure was required. The glomerular filtration rate tended to rise post-surgery (postoperative day-1: 48.67±15.92 mL/min, 100.2%, P=0.940; postoperative month-1: 51.32±16.90 mL/min, 105.7%, P=0.101) compared with preoperative rates. The stone-free rate and surgery time were not significantly different between the two groups, although post-surgical hospitalization time was longer for group A (4.05 vs. 3.08 days, P=0.037). The change in glomerular filtration rate was not significantly different between groups A and B (postoperative day-1: +0.101 vs. +0.547 mL/min, respectively, P=0.857; postoperative month-1: +2.749 vs. 3.161 mL/min, respectively, P=0.882). No significant difference was found in terms of complication rate.

Conclusions: Retrograde intrarenal surgery in solitary kidney patients is as safe and effective as in bilateral kidney patients.

Biography

Shinnosuke Kuroda has completed his graduation from Yokohama City University School of Medicine. He has worked at Ohguchi Higashi General Hospital in Japan from 2014 to 2015. He has published more than 10 papers about male infertility and urolithiasis.

shinnosuke_1014@yahoo.co.jp

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The impact of a multidisciplinary self-care management program on quality of life, self-care, adherence to anti-hypertensive therapy, glycemic control and renal function in diabetic kidney disease: A cross-over study

Nancy Helou

Haute Ecole de Santé Vaud, Switzerland

Diabetic Kidney Disease (DKD) is a global health concern that is associated with high morbidity and mortality. Patients with DKD are expected to manage their daily self-care activities. Patients' non-adherence to treatment regimen is thought to be the major cause for the poor control and the occurrence of complications. Previous research has shown that multidisciplinary management of DKD can improve patient outcomes. The effect of nurse-led multidisciplinary self-care management on Quality of Life (QoL), self-care, adherence to antihypertensive therapy, glycemic control and renal function of patients with DKD is not yet well established. The aim of this study was to investigate the effect of a nurse-led Multidisciplinary Self-care Management Program (MSMP) on QoL, self-care behavior, adherence to anti-hypertensive therapy, glycemic control and renal function of adults with DKD. A uniform balanced cross-over design was used with 32 participants randomized into four study arms. Cross-over designs allow efficient comparison of treatments when recruiting fewer participants and attaining the same level of statistical power as randomized controlled trials. It is for use more importantly in chronic diseases for comparison of participants' responses to different treatments. Each participant receives treatment and serve of own control thus, overcoming the mixed effects related to heterogeneity of co-morbidities when comparing two different groups. The uniform strongly balanced design represents the ideal cross-over because it overcomes the statistical bias of carry-over effect. Each participant received twice, at different time intervals and over 12 months, three months of Usual Care (UC) alternating with three months of MSMP. QoL was evaluated using the Audit of Diabetes-Dependent QoL scale, patient self-care behavior was measured using the Revised Summary of Diabetes Self-Care Activities and adherence to anti-hypertensive therapy was assessed using the Medication Events Monitoring System (MEMS). Blood glucose control was measured by glycosylated hemoglobin (HbA1c) levels and renal function by serum creatinine, estimated glomerular filtration rate and urinary albumin/creatinine ratio. The present QoL was improved by MSMP with a higher mean rank (55.95) as compared to UC (42.19) ($p < 0.05$, Confidence Interval (CI) of 95%). MSMP also improved the general diet habits, diabetes specific diet habits and blood sugar testing frequency demonstrating overall higher mean ranks as compared to UC ($p < 0.01$, 95% CI, respectively 59.56 vs. 39.44, 59.98 vs. 37.02 and 57.75 vs. 40.43). Results of glycemic control and renal function did not show a significant difference between MSMP and UC. MEMS adherence overall percentage mean ($n=21$) over the 12 months, for UC and MSMP confounded was high (95.38%, Minimum=69%, Maximum=100%). The implementation of a nurse-led multidisciplinary self-care management program with a theory-based nursing practice improved general QoL and self-care activities of DKD patients.

Biography

Nancy Helou is an Associate Professor in Nursing Sciences at University of Health Sciences, University of Applied Sciences and Arts of Western Switzerland (HES-SO). She has completed her PhD in Nursing Sciences from the University of Lausanne, Switzerland. She holds a Master of Science degree in Nutrition and Dietetics from the American University of Beirut. She has started her academic career in 2004 as a Research Assistant and became an Associate Professor in 2016. She has also build a clinical career as a Cardiac Intensive Care Nurse for four years before becoming a Quality Nurse Manager ensuring Joint Commission Accreditation and Magnet Designation. She is currently interested in clinical research areas and interdisciplinary work. Her research emphasizes on chronic diseases prevention and management and patient self-management.

Nancy.HELOU@hesav.ch

Notes:

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Estimated glomerular filtration in obese patients

Pehuén Fernández

Hospital Privado Universitario de Córdoba, Argentina

Introduction: Estimating glomerular filtration rate (GFR) in obese subjects is a challenge. An analysis is made from the performance of equations to estimate GFR in this population.

Materials & Method: This cross-sectional study included 100 obese subjects evaluated between 2008 and 2015. The GFR was measured with urinary iothalamate clearance (reference standard) and estimated using creatinine-based formulas: Cockcroft Gault, MDRD, CKD-EPI, MCQ and CKD-MCQ (mean of these). A global performance score (G-P-Score) was created to unify all the analysis criteria.

Results: CKD-MCQ equation had the best performance in obesity grade I (n=53) [bias=1.6 +/- 17.4 ml/min × 1.73 m²; correlation (r)=0.87; area under the curve (AUC)=0.978; sensitivity (S) =100%; specificity (E)=87.8%]. MCQ and CKD-MCQ had the lowest bias in obesity grade II (n=25) (bias=1.8 +/- 22.3 and -4.4 +/- 21.9 ml/min × 1.73m²) and CKD-MCQ the highest r (r=0.89), with the same AUC, S, and E (AUC=0.976, S=85.7%, E=100%). MDRD equation had the lowest bias in obesity grade III (n=22) (bias=-0.2 +/- 31.1 ml/min × 1.73 m²), and CKD-MCQ had the highest r and AUC (r=0.66, AUC=0.929), with the same S and E (S=80%, E=94.1%) than MDRD. CKD-MCQ was the only equation without significant differences compared to the reference standard in any of the obesity levels. The highest score was obtained in the G-P-score (39/48).

Conclusion: CKD-MCQ had the better overall performance for estimating GFR in subjects with different degrees of obesity.

Biography

Pehuén Fernández has completed the Speciality in Clinical Nephrology at the Universidad Católica de Córdoba, Argentina. He is currently working as a Nephrologist at the Hospital Privado Universitario de Córdoba and is pursuing the career of University Professor with a Master's degree in Clinical Research, and a PhD degree.

pehuenfernandez@hotmail.com

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Simvastatin attenuates chromium-induced nephrotoxicity in rats

Massumeh Ahmadizadeh¹, Zahra Goodarzi² and Esmail Karami²¹Ahvaz Jundishapur University of Medical Sciences, Iran²Semnan University of Medical Sciences, Iran

Hexavalent chromium, cr (vi) is used for various industrial applications. This chemical agent can cause numerous human diseases, including severe damage to the kidney. The wide environmental distribution of this chemical lead to an increase interest of preventive effects of its adverse effects. Simvastatin (simv) is widely clinically used for lowering hypercholesterolemia. It also has anti-inflammatory and anti-oxidant effects. The study of the effect of simv on cr (vi)-induced adverse effects on experimental animals may be useful for better understanding of the clinical pictures following cr (vi) exposure in humans. The present study was undertaken to investigate the potential protective effects of simv on cr (vi)-induced nephrotoxicity in rat. Forty-eight adult male wistar rats (180-220 g bw) were randomly assigned to eight groups (n = 6). Group one received simv 20 mg/kg/day. Group two was given vehicle only. Groups three, five and seven received intraperitoneally (i.p) cr (vi) at doses of 8, 12 and 16 mg/kg body weight. Groups four, six and eight pretreated with the 20 mg/kg simv 30 minutes to prior administration of cr (vi) at doses of 8, 12 and 16 mg/kg respectively. The experiment repeated for eight consecutive days. Twenty-four hours after the last administration, animals were killed with overdose of sodium pentobarbital. Kidney tissues were excised for measuring malondialdehyde (mda), glutathione (gsh) and histopathological examination. Results of the present study indicated that chromium induced a dose dependent elevation of mda and reduction of gsh levels when compared to those in control rats. Histopathological manifestations were observed in cr (vi)-treated rats. Simv administration restored cr (vi) produced biochemical and morphological changes in rat kidney. Simv decreased mda values and increased gsh levels in cr (vi)-treated rats. Simv clearly reversed the microscopic damage, demonstrating its protective effects against cr (vi)-induced kidney injury. The observations support the view that generation of oxidative stress is responsible for cr (vi)-induced nephrotoxicity. Simv may have a protective effect against cr (vi)-induced oxidative stress in rat kidney.

Biography

Massumeh Ahmadizadeh is working in the field of Occupational Health, Engineering Department, School of Health, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, IR Iran.

ahmadizadeh_m@ajums.ac.ir

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Scientific Tracks & Abstracts

Day 3

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Hypertension after kidney transplantation: Multifactorial etiologies and transplant outcomes

Ekamol Tantisattamo

Oakland University William Beaumont School of Medicine, United States

Hypertension is one of the most common causes of cardiovascular morbidity and mortality worldwide. Several factors contribute to the development of hypertension. Similar to non-transplant population, hypertension remains high prevalence in kidney transplant recipients. Among kidney transplant recipients with pre-transplant hypertension, the majority of them still continue to be hypertensive after successful kidney transplantation; however, some kidney transplant recipients become normotensive. Etiology of hypertension is difficult to determine and it is likely multifactorial including genetic and acquired conditions. Kidney is thought to be one contributing factor of hypertension and this may represent in the form of genetic kidney disease. Native nephrectomy in non-transplant patient is one possible way to manage uncontrolled hypertension. Our previous data demonstrated that kidney transplant recipients who received living-unrelated renal transplantation appeared to have lower prevalence of post-transplant hypertension compared to the recipients receiving living-related renal transplantation. For deceased donor renal transplantation, hypertensive patients receiving kidney transplantation from the same donor (mated kidney transplantation) seemed to convert to normotensive or remain hypertensive at the same direction. This may imply a potential role of genetic kidney diseases. In addition to potential genetic causes of post-transplantation hypertension, other traditional non-genetic risk factors of post-transplant hypertension are still important since these may be reversible or preventable conditions. These common conditions or diseases include obesity. Since post-transplant hypertension is high prevalent and crucial for kidney transplant outcomes both renal allograft and patient survivals, identifying the causes of post-transplant hypertension should lead to strategies for preventing post-transplant hypertension and mitigate poor kidney transplant outcomes.

Biography

Ekamol Tantisattamo has completed his MD from the Faculty of Medicine, Siriraj Hospital, Mahidol University in Bangkok, Thailand and pursued his specialty training in internal medicine at the University of Hawaii John A Burns School of Medicine. He then completed sub-specialty training in Nephrology at Emory University School of Medicine. Since his special interest is in clinical transplantation, he went to transplant nephrology fellowship training at Northwestern University Feinberg School of Medicine. He is currently a staff Physician at Multi-Organ Transplant Center, Division of Nephrology, Department of Internal Medicine, William Beaumont Hospital in Royal Oak, Michigan and Assistant Professor of Medicine at the Oakland University William Beaumont School of Medicine in Rochester, Michigan. He is interested in clinical research in the areas of Nephrology and Transplantation including clinical hypertension, clinical pancreas-kidney transplantation, transplant renal artery stenosis, Chronic Kidney Disease-Mineral Bone Disorder (CKD-MBD) and nutrition-related post-kidney transplantation, and vascular calcification.

ekamoltan@gmail.com

Notes:

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Recent topics of autosomal dominant polycystic kidney disease (ADPKD)

Kenjiro Honda

The University of Tokyo Graduate School of Medicine, Japan

Autosomal dominant polycystic kidney disease (ADPKD) is one of the most common hereditary kidney diseases that develop end-stage kidney disease. Usage of renin-angiotensin-aldosterone system inhibitors and educational campaign such as salt restriction and metabolic syndrome have successfully delayed initiation of dialysis in the other kidney diseases. However, ADPKD patients have obtained little benefit from these appearance of medicine or activities. As a result, ADPKD now requires dialysis at a younger age than the other kidney diseases. Tolvaptan is the first drug that directly inhibits growth of kidney cysts. TEMPO 3:4 study clinically showed efficacy and safety of tolvaptan treatment among ADPKD patients with creatinine clearance more than 60 mL/min. This medicine improved decline of kidney function as well as enlargement of total kidney volume. Polyuria is frequently present, and tolvaptan requires sufficient fluid intake. According to TEMPO 3:4 study, tolvaptan can be administered to ADPKD patients with chronic kidney disease (CKD) G1-G4 since 2014 in Japan. Tolvaptan has been administered to more than 1,000 ADPKD patients. Approval of indication including CKD G3 and G4 resulted in the current situation that CKD G3 and G4 is dominant in tolvaptan-treated patients. I will introduce therapeutic effect and amount of fluid intake and urine volume in tolvaptan treatment.

Biography

Kenjiro Honda graduated from The University of Tokyo in 2005, and completed his PhD from The University of Tokyo Graduate School of Medicine in 2013. His work is genetics in kidney including ADPKD, and peripheral arterial disease. He is now an Associate Professor in Department of Nephrology and Endocrinology, The University of Tokyo Graduate School of Medicine.

khonda-ky@umin.ac.jp

Notes:

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Vitamin D repletion after kidney transplantation

Kyra Borchhardt

Medical University of Vienna, Austria

Objectives: Vitamin D deficiency has been associated with detrimental renal allograft outcome, yet interventional studies on vitamin d supplementation after kidney transplantation are not available. We aimed to test whether treatment of vitamin d deficiency improves renal allograft function by preventing infections and acute rejections, and improves bone mineral density one year after kidney transplantation.

Design: The study is a single-center randomized double-blind placebo-controlled clinical trial with one-year follow-up.

Setting: The study was conducted at the Medical University of Vienna, Austria between May 2009 and August 2014. Participants: we studied 203 deceased-donor kidney-only transplant recipients with vitamin D deficiency (25-hydroxyvitamin D levels <20 ng/ml) at the time of transplantation. Patients who underwent re-transplantation more than twice, as well as immunologically high-risk patients were excluded.

Interventions: Participants were randomly assigned to receive daily treatment with oral vitamin D3 (6800 international units) or placebo for one year. Main outcome measures: primary outcome was renal allograft function at one year post-transplant (estimated by serum creatinine) with the combined event rate of acute rejections and infections as a co-primary endpoint. Secondary outcomes included time course analyses of serum creatinine and c-reactive protein levels, bone mineral density, serum levels of parathyroid hormone, 25-hydroxyvitamin D, 1,25-dihydroxyvitamin D, and cathelicidin. Besides intention-to-treat analyses, per-protocol analyses were performed at twelve (n=63 in the vitamin D3 and n=60 in the placebo group) and six months (n=70 in the vitamin D3 and n=65 in the placebo group), including patients who completed the follow-up.

Results: Out of 610 consecutively screened kidney transplant candidates, 203 were included and randomly assigned to vitamin D3 (N=103 with mean 25-hydroxyvitamin D levels of 11.6±4.9 ng/ml at baseline) or placebo (N=100 with mean 25-hydroxyvitamin D levels of 11.1±4.8 ng/ml at baseline). The novel supplementation regimen led to a fast and persistent increase in 25-hydroxyvitamin D levels (+22.6 (quartiles 7.5-36.9) ng/ml in the vitamin D3 group vs. -0.3 (-4.6-3.9) ng/ml in the placebo group at one year post-transplant, p<0.001). One-year serum creatinine levels were similar in the vitamin D3 and placebo group in the intention-to-treat analyses, but were higher in vitamin D3-treated patients in the per-protocol analyses at twelve (1.54 (1.32-2.17) mg/dl vs. 1.42 (1.20-1.73) mg/dl, p=0.03) and six months (1.61 (1.36-2.13) mg/dl vs. 1.43 (1.19-1.82) mg/dl, p=0.01). There was no group difference in the monthly combined event rate of acute rejections and infections (0.25 (0.09-0.44) in the vitamin D3 and 0.33 (0-0.71) in the placebo group, p=0.73) or the course of C-reactive protein levels or serum levels of cathelicidin. Changes in lumbar and femoral bone mineral density over time were similar in both groups. Vitamin D3 therapy resulted in significantly lower serum levels of parathyroid hormone (median 96 (quartiles 61-139) pg/ml vs. 128 (89-172) pg/ml, p=0.02), and significantly higher serum levels of 1,25-dihydroxyvitamin D (50 (38-75) pg/ml vs. 35 (24-49) pg/ml, p<0.001). Hypercalcemia was more common during vitamin D3 supplementation (30% vs. 17%, p=0.04).

Conclusions: Given the lack of an overall benefit of vitamin D supplementation, as well as its potential adverse effect on renal allograft function and its hypercalcemic potential, vitamin D supplementation is not justified in kidney transplant recipients.

Biography

Kyra Borchhardt has completed her studies at Medical University of Vienna and Post-doctoral studies from Stanford University School of Medicine. She is the Medical Director of the Dialysis Institut of Klagenfurt, Austria.

kyra.borchhardt@gmail.com

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Management of kidney trauma in Saiful Anwar Hospital, Malang, Indonesia: A retrospective study

Besut Daryanto, Made Udiyana Indradiputra and Gusti Lanang Andi Suharibawa
Saiful Anwar General Hospital, Indonesia

Kidney is the most commonly injured genitourinary organ (65%). Kidney trauma occurs in approximately 1-5% of all trauma cases. The present study was performed to describe and analyze the characteristics of hospitalized patients in Saiful Anwar Hospital (SAH). During January 2005 to December 2016, 63 of kidney trauma patients in SAH were retrospectively studied. The data were analyzed based on demographic characteristic, chief complaint, mechanism of injury, hemodynamic stability state, grading and location of trauma and management. The association of hemodynamic state, type of management, anemic condition, grade of kidney trauma to patient's outcome was analyzed using SPSS. It occurred mostly in male patients (47/74.6%), pediatric involve (22/34.9%) of total patients. Motor vehicle injury was the most common mechanism of injury (50/79.4%). Most of the patients came with flank pain as a chief complain (42/66.7%). Trauma were occurred mostly due to blunt trauma (61/96.8%), more frequent cases involved right kidney (33/52.4%). Grade I kidney trauma is the most frequent occurred (40/63.5%) and stable hemodynamic state (52/82.5%). Mostly patients treated with non-operative management (60/95.2%) and no significant difference of length of hospitalization was noted between conservative and operative treatment ($p=0.625$). There were significant association between hemodynamic state and treatment options ($p=0.047$). However no association was noted between type of management and patients' outcome ($p=0.436$). Severe grade of trauma revealed increasing nephrectomy rate (OR: 174, 95% CI: 8.62-315.174 $p<0.01$). Most of its patients in SAH were uneventfully treated by conservative treatment. Severe grade of trauma increased risk of nephrectomy.

Biography

Besut Daryanto has completed his General Surgery study from Diponegoro University and obtained Urologist License from Airlangga University, Indonesia He is currently the Director of Urology Department in Faculty of Medicine Brawijaya University, Saiful Anwar General Hospital, Indonesia.

besut.daryanto@yahoo.co.id

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Advanced retroperitoneoscopic surgery in renal stones

Rajinder Yadav

Fortis Superspeciality Hospital, India

Introduction & Purpose: Staghorn and multiple renal stone diseases have been a challenging problem, and require multiple modalities for complete clearance. The purpose of this study is to discuss about the innovative and advanced retroperitoneoscopic surgery performed for this morbid condition.

Material & Method: Since 1992, 336 cases of urinary stones were operated by this technique out of which, 65 cases were of staghorn and multiple stone diseases. Apart from laparoscopic instruments, rigid and flexible nephroscope, dormia basket, grasping forceps and flushing cannula were used. Standard kidney position was used with 3 to 4 ports. 43 cases were male, 22 cases were female. The age of the patients ranged from 11 years to 65 years. Ureteric catheter or DJ stent was introduced before operation.

Results: All the operations were performed successfully except two conversions in initial period. Blood transfusion was given into two patients in the post-operative period (one unit in each patient). Post-operative urine leak stopped in 24 to 72 hrs. Duration of surgery ranged from two hours 45 minutes to four hours 35 minutes. Post-operative x-rays showed residual stones in kidney in three patients and in the retroperitoneum in four patients. Residual stones in kidney were treated by ESWL after six weeks. Hospital stay was 4-6 days. No postoperative urinary tract infection occurred from the surgery. Two patients had port infection. One patient had urinoma due to lockage of drain.

Conclusion: Retroperitoneoscopic surgery for staghorn and multiple stones is minimally invasive and less traumatic to kidney. It is comparable with open surgery and accepted by patients. Post-operative discomfort in more as compared By PCNL.

Biography

Rajinder Yadav has completed his MCh in Urology from AIIMS in December 1980. After completion of MCh from AIIMS, he joined as Sr. Lecturer in Department of Surgery & Urology at PGI Medical College, Rohtak. He is the Director of Urology, Kidney Transplant and Laparoscopic Oncosurgery at Fortis Healthcare, a premier healthcare organization. He has published and presented more than 15 papers in journals and conferences.

drrajinder_yadav@yahoo.co.in

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Renal transplantation in sub-Saharan Africa: A case of Tanzania

Onesmo A Kisanga¹, Francis Fredrick^{1,2}, Paschal J Ruggajo^{1,2} and Eden E Maro²¹Muhimbili National Hospital, Tanzania²Muhimbili University of Health and Allied Sciences, Tanzania

Background: Renal replacement therapy (RRT) is the treatment of choice for patients with end stage renal failure, RRT include dialysis and kidney transplantation. Most sub-Saharan African countries have not developed renal transplantation services and are relying on referring patients to overseas countries. This study was carried out to describe renal transplantation experience in Tanzania.

Methods: Forty four renal transplant recipients were recruited in this study. Standardized questionnaire and Swahili version of standard form – 36 (SF-36) were used to collect socio-demographic information, clinical data, laboratory test results and health related quality of life information.

Results: Ages of transplant recipient ranged from 21 to 66 years with mean age of 45.9 ± 10.5 years. The leading causes of end stage renal failure among participants was hypertension 58.8% (25/44) followed by glomerulonephritis 15.9% (7/44). Twenty eight (63.6%) of transplantations were paid by the government. Most of the donors (97.7%) were living out of which 26 (59.1%) were siblings and 11 (25%) were second degree relatives (cousins and nephews). Most common complication noted following transplantation was diabetes mellitus 9 (20.5%) and 3 (6.8%) had chronic rejection. Mental health was the domain with highest mean score (75.6 ± 14.3) and role physical had the least mean score (44 ± 45.6).

Conclusions: Hypertension was the leading cause of ESRF in this study. Most of the donors were siblings and the costs of transplantation were largely covered by the government. There is a need for concerted effort to establish local kidney transplantation services in Tanzania.

Biography

Onesmo A Kisanga has completed his MD, MMed (Internal Medicine) and MSc (Nephro) from University of Dar es Salaam and currently working at Muhimbili University of Health Sciences. He is a Consultant Physician and a Nephrologist at Muhimbili National Hospital. He is serving as a Medical Director with Access Medical and Dialysis Centre and President of Nephrology Society of Tanzania (NESOT). His interest is in Kidney Transplant. His group started kidney registry in the country and expanded kidney biopsy programme.

oakisanga@yahoo.co.uk

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Video Presentation

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A simple renal cyst is really an innocent problem?!

Manuela Stoicescu
University of Oradea, Romania

Objective: The main objective of this presentation is to put in discussion if a simple renal cyst is really an innocent problem?! The diagnosis of a simple renal cyst is one of the most common diagnoses from the medical practice. Frequent is asymptomatic and represent a random discovering after a routine abdominal ultrasound examination. Is considered a benign formation and the patients are advice to follow in time the cyst to observe if increase in dimensions after repeated abdominal ultrasounds at 3 or 6 months. Without an abdominal ultrasound, many patients didn't know that they have a simple renal cyst.

Material & Methods: Present the situation of a patient 54 years old, hypertensive with three medications in the therapeutic scheme (Lisinopril 2x10mg/day, Betaloc-Zok 2x25mg/day and Losartan 10mg 1 drug/day), with diastolic pressure resistant at therapy (BP=140/110mmhg), who came at a routine consultation to check the value of blood pressure. This was 160/110mmhg under therapy, HR=86bates/min, rhythmic, EKG showed left ventricular hypertrophy and performed an abdominal ultrasound. The surprise was to be discover a gigantic (very enlarge) 18/19cm simple renal cyst on the left kidney and of course in this moment appear the reality that the arterial hypertension was secondary renal hypertension. The patient was advice to perform puncture of the cyst with evacuation of the fluid or surgical remove with complete capsule, but the patient refused in the first instance. The cyst has a rapidly growing in dimensions at the second evaluation after 3 month increase at 23/22cm. After realized this fast growing and that after solve the simple renal cyst can decrease the value of blood pressure he accepted the puncture. The surprise was that after the puncture of the cyst ultrasound guided appears hemorrhagic fluid and was evacuated. In three days the fluid reappears fast in the same quantity. The second evacuation eliminated again hemorrhagic fluid –for this reason the patient performed a laparotomy. The left renal cyst was removed complete with capsule and inside of the capsule on the walls there were many small villi with irregular borders. The histopathology examination confirmed safe the diagnosis of papillary renal cell carcinoma. The collection of fluid inside of the cyst was actually a liquid neoplastic hemorrhagic and inexhaustible and was recovering quickly after puncture.

Results & Discussions: The case is surprising because in the first instance at the abdominal ultrasound put in evidence enlarge simple renal cyst with dorsal acoustic enhancement which is a ultrasound sign for the presence of the fluid inside of the cyst, but can't mention the difference between a simple serous-citrine fluid and a hemorrhagic fluid. Without puncture of the cyst ultrasound guided is really very difficult to know this. The very small vili on the wall of the cyst is possible to remain unknown. Only the surgical removed of the renal cyst and histopathology examination can relive the real diagnosis.

Conclusion: Sometimes, apparently a simple enlarge renal cyst, with fast growing, can hide a neoplastic hemorrhagic fluid, inexhaustible in context of unknown papillary cell carcinoma.

Biography

Manuela Stoicescu is a Consultant Internal Medicine Physician (PhD in Internal Medicine), Assistant Professor of University of Oradea, Faculty of Medicine and Pharmacy, Medical Disciplines Department, Romania. She was invited as a Speaker at more than 30 international conferences is USA, China, Japan, Canada, Thailand, Dubai, Spain and Germany. She is a Committing Organizing Member at many international conferences and Editorial Board Member in two ISSN prestigious journals in USA. She published more than 20 articles in prestigious ISSN journals in USA. She published five books: two books for students, two books on Amazon at International Editor-LAP Lambert Publishing Academic House in Germany- "Sudden Cardiac Death in the Young" and "Side Effects of Antiviral Hepatitis Treatment", one monograph: "High blood pressure in the young a ignored problem!", two chapter books – Cardiovascular disease: Causes, Risks, Management CVD1- Causes of Cardiovascular Disease 1.5, 1.6, USA on Amazon. , a book in USA –"Tumor Markers in Hypertensive Young Patients".

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manuela_stoicescu@yahoo.com