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Epidemiology of Hepatitis C Virus Infection in ESRD Patients in Khuzestan Province, Iran

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Introduction. Liver disease caused by Hepatitis C Virus (HCV) in End-Stage Renal Disease (ESRD) patients causes significant morbidity and mortality. The aim of this study was to determine the prevalence of HCV infection and its relationship in ESRD patients living in the province of Khuzestan, Iran.
Methods. In a cross-sectional study from December 2010 to March 2011, all of ESRD patients treated with hemodialysis or Peritoneal Dialysis (PD) in the Khuzestan province enrolled for the study. A standardized questionnaire was used to collect social and demographic data including cause of ESRD and date of onset of PD or hemodialysis. Blood samples were tested for hepatitis C antibody (anti-HCV) by enzyme-linked immunosorbent assays (ELISA). The Research Center of Ahvaz Joundishapur University of Medical Sciences approved the study.
Results. In overall, 1117 ESRD patients were enrolled for the study. The prevalence of anti-HCV was 3.4% (38 patients, 20 males with Mean age of 45.29 years and 18 females with Mean age of 45.6 years). The most common cause of ESRD in anti-HCV positive patients was high blood pressure in 45.4%, followed by, DM in 28.7%, and unknown in 13.9%. We did not find any association between both sexes (P = .06) and between mean age of anti-HCV positive and negative patients (P = .59). There was a significant association between high blood pressure as cause of ESRD with anti-HCV positivity (P = .033).
Conclusions. Although, the prevalence of HCV infection among ESRD patients has decreased in recent years; however, it remains as a significant cause of viral hepatitis among these patients in Khuzestan province.

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Don't Forget the Evaluation of Dialysis Adequacy in Your Hemodialysis Centers

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Introduction. Although the K/DOQI guidelines are recommended that hemodialysis patients need to evaluate for dialysis adequacy, however, it seems that most of hemodialysis centers forget this issue and hemodialysis patients are not received a minimum dialysis dose. In this study, we aim to determine the adequacy of dialysis by Kt/v in one of our hemodialysis centers in Shahid Beheshti hospital,Abadan, Iran.
Methods. In a cross sectional study, we evaluated the value of Kt/v in hemodialysis patients of this center that were on dialysis more than 6 months. Blood sampling for Blood Urea Nitrogen (BUN) was done immediately before and after the dialysis session. For postdialysis BUN, our practice was to slow the blood pump to 100 mL/min and then take the blood sample 15 seconds later. We used following equation to estimate the KT/V from the Percent Reduction in Urea (PRU) [KT/V = (0.026 ×PRU) – 0.460].
Results. Fifty-four hemodialysis patients (28 females and 26 males) with mean age of 39 ± 14.2 years were enrolled in the study. The most common cause of end-stage renal disease was hypertension followed by unknown, DM, Glomerulonephritis, urinary tract obstraction, and poly cystic kidney disease. Kt/v was less than 1.2 in 87% patients (n = 47). There was no significant difference in the value of Kt/v in men and women (P = .54) and in different hemoglobin concentration (P = .58).
Conclusions. The results of the study show that the most of hemodialysis patients in this center have not received minimam dialysis dose and we should evaluate and correct its causes.

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Fluconazol in the Treatment of Cutaneous Leishmaniasis in a Kidney Transplant Patient, a Case Report

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Introduction. Leishmaniasis is a well recognized opportunistic infection, which caused by an intracellular protozoan parasite belonging to genus leishmania and is transmitted by the bite of a phlebotomus sandfly. Although, in healthy subjects the mortality and morbidity from this infection is not significant and most of the patients cured with or without treatment; however, depending on the species of leishmania and especially in immunosuppressed patients including solid organ transplant recipients, it can cause an overwhelming visceral disease and lethal systemic illness.
Case Report. We report a case of cutaneous leishmaniasis in a 54 years old diabetic man after kidney transplantation. He had successful unrelated kidney transplantation 14 months before presenting skin lesions. In physical examination, the patient had multiple itchy and erythematous nodules and ulcers in diameter of 1×2 cm with central ulceration over his arms and hands compatible with a diagnosis of cutaneous leishmaniasis. The patient was given intramuscular Glucantime 20 mg/kg daily but he did not tolerate it. Finally, he was treated with Fluconazol and after two weeks the ulcers healed.
Conclusions. Cutaneous leishmaniasis should be considered as a differential diagnosis of each nodule or chronic skin lesion in kidney transplant patients. Although, antimonials are the first line drug, Fluconazol can also used in the treatment of cutaneous leishmaniasis.

P304

Prevalence of Idiopathic Hypercalciuria Among Primary School Children in Rasht, Iran

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Introduction. Hypercalciuria is defined as 24-hour urinary calcium excretion more than 150 mg in an adult female, more than 200 mg in an adult male, or more than 4 mg/kg/d in a child who weighs less than 60 kg. Hypercalciuria is the most common identifiable cause of calcium kidney stone disease. Idiopathic hypercalciuria is diagnosed when clinical, laboratory, and radiographic investigations fail to determine an underlying cause. Idiopathic Hypercalciuria (IH) is one of the most common human metabolic abnormalities. The aim of the present survey was studying the prevalence and the frequency of urinary tract signs and symptoms of IH in a healthy group of primary school children living in Rasht, Iran.
Methods. In a descriptive cross sectional study from April 2009 to February 2010 among primary school children from 30 schools in Rasht, the Capital city of Guilan province, Iran, 340 children aged 7 to 11 years (mean 9.3 years) were randomly included. Children whose urine calcium (UCa) to urine creatinine (UCr) ratio was more than 0.21 mg/mg, were defined as suspicious cases of hypercalciuria and entered the second stage which was 24-hour urine calcium measurement. Hypercalciuric children (24-hour UCa more than 4 mg/kg) were undertaken some complementary studies including history taking, clinical examination, filling questionnaires, family history study, some laboratory tests (BUN, Cr, Ca, P, ALP, and PTH) and sonography. P values < .05 were considered significant.
Results. The sample consisted of 180 (52.9%) boys and 160 (47.1%) girls. The UCa/UCr ratio was abnormal (> 0.21 mg/mg) in 47 (13.8%) children, 55.3% of them were boys and 44.7% girls. Among those who were tested for 24-hour urine calcium (44 children),19 children whom 11 (3.3%) were boys and 8 (2.3%) were girls showed urinary calcium excretion more than 4 mg/kg/d (definitely positive) with normal concentrations of serum calcium, creatinine and BUN and we defined them as idiopathic hypercalciuria. Chi-square test showed there was no statistically significant difference between the prevalence rate in males and females (P = .21). Prevalence of IH in our study was estimated 5.6%. In 5 children, intermittent abdominal pain was present. Two boys and 1 girl showed microscopic hematuria of which one boy had nephrolithiasis. Two children had secondary enuresis. We found urinary tract

infection that was not recurrent and regarding its good response to antibiotics, we could not relate it to hypercalciuria.

Conclusions. We found a prevalence of 5.6% for idiopathic hypercalciuria in our region. Considering high prevalence of hypercalciuria and the frequency of attributed signs and symptoms and also its consequences, we suggest thinking about hypercalciuria while facing to all urinary system clinical manifestations.

P305

Effect of Spironolactone-Placebo and Spironolacton-Losartan on Microalbuminuria in Type II Diabetes Patients

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Introduction. Diabetic nephropathy is the most important cause of end-stage renal disease. Aldosterone has role in renal damage through induction of fibrosis, inflammation, and necrosis. It is supposed that the use of ARBs and ACE-inhibitors alone do not prevent the effects of aldosterone mediators. Therefore, because of availability of cheap and effective Spironolactone and its effect on reduced proteinuria, in our study we investigated the effect of spironolactone on the reduction of albuminuria in type II diabetic alone and in combination with Losartan.

Methods. This was a double blind random prospective study in 56 patients with type II diabetic nephropathy. The patients were divided into two groups: Group 1, Type II diabetic patients that receiving Spironolactone 25 mg daily plus half placebo tablets twice a day; Group 2, Type II diabetic patients who received 25 mg daily Spironolactone plus Losartan 12.5 mg twice a day. Albuminuria levels at the beginning and end of treatment were measured. Data from each group approach with Repeated measured data test, sum of squares test and t test. P value < .05 were considered statistically significant.

Results. Out of 46 patients in the study, 14 patients (30.4%) were males and 32 (69.6%) were female. Fifteen patients (32.6%) randomized to Spironolactone and placebo treatment. Thirty-one patients (67.4%) were treated with Spironolactone and Losartan. Microalbuminuria after 3 months of Spironolactone therapy in the treatment groupe-placebo 62.5% and in the treatment group by Losartan 64.4% has fallen, which was not statistically significant difference ($P > .05$). In addition, effectiveness of two treatment groups was the same. Mean serum potassium after treatment in two treatment groups had no statistically significant difference ($P > .05$).

Conclusions. In this study, we have shown that treatment with 25 mg daily dose Spironolactone alone compared with treatment Spironolactone and Losartan in patients with diabetic nephropathy equally effective in reducing microalbuminuria.

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The Effect of Intradialytic Aerobic Exercise on Serum Electrolytes Levels in Hemodialysis Patients

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Introduction. Hyperkalemia and hyperphosphatemia play an important role in morbidity and mortality of hemodialysis patients. There are some evidences that showed intradialytic exercise increases removing of phosphate and potassium. This study examined the effect of intradialytic exercise on serum phosphate, calcium and potassium and hemoglobin (Hb) levels.

Methods. This study is a single-blind randomized clinical trial. The samples included 50 End-Stage Renal Disease (ESRD) patients (25 cases and 25 controls) who underwent hemodialysis in Imam Khomeini hospital, Sari, more than three months during 2010. Serum phosphate, calcium, potassium, and Hb levels were measured initially, at the end of 4th week and 8th week of study. Data were analyzed using parametric and non-parametric statistics tests.

Results. The mean age of subjects was 54.76 ± 12.55 years. Serum phosphate decreased 1.84 mg/dL that was significant in case group at the end of the study (P = .000). The rate of serum potassium was decreased to 0.69 mg/L that was also significant (P = .001). Statistically significant differences were not observed in other results.
Conclusions. Based on the findings of this study, it can be concluded that 15 minutes intradialytic range of motion exercise can significant reduce in serum phosphate and potassium, and slight increase of hemoglobin level.

P307

Correlation Between Serum Magnesium and Cardiovascular Disease in Hemodialysis Patients

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Introduction. There are associations between Magnesium (Mg) and some risk factors of cardiovascular disease and atherosclerosis, like lipid profile, albumin, CRP, phosphorus, Parathyroid Hormone (PTH), diabetes mellitus, and other clinical characteristics in hemodialysis patients. The aim of this study is to examine these associations.
Methods. This study was conducted on 103 patients with end-stage renal disease on maintenance hemodialysis for 3 sessions per week each lasting 4 hours. All patients were subjected to full history and clinical examination. Systolic and diastolic blood pressures were measured before dialysis. Laboratory assessments were performed before hemodialysis sessions and in 12-hour fasting states. Patients were divided into two groups according to their serum Mg concentration, as follows: < 2.6 mg/dL, n = 34; and ≥ 2.6 mg/dL, n = 69.
Results. The mean age of patients was 57.4 ± 15.4 years, with 66 (64.1%) being male. The mean serum Mg was 2.8 ± 0.55 mg/dL (range 1.7 to 7 mg/dL). There were no significant differences in serum Mg between lower and upper values of HDL, triglycerides, LDL and history of hypertension. Out of the 103 patients, only one person (1%), had hypomagnesemia (Mg level < 1.8 mg/dL), 41 (39.8%) had normal range of Mg level (1.8 to 2.6 mg/dL), and 61 (59.2%) had Mg level > 2.6 mg/dL. Serum Mg was positively correlated with plasma phosphorus level (P < .0001) and albumin (P = .01). There were no correlations between serum magnesium level and age, BMI, systolic BP before dialysis, serum calcium, LDL, HDL, TG, and Apo(a). Serum albumin (r=0.24, P= .01), and serum phosphorus level (r=0.35, P < .0001), had significant positive correlation with serum Mg.
Conclusions. In our study there was no correlation between Mg and atherogenic lipids, serum Ca, and PTH in maintenance hemodialysis patients.

P308

Percentage of Students Classified as Hypertensive or at Risk for Hypertension in School–Aged Children by Gender, Weight and Height in Tehran

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Introduction. Hypertension (HTN) is one of the most common diseases in the world and a major risk factor for cardiovascular, renal, and neurologic diseases. It seems that HTN and overweight in American children are a growing epidemy. The Aim of this study was to investigate the prevalence of hypertension in school-aged children.
Methods. In a cross sectional descriptive study, blood pressure and anthropometrics evaluations were performed on school-aged children in Tehran from 2008 to 2009. Children aged 7 to 11 years from 5 public schools in Tehran were included. Blood pressure, weight, and height measurement would be performed at the school. At each school screening, 3 seated-blood pressure, weight and height measurements were made. It was done at least after 3 minutes of rest and choosing proper cuff. Blood pressure was measured by a pediatric nephrologist and a pediatric assistant. For statistical analysis descriptive statistics, chi-square test, analysis of variance, post hoc analysis and logistic regression analysis were performed.

Results. We evaluated 425 school-aged children 54% were female and the rest of them were male. Mean of age for female students was 9.21 ± 1.31 and for male group was 8.54 ± 1.30. Totally, 24% of primary school children had HTN. The prevalence of HTN in female and male group was 35.4% and 11.2%, respectively. Totally, 12% of our study group was overweight (53 out of 425 students). In normotensive group, 15.5% of students were overweight and in hypertensive group 11.5% were overweight ($P < .41$). There was a significant difference in prevalence of hypertension between girl students of north of Tehran and girls of the other parts of Tehran ($P < .001$). There was not any significant difference in prevalence of hypertension between boy students of center part and east part of Tehran. We also revealed that overweight was more common in students of center part of Tehran. In boys' student, there was not any significant difference in prevalence of overweight between geographic parts of Tehran.

Conclusions. We concluded that hypertension is a common problem in school-aged children and females are more susceptible to hypertension than males. Our study re-emphasized the need for prevention and control of high blood pressure in children to curb the global diseases burden due to HTN.

P309

Kidney Ultrasonography and DMSA Scan for Revealing Vesicoureteral Reflux in Children With Pyelonephritis, a 7-Year Prospective Cohort Study of 1500 Pyelonephritic Patients and 2986 Renal Units

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Introduction. The presence of Vesicoureteral Reflux (VUR) has been documented in 1.3% of normal population and 70% in infants with Urinary Tract Infection (UTI) and 15% to 25% in children with UTI. The main aims of this prospective cohort study were to compare the value of different imaging techniques [renal ultrasonography, cortical scintigraphy with technetium-99m dimercaptosuccinic acid (99mTc DMSA)] in detecting VUR in acute pyelonephritis.

Methods. Between June 2003 and March 2010 a prospective cohort study on patients 1 month to 14 years of age was done. Pediatric patients with documented UTIand imaging evidence of upper tract involvement were examined with DMSA scintigraphy, renal ultrasonography and Voiding Cystoureterography (VCUG). The evaluation to be performed in study group included a UTI profile, kidney ultrasonography and DMSA scan. Data were expressed as mean ± SD. Statistic test was two-tailed and was considered significant when $P \leq .05$.

Results. A total of 1500 pediatric patients were eligible for treatment of pyelonephritis. DMSA scans were normal in 20.2% and abnormal in 79.8% and the kidney ultrasonographies were reported normal in 68.5% and abnormal in 31.5%. There was a significant difference in ultrasonography reports between patients with normal and abnormal DMSA scans. The VCUGs were reported normal in 74.1% and VUR in 25.9% (VUR grade I in 10.7%, grade II in 7.3%, grade III in 4.7%, grade IV in 1.7% and grade V in 1.5%). The refluxes were unilateral in 62.9% and bilateral in 37.1%. We found a significant correlation between the presence of VUR in VCUG and urological abnormality in ultrasonography ($r=0.14$, $P < .001$). Among patients with severe abnormality in DMSA scintigraphy the percent of VUR was significantly higher than patients with normal DMSA or mild to moderate changes of DMSA scintigraphy.

Conclusions. We concluded that kidney ultrasonography and DMSA scan be used before VCUG in children with UTI. In addition, we recommend performing VCUG in first pyelonephritis only when they show abnormal kidney ultrasonography or DMSA scan results.

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Prediction of Vesicoureteral Reflux in Children with First Urinary Tract Infection by DMSA and Ultrasonography

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Introduction. Urinary Tract Infection (UTI) is one of the most common causes of febrile infectious diseases in children and Vesicoureteral Reflux (VUR) is a significant risk factor for UTI. Voiding Cystourethrography (VCUG) is a method of choice for evaluation of VUR. This study was conducted to predict VUR bytechnetium 99 m -labeled Dimercaptosuccinic acid(DMSA) and ultrasonography(US).
Methods. In this study, all children with first time acute pyelonephritis were selected and evaluated by DMSA and US, as soon as possible, and VCUG after negative urine culture. All children with final diagnosis of obstructive congenital anomaly were excluded. Then the sensitivity, specificity, positive predictive values, Negative Predictive Values (NPV), confidence interval of DMSA and US for prediction or exclusion of VUR were assessed.
Results. Among 100 children diagnosed with UTI, VUR was detected in 39 children and 60 (31.5%) units kidney had VUR. DMSA was abnormal in 103 units (51.5%) that 45 units had VUR (PPV = 44%) and 79 units with normal DMSA scan had not VUR (NPV = 81%). To evaluate kidney units that were abnormal by DMSA or US, 51 unites had VUR (PPV = 44%) and NPV was 56%.
Conclusions. DMSA scan alone or with US can not predict especially low grade VUR. However, according to NPV, it seems that we can predict the absence of VUR. So, more studies are needed to use DMSA and US instead of VCUG.

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Congenital Imperforate Hymen Causing Renal Failure, Case Report

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Introduction. Imperforate Hymen (IH) is one of the simple anomalies in the female genital organs, leading to hydrometrocolpos, and hematocolpos. Although, as association with other congenital anomalies has reported, isolated IH is the most common finding, occurring in 0.1% of girls born at term.
Case Report. A 5-month old girl infant with fever and poor feeding was admitted. She treated as a case of Urinary Tract Infection (UTI) regarding to active urine and leukocytosis, supported by isolation of E-coli from a supra-pubic urine sample. The serum creatinine level was 1.2 and 45 mg/dL, respectively. She was an undernourished infant who born via vaginal delivery, weighing 2.9 kg and no any overt congenital anomaly. The ultrasonographic evaluation revealed a normal left kidney, with mild fullness of collecting system. The right kidney was also not visualized. There was a large midline pelvic cystic mass, could be a hydronephric sac of an ectopic right kidney. The renal dimercaptosuccinic acid scan showed a normal left kidney with no any evidence of renal tissue at the right. The voiding cystourethrography revealed a vesicoureteral reflux grade V at the left, with a large bladder. The Intravenous pyelography (IVP) showed a long segment stricture of distal left ureter resulting left sided hydroureteronephrosis due to pressure effect of the pelvic mass. The right kidney was not visualized. The bladder was pushed right laterally. Regarding to the midline pelvic mass showing in the IVP, her external genitalia was carefully inspected. There was a bulging introitus, so the imperforate hymen was diagnosed and hymenectomy was performed. On cystoscopy, there was no any orifice in the right side of the trigone, bladder neck and urethra. A double J catheter was fixed on the left urinary system. She was discharged 3weeks later in good condition with normal renal function.
Conclusions. Careful examination of external genitalia including the hymen is an important part of evaluation of any newborn girl and who has UTI, particularly when she has a pelvic mass. The vaginal opening should be fully visible at birth. With early diagnosis, possible urinary complications of IH can be prevented only by a simple hymenectomy.

P312

Survey on Blood Lead, Copper, and Plasma Aluminum Concentrations in Dialysis Patients, a Multicentric Study

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Introduction. Chronic renal failure is a clinical

syndrome in which renal functions compromise irreversibly due to loss of nephron. These patients are susceptible to toxicity or deficiency of some trace elements. The heavy metals such as aluminium, lead, and copper are in this group.

Methods. Seventy-six chronic hemodialysis patients are selected consecutive and non-random from patients who refer to Imam Khomeini hospital of Tehran and Shohaday-e-Ashayer hospital of Lorestan. Patient blood sampling (4 cc) were taken before dialysis, in plastic acid-wash tubes for aluminium and copper, and in tubes included EDTA (anti coagulant) for lead. Information of each patient was recorded in a questionnaire.

Results. The mean serum level of lead, copper and aluminium in Tehran study were 7.003 ± 2.85 µg/dL, 100.9 ± 12.52 µg/dL, and 23.75 ± 6.57 µg/L, respectively. The mean serum level of aluminium was 21.9 µg/L, in Lorestan study.

Conclusions. According to normal blood level of aluminium, lead, and copper in the patients on the present study, probably their effects are minimized on the metabolic complications in patients. There is no significant difference between serum aluminium levels in two centres. Other trace elements must be studied in other studies.

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Renal Function Among Adult With Recurrent Calcium Kidney Stone Disease

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Introduction. Because the prevalence of nephrolihiasis and chronic kidney disease has risen over the past three decades, we sought to determine if person with a history of kidney stones have lower renal function compared to non-stone formers.

Methods. We conducted a case-control study enrolling 138 recurrent calcium kidney stone formers and 127 age and gender matched controls with no history of renal disease. All subjects were aged 30 to 55 years old, with no history of HTN, DM, CHF, and liver disease, and no urinary tract obstruction and medications can affect GFR. We estimated GFR by modification of Diet in Renal disease (MDRD) equation and categorized using cut points suggested by K/DOQI guidelines: stage I (GFR > 90 mL/min), stage II (60 < GFR < 89 mL/min), stage III (30 < GFR < 59 mL/min).

Results. Mean GFR in case group and control group was 89.90 (22.36%) mL/min and 89.28 (19.41%) mL/min, respectively (P = .38). Distribution of GFR among stone formers in stage I, II, and III was 53 (38.4%), 76 (55.1%), and 9 (6.5%); and in control group was 53 (41.7%), 72 (56.7%), and 2 (1.6%), respectively. There was no significant difference between GFR in all stages of CKD. Even though it seems to be an inverse correlation between GFR and number of passed stone and ESWL session in case group, it was not significant.

Conclusions. In our study, there was no significant difference of GFR in stone former and control group. Proportion of case in stage III is more than control but is not statistically significant that may be because of low sample size.

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Sodium Intake and Correlation of Urine Sodium in Spot Urine and 24-Hour Urine

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Introduction. Level of sodium (Na) intake has an important effect on blood pressure and cardiovascular disease, and reduction in salt consumption is important as primary prevention of hypertension and cardiovascular disease. Salt intake is estimated by either urine 24-hour sodium excretion or 24-hour dietary recall (which is unreliable). In this study, we evaluated salt intake and correlation of urine Na in spot urine and 24-hour urine collection.

Methods. We evaluated 271 male aged 30 to 50 years old for urine Na, creatinine, and chloride in urine 24-hour collection and spot urine. Subjects have no history of DM, HTN, liver disease, renal failure, and they were not on any medication. For

more accuracy, both urine 24-hour and spot urine were collected 2 times in 2 different days.
Results. The mean 24-hour urine sodium was 210.30 (79.53%) meq/d. Urine sodium was less than 100meq/d in 13 (4.8%), 100 to 170 meq/d in 84 (31%), 170 to 205 meq/d in 49 (18.1%), 205 to 256 meq/d in 56 (20.7%), and > 256 meq/d in 69 (25.5%) of subjects. There is a significant correlation between Na/Cr and Cl/Cr in spot urine and urine 24-hour sodium. Pearson correlation coefficient was 0.268 and 0.198, respectively (that is a weak correlation).
Conclusions. Salt intake is high in male and probably general population (> 12 g/d). Salt intake is < 6 g/d only in 5%, 6 to 10 g/d in 31%, 10 to 12 g/d in 18.1%, 12 to 15 g/d in 20.7%, and > 15 g/d in 25.5%. Sodium and chloride in spot urine is not a good predictor for sodium in 24-hour urine.

P315

Urinary Incontinence in Children and Lower Urinary Tract Anomalies, Comparing Patients Younger and Older Than 5 Years

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Introduction. This study was conducted to define prevalence of lower urinary tract anomalies in children 3 to 5, and > 5 years who wetted during day and night.
Methods. Sixty-seven neurologically normal children who referred nephrology clinic with chief complaint of day and night incontinence were evaluated in a 3-year period (2007 to 2009). Patients with neurologic deficits (myelodysplasia, spinal cord disorders, and mentally retarded children) excluded from study. Urine analysis, urine culture, renal -bladder ultrasonography, and Voiding Cystourethrography (VCUG) were done for all.
Results. Fifty-one patients ≥ 5 years (34 girls, 17 boys) and 16 patients < 5 years (9 girls and 7 boys) included in the study. 17 patients (1/3) had UTI at presentation, 12 patients ≥ 5, and 5 children < 5 years. Vesicoureteral Reflux (VUR) was reported in 7 (43.8%) and 9 (17. 7%), in patients < 5 and ≥ 5 years, respectively ($P > .05$). In patients aged ≥ 5 years, VUR was found in 11 KUU, including VUR grade III (6), grade IV (2), grade V (2), and grade I (1), while in patients < 5 years, VUR was reported in 8 KUU, including VUR grade II, III, IV, and V in 2, 2, 3, and 1 KUU, respectively.
Conclusions. VUR is a common finding in children with day and night incontinence either those < 5 year or patients ≥ 5 years old. Since this study included a few number of small children (< 5 years old), more studies are needed to define lower urinary tract anomalies in small children with incontinence.

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Response to Low Dose Oxybutynin in Childhood Enuresis

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Introduction. To evaluate response to low dose oxybutynin (2.5 to 5 mg/d) in children with enuresis either monosymptomatic or non-monosymptomatic forms.
Methods. First 96 of 111 neurologically normal enuretic children who referred to nephrology clinic in a 3-year period (2007 to 2009) were chosen for evaluating response to the drug. The response of patients to the drug in one-month and 3-month periods was analyzed. Fifty-five out of 96 patients who received the drug, but did not have regular follow up excluded from study. Finally, 41 patients who were followed regularly enrolled study. No response, partially, and full responses were defined as decreased in bed wetting in the rate of 0 to 49%, 50 to 89%, and ≥ 90%, respectively.
Results. In first month of treatment full, partial, and no responses were reported in 3 (7.3%), 14 (34.1%), and 24 (58.6%) patients, respectively. In non-responder patients 6 (25%) and 5 (20.9%) patients had full and partial responses in 3-month treatment period, whereas 13 (54.1%) had no response. Actually 2/3 of patients responded to the drug in 3-month treatment. There was no significant differences between variables such are age (≤ 10 years, > 10 years), gender, family history of enuresis, and presence of absence of daytime symptoms in responder and non-responder groups ($P > .05$, for all). It means that cannot predict which groups of patients will have favorable responses.

Conclusions. According to our study low dose oxybutynin is a good treatment for childhood enuresis either those with symptoms of overactive bladder (NMNE) or those with MNE, and short course treatment (3-month therapy) results in reasonable response in majority of patients.

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Invasive Fungal Infection After Renal Transplantation

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Introduction. Invasive Fungal Infection (IFI) are a leading cause of infection-related mortality among kidney allograft recipients. The aim of our study was to estimate the incidence and etiology of systemic fungal infections in renal allograft recipients in Sydney transplant facility.
Methods. 471 kidney recipients, transplanted between 2000 and 2010 at the Westmead hospital renal transplantation center, Sydney, were retrospectively surveyed.
Results. IFIs developed in 10 of 471 patients (2.1%). With the average 42.9 ± 13, new kidney transplants per year, the incidence of IFI was 0.9 ± 0.6 for each year of transplantation. Four patients had received kidneys from living donors and seven from deceased donors with the average age of 50.5 ± 14 years. The mean time to IFI was 33 months after transplantation with majority within first two years. Cryptococcus Neoformans was responsible for 50% of episodes (n = 5) followed by Aspergillus Fumigatus (n = 3), Pseudallescheria Boydii (n = 3) and then a single case of Mucurmycosis (n = 1). Lungs (n = 5) followed by meninges (n = 4) and skin (n = 3) were the most commonly involved sites.
Conclusions. IFI remains a major concern in renal transplantation. A high index of suspicion is required for early diagnosis and treatment in order to reduce the mortality. In this regard, appropriate diagnostic tests are necessary, particularly for C. Neoformans.

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Peritonitis in Continuous Ambulatory Peritoneal Dialysis Patients in Shiraz, Iran

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Introduction. Peritonitis is one of the major concerns of chronic Peritoneal Dialysis (PD). It is one of reasons of switching to hemodialysis as well as one of the PD patients' concerns when starting PD.
Methods. We used the data from Iranian PD registry and reviewed the files and charts of patients who experienced peritonitis in timeperiod from 2004 to 2009.
Results. Thirty-seven PD patients with mean age of 49 ± 15 years (ranges from 19 to 83) were included in the analysis. They were all on chronic ambulatory PD with no cases of automated PD. Fifty episodes of peritonitis were reported in 37 patients, 27 patients with one, 7 patients with two, and 3 patients with three episodes. The mean time of developing the first episode of peritonitis after starting PD was 316 ± 329 days, 28 of them (75%) within the first year, especially within the first 3 months (n = 8, 21%). The time between the first and the second episodes was 175 ± 128 days (ranges from 18 to 407). Culture data of 20 episodes were available with 8 episodes (40%) were culture negative. Staph epidermis (n = 3, 15%) and Streptococcus spp. (n = 3, 15%) followed by Staph aurous (n = 2, 10%) were the most common isolates. Withdrawal from PD occurred in 14 patients because of peritonitis, 10 switched to hemodialysis and 4 resulted in death. Hypertension (45%), diabetes mellitus (32%), and both hypertension and diabetes (21%) were the most common underlying diseases.
Conclusions. Peritonitis is still the main reason for withdrawal from PD. Special attention should be paid to reduce the rate of peritonitis particularly in the first year of starting PD.

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Prevalence of Hypertension in Hemodialysis Versus Peritoneal Patients

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Introduction. Hypertension is a common problem in patients with End-Stage Renal Disease (ESRD); therefore, we assessed the prevalence of hypertension and the efficacy of dialysis therapy on patients with ESRD.
Methods. Sixty-six patients (48 ± 18.03 years, 43.9% males) were studied who were selected form Qaem hospital and Imam Reza hospital (clinical and educational centers in Mashhad, Iran), 34 Peritoneal Dialysis (PD) and 32 Hemodialysis (HD) patients. The blood pressures (BP) of the patients were evaluated in HD patients (pre- and post- dialysis) and PD patients. Hypertension was defined as an average predialysis systolic blood pressure ≥ 140 mmHg or diastolic blood pressure ≥ 90 mmHg (the seventh report of the Joint National Committee guidelines).
Results. Out of 66 patients, 15 (22.7%) were hypertensive. The prevalence of systolic and diastolic hypertension were not different among PD patients and predialysis HD patients (P = .036, P = .163, respectively). The prevalence of hypertension in PD patients and postdialysis systolic and diastolic hypertension in HD patients had a significant differences (P = .02).
Conclusions. Our results proved that in two modalities of renal replacement therapies (HD and PD), the control of blood pressure was similar. There was a significant correlation between fluid loss during HD and control of blood pressure.

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Demographic Characteristics of Peritoneal Dialysis Patients in Isfahan

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Introduction. There are more than 150 active Peritoneal Dialysis (PD) patients in Al-Zahra medical center in Isfahan. This center has been working since 2000. We evaluated demographic characteristics of our PD patients.
Methods. It is an observational descriptive study done in 2011. The information was collected from all patients' records in Al-Zahra medical center until end of 2009.
Results. 1) Out of 240 patients, the mean age was 48 ± 21 years. 2) 57% of patients were male. 3) Diabetes mellitus, hypertension, and glomerulonephritis were the most common cause of chronic kidney disease, 44%, 30%, and 4%, respectively. 4) The most common age group was the 7th decade (22.5%) and the least common age group was the 2nd decade (5%). 5) 27% of patients were single. We do not have information about divorced and unmarried patients. 6) The level of patients' education was 38%, 38%, and 24% for illiterate, under diploma, and diploma or university education, respectively. 7) The number of co-morbid diseases (cardiovascular, diabetes mellitus, etc.) in our patients was 13%, 41%, 25%, 15% for none, one, two and three co-morbid diseases, respectively. 8) History of hemodialysis: 54% had history of hemodialysis equal or less than 6 times. 9) Body mass index of our patients < 19, 19 to 25, 26 to 30, and > 30, were 15%, 51%, 29%, and 5%, respectively. 10) In 77% of our patients, peritoneal dialysis was the first choice for renal replacement therapy. 11) PD was used as renal replacement therapy as a positive selection for 85% of patients.
Conclusions. PD was the first choice of renal replacement therapy in most of our PD patients and used as a positive selection. It shows that PD has become a popular form of renal replacement therapy and we need more PD centers to cover patients.

P321

Does Intraperitoneal Heparin Affect the Level of CA125 in Peritoneal Dialysis Effluent of Peritoneal Dialysis Patients?

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Introduction. Cancer Antigen 125 (CA125) level in dialysate effluent is a marker of mesothelial cell mass in stable Peritoneal Dialysis (PD) patients and declines with duration of PD. Heparin also has anti–inflammatory effect, and may reduce the deleterious effects of peritoneal dialysis solutions on mesothelial cells. The aim of this study was to evaluate the effect of heparin on prevention of mesothelial cell loss by measuring CA125, a marker of mesothelial cell mass.
Methods. In a double blind randomized clinical trial, 74 Adult Continuous Ambulatory Peritoneal Dialysis (CAPD) patients were enrolled the study and divided into two groups, each group contained 37 patients. The first group received 5000 units intraperitoneal (IP) heparin daily added to dialysate and the second group received IP distilled water daily as placebo. Patients were followed for 9 months and effluent CA125 level was measured by ELISA method, before the study, 4.5 months and after 9 months. Patients should not have used heparin more than one time per week before the study and should not have had peritonitis during the month before the study or during the study; otherwise, they exit. The data were analyzed by *t* test, chi-square and repeated measure ANOVA.
Results. The mean effluent CA125 levels were 17 ± 19 U/mL and 18 ± 20 U/mL (at the beginning), 15 ± 10 U/mL and 20 ± 30 U/mL (after 4.5 months), and 7 ± 11 U/mL and 8 ± 10 U/mL (at the end of the study) in the heparin and placebo group, respectively. CA125 changes was not significant between groups ($P = .58$), but was significant within groups ($P < .001$). There was not any relationship between CA125 level and age, sex, cause of renal failure, and duration of peritoneal dialysis ($P > .05$).
Conclusions. We did not find any relationship in CA125 effluent level between patients using IP heparin or placebo; however, IP CA125 level was decreased in both groups, which may indicate that heparin has no effects on mesothelial cell mass as shown by CA125 level. Time on dialysis causes chronic injury to peritoneal mesothelial cells and less production of CA125 by these cells.

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Stills Disease and Nephrotic Range Proteinuria

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Introduction. Adult-onset stills disease (AOSD) is a systemic inflammatory disorder, characterized by spiking fever, skin rash, and arthritis. However, the renal involvement is a rare manifestation of the disease. Here we report a case of a 23-year old female diagnosed with AOSD with kidney disease presentation.
Case Report. We describe here a 23-year old female with history of intermittent polyarthritis, fever and flu like symptoms, since 4 years ago. She was treated with Prednisolone and NSAIDs; however, she did not fully respond to medications. Since two year ago, she was found to have several episodes of disease flare up with multisystemic manifestations, including high spiking fever, arthralgias, lymphadenopathy, striking hyperferritinemia, and nephrotic range proteinuria with a normal serum BUN and creatinine concentration levels. Renal biopsy was associated with the minimal histological changes. Laboratory tests for other diseases were negative. By excluding other diseases, diagnosis of AOSD was suggested. Azathioprine and steroid were started for her and NSAIDs was discontinued. However, the proteinuria was still existed after several months of therapy. By changing the medication to Cyclosporine, low dose steroid, and NSAIDs; proteinuria was decreased toward normal ranges.
Conclusions. Clinicians should be aware that proteinuria can be a manifestation of still's disease. In these patients, urinalysis and renal function should be routinely monitored.

P323

The Effectiveness of Low Dose Daclizumab Compared With Standard Regimen for Acute Rejection Prevention After Renal Transplantation in Kerman, Iran

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Introduction. One of the most important therapeutic problems in kidney transplant patients is preventing of acute graft rejection. The purpose of this study was to investigate the efficiency of low dose Daclizumab for prevention of acute kidney graft rejection in living donor recipients.
Methods. This clinical trial study was performed on 120 living donor kidney recipients who were admitted in kidney transplant ward of Afzalipor hospital, Kerman. Sixty patients, as a case group, received Cyclosporine, Mycophenolate Mofetil, and Prednisolone plus Daclizumab at a dose of 1 mg/kg before transplantation and then two weeks later. The others received all above except Daclizumab. All patients were followed up at least for 6 months.
Results. The rate of acute rejection was significantly lower in case group (6.7 versus 18.3, $P = .048$). The six months graft survival rates at case group were 95% and at control group 85%. The 12 and 18 months graft survival rates were 95% in case group and 82% in control group. The mean graft survival time was significantly different between two groups (at case group 17.2 months and at control group 14.8 months, $P = .040$). There was a significant difference in 6 months graft survival between the women of the case and control groups (97% versus 74%, $P = .02$) but it was similar for the men (94% and 92%). The incidence of serious infection was similar in the case group to that in the control group.
Conclusions. The use of induction therapy with two doses of Daclizumab in living donors kidney reciepients reduces the incidence of acute rejection with improving graft survival espacially in women and dosen't result in more infectious complications.

P324

Severe Febrile Illness With Acute Kidney Injury After Swimming in River

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Introduction.

Case Report. A 21-year old female felt ill 3 weeks after swimming in a river. She developed fever, chills, severe headache, myalgia, arthralgia, generalized weakness, transient skin rash, blurred vision, and glossitis. The patient developed elevated serum creatinine (5.6 mg/dL), elevated liver enzymes and CRP, pancytopenia. Urinanalysis showed microscopic hematuria without proteinuria. Microagglutination titre for leptospirosis was 1/200 (In her endemic area, titres less than 100 is accepted as normal value). The patient treated with Ampicillin. Treatment led to a rapid improvement of patient's condition and also of the laboratory findings.
Conclusions. Leptospirosis is considered in febrile patients with severe headache, fever, elevated liver enzymes, acute kidney injury, and a history of close contact to potentially contaminated water.

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Correlation between Inflammatory Cell Infiltration and Histopathologic and Clinical Manifestations of Lupus Nephritis

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Introduction. Lupus Nephritis (LN) is one of the severe manifestations of Systemic Lupus Erythematosus (SLE) which is associated with an increased morbidity and mortality, part of which is related to the side effects of immunosuppressive therapy. Determining the subsets of infiltrating cells in kidney biopsy and their correlation between histological presentation, clinical, or serological data might help in instituting novel targeted therapy and predicting prognosis.
Methods. Thirty-five patients with biopsy-proven diagnosis of LN were evaluated retrospectively, during 2007 to 2009, for systemic lupus erythematosus disease activity index (SLEDAI), Glomerular Filtration Rate (GFR), proteinuria, hematuria, and serologic findings. Paraffin-embedded specimens were classified according to WHO classification and immunohistochemical staining was performed to determine CD20+, CD3+, CD68+ cells, and their pattern of distribution.
Results. Twenty-nine female and 6 male patients

with mean age of 31.4 ± 8.9 years (18 to 49 years) and SLEDAI of 19.2 ± 10.5 were included. All patients had proteinuria with mean amount of 3315.1 ± 3.6 mg/d, 12 patients with nephrotic range proteinuria and 29 patients had hematuria. Mean serum creatinine was 1.6 ± 1.1 mg/dL. Ninety-one percent were ANA positive and 22 patients had class IV LN. Tubulointerstitial CD3+ cells infiltration was present in all the samples with mean of 11.5 ± 5.9 cell/mm^2 and was correlated with the chronicity index (r = 0.466). Tubuloinerstitial infiltration of CD68+ cells (mean of 10.1 ± cell/mm^2) was correlated with creatinine level at presentation, GFR, and chronicity index (r = 0.473, 0.443, -0.385; respectively). Tubulointerstitial infiltration of CD20+ cells (mean of 4.3 ± 3.1 cell/mm^2) and intraglomerular infiltration of CD3+, CD68+, and CD20+ cells (mean of 0.5 ± 0.7, 0.2 ± 0.9, and 6 ± 3.2 cell/glomerulus; respectively) were not significantly correlated with clinical, paraclinical, and pathological variables.

Conclusions. The correlation between tubulointerstitial infiltration of macrophages and chronicity indices of nephritis may suggest a key role of macrophages in pathogenesis and/or prognosis of LN.