P101

Quantitative Real-Time RT-PCR Assay, a Suitable Method for Detection of Tumor Markers in Peripheral Blood of Bladder Cancer Patients

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Introduction. Bladder cancer is the second most common genitourinary malignancy, with transitional cell carcinoma (TCC) comprising nearly 90% of all primary bladder tumors. Early diagnosis of this cancer is still a major challenge in cancer research and many ongoing works have tried to find a prognostic biomarker in peripheral blood. In this study, the alteration in the mRNA expression of some apoptotic and anti-apoptotic genes in bladder cancer patients were compared with normal group.
Methods. P53, Fas, and Bcl-2 mRNA was assessed in peripheral blood of 50 patients with bladder cancer by real-time quantitative reverse transcription-PCR (QPCR). A total of 50 healthy controls 9sex/age matched) formed the control group.
Results. Data of this study demonstrates that Fas, Bcl-2, and p53 gene transcripts have significantly increased in peripheral blood of patients with bladder cancer in comparison of healthy control.
Conclusion. Data of this study showed that overexpression of p53 and Bcl-2 may be considered as a prognostic biomarker in management of bladder cancer.

P102

Outcome of the Children with Post-Streptococcal Glomerulonephritis (PSGN)

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Introduction. Post-streptococcal glomerulonephritis (PSGN) is the most common type of glomerulonephritis in children causing a wide range of the clinical features. Although, it has usually an excellent prognosis in childhood, some degree of renal impairment may be remained. In rare cases, severe complications may be present, leading to death. Thus, early diagnosis and treatment of its complication is crucial. The aim of the study was to determine the clinical and laboratory features of children with PSGN hospitalized and followed up at Abuzar childrens medical center, Ahvaz, Iran.
Methods. In a retrospective study, the hospital records of 107 children who had been admitted to the center with the diagnosis of PSGN between 1997 and 2001 were studied. All the demographic, clinical, and laboratory data were obtained.
Results. There were 107 children (67% male and 33% female; M/F= 2:1). The mean age was 9 years (range, 2 to 15 years); 87% was between 5 and 12 years. In the majority of them (93.5%), PSGN was pharyngitis-related; in 4.5%, it was pyoderma-related PSGN, and 2% did not have a history of recent infection. Two-thirds of the patients were hospitalized during Winter and Spring. Clinical findings were as follow: facial edema in 94.5% (8% generalized edema), gross hematuria in 82.5%, and hypertension in 62.5% of the patients. Laboratory data were as follows: microscopic hematuria in 100%, mild to moderate proteinuria in 72% (11.5% severe proteinuria), azotemia in 29% (4.5% serum creatinine >1.5 mg/dl), elevated level of anti-streptolysin O in 95%, hypocomplementemia (low C3 level) in 69%, normochromic normocytic anemia in 53.5%, and hyperkalemia in 15.5% of the patients. They were managed by only furosemide in 18.7%, furosemide and nifidipine in 32.7%, and furosemide, nifidipine, and a third antihypertensive drug in 11.2% of the cases. A child had developed hypertensive encephalopathy, but there was no mortality. During the study period, only 40(37.5%) patients had returned for follow-up for an average of 3.5 months. Hypertension, azotemia, and hematuria resolved in all patients, but microscopic hematuria remained in 25% of them.
Conclusion. We concluded that children with PSGN had a very good prognosis with early diagnosis, treatment, and an appropriate follow-up. Therefore, we recommended admitting every case for definite diagnosis and control of hypertension, circulatory overload, and education for follow-up.

P103

Concomitant Pulmonary Tuberculosis and Tuberculosis Appendicitis in a Renal Transplanted Patient a Few Weeks After Sirolimus Start; A Case Report

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Introduction. Tuberculosis is still a serious infection among renal transplant recipients. We report a cse of concomitant pulmonary tuberculosis and tuberculosis acute appendicitis a few weeks after replacement of cyclosporine with sirolimus.
Case Report. A 24-year-old girl was admitted with

prodoctive cough, weight loss, and fever. She had received a renal transplantation 5 years earlier. Six weeks before recent admission and for prevention of chronic allograft nephropathy, her immunosuppressant regimen was changed from cyclosporine 100 mg/BD to sirolimus (1, mg BD). Mycophenolate mofetile was continued at 1000 mg daily. On admission, main laboratory data was as the follows; white blood cell count: 5.1/µl, hemoglubine: 7.2 g/dl, platelets count: 213000µl, FBS: 88 urea; 62 mg/dl, serum creatinine; 1.9 mg/dl, albumin: 2.7 g/l, serum phosphate: 4.4 mg/dl, and serum calcium: 10.4 mg/dl. Plain Direct sputum examination was positive for pulmonary tuberculosis. PPD skin test revealed 5-mm indurations. In the evening of the fourth day of hospitalization, she started a growing pain on her right lower quadrant. Physical examination revealed profound tenderness and rebound. Abdominal CT scan with oral contrast material revealed thickening of the ascending colon with stranding in peri-cecal fat tissues. The peritoneal cavity was opened with a midline incision. The appendix was perforated. Histopathology examination of the appendectomy specimen revealed widespread caseating epithelioid granulomas compatible with tuberculosis. We started anti-tuberculous therapy and she was discharged with relatively good general condition.

Conclusion. Because of immunosuppressive state, prompt diagnosis and management of acute abdomen and appendicitis is very important in renal transplant recipients. With introduction of new and strong immunosuppressive regimens we should be familiar with unusual and rare presentations of tuberculosis, including tuberculosis appendicitis.

P104

Evaluating Adequacy of Obtained Tissue Using Varying Renal Biopsy Approaches

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Introduction. Renal biopsy plays a pivotal role in diagnosis of renal diseases. For a biopsy to be pathologically diagnostic, it is necessary to ensure that sufficient amount of specimen is obtained. The conventional methodology for renal biopsy is the blind approach; however, in the recent years, guided biopsy using CT scan or sonography is advocated. In this cross-sectional study, we have compared the adequacy of obtained specimen from different approaches.

Methods. All renal biopsies that were performed in Al-Zahra and Nour hospitals in Isfahan between 2005 and 2008 were assessed for adequacy of obtained specimen. The total number of biopsies was 788.

Results. Overall, 74% of all biopsies performed yielded adequate specimen for a pathological diagnosis. The rate of successful biopsies was significantly higher in non-transplanted in comparison with transplanted kidneys. However, there seems to be no significant difference between the different approaches used. The results showed that 75.2% of the biopsies performed using blind approach as well as 66.4% of the biopsies performed under CT scan guide and 77.6% of the biopsies guided by sonography yielded adequate tissue.

Conclusion. This study shows that modern methodologies that use CT scan or sonography for guiding the biopsy procedure have no significant advantage over the conventional blind approach in obtaining adequate tissue. We partly attribute the results of the study to the experience of the individuals performing the biopsy using the blind approach.

P105

The Evaluation of Renal Involvement in HCV-Infected Patients

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Introduction. Hepatitis C virus infection is a hepatotropic virus causing a variety of extra-hepatic immunological manifestations and is a risk factor for a variety of extra-hepatic disease such as mixed cryoglobulinemia and membranoproliferative glomerulonephritis. MPGN is the most common glomerulonephritis. The aim of this prospective study is to evaluate renal involvement in HCV-infected patients.

Methods. Between January 2007 and May 2009, 300 HCV antibody–positive adults who were outpatient visitors to HCV clinic of Shariati University hospital were enrolled prospectively. These patients were selected randomly. Serum creatinine was measured by the modified kinetic Jaffe reaction. The Cockroft-Gault and MDRD method were used to estimate creatinine clearance. Urine proteinuria was measured in 24-hr urine sample.

Results. A total of 300 HCV antibody–positive patients [249 males, 51 females with mean age of 37.8 ± 11.7 (range, 18 to 70 years)] were included in this study. The prevalence of proteinuria in HCV antibody–positive adults was 4% (12 patients). The only patient who underwent biopsy, was a 55- year-old man with 4-months history of facial and lower extremities edema and 3-gr proteinuria with a normal renal function (eGFR = 85 ml/min) and normocomplementemia. Kidney biopsy specimens showed membranoproliferative glomerulonephritis. The prevalence of low eGFR in HCV antibody–positive adults was 0.6 % (2 patients). There was no significant relationship between HCV seropositivity and low eGFR.

Conclusion. Our observations show that renal involvement is found in HCV antibody–positive patients. Among immune-complex glomerular renal diseases,

and without cryoglobulins is thought to be the most common in these patients.

P106

Educational Effects of Organ Donation Educational Program about Brain Death on Nurses

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Introduction. Number of transplantation users in our country is very lower than Europe and America due to lack of members and each year, thousands of people lose their lives due to this reason. Meanwhile, we face cases of brain death every day; the body of these brain death patients can improve the life of the patients that are poor. Educational planning for awareness and attitude of the nurses towards organ donation after brain death can be effective in promoting this culture. : This cross-sectional study was performed to evaluate the effect of education on attitudes and knowledge of nurses and emergency care wards of hospitals in Kerman province at the time of brain death organ donation.
Methods. Collecting data was performed using researcher-made questionnaire. The study sample included 120 nurses participating in a seminar on brain death. The questionnaires was completed by nurses once before and once after related training (after two weeks).
Results. Average knowledge of nurses before training was 7.5 ± 2.6 that increased to 9.4 ±0.78 after the training program. Numerical knowledge was considered as moderate level. The average overall attitude of the nurses before and after training was 65.7 ±13.7 and 76.9 ±8.7, respectively. Numerical scores 1-13 and 18-90 was considered for knowledge and attitude, respectively. The results also showed that there was a positive correlation between knowledge and attitude.
Conclusion. Considering the results of this study, more educational awareness for brain death and creating a positive attitude towards organ donation in the health field can be an effective step in promotion of this culture.

P107

Renal Function (GFR) in Iminoral and Neural Cyclosporine in Kidney Transplantation

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Introduction. Kidney transplantation is the replacement therapy of choice for end-stage renal disease (ESRD). Cyclosporine (CSA) is the most frequent ingredient of immunosuppressive regimens. In the present study, renal function of kidney transplant recipients was evaluated using GFR as determinant marker in two periods of treatment with Neoral and CSA soft gelatin capsules (Iminoral).
Methods. In this before-after study, we evaluated all recipients who had kidney transplantation between 2004 and 2007. Participation in the study was voluntary for patients and they could exit study whenever they wanted. Finally, 72 patients remained in the study. Every patient was evaluated as control for his previous status. All patients were treated with a specific dose of Neoral for 6 month and then Neoral was discontinued and replaced by Iminoral with the similar dose. After transplantation, recipients were visited monthly, routine lab test were done, and GFR was calculated and attached to their documents. The researcher remained blind during all research stages.
Results. Treatmen was switched from Neoral to Iminoral in 72 patients (including 33 women and 39 men). The mean GFR in two periods of treatment with Neoral and Iminoral were 65.14 ± 15.73 and 67.39 ± 14.87 and this difference was not significant.
Conclusion. According to our results, Neoral and Iminoral cyclosporin have the same effect on renal function, especially on GFR, in the recipients after transplantation and regarding to the very lower price of Iminoral, it seems that there is no problem in replacing Neoral with Iminoral in recipients' drug regimes.

P108

Mean Random Urine Albumin in Children with Vesicoureteral Reflux and Those with Improved Vesicoureteral Reflux

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Introduction. Vesicoureteral reflux (VUR) has been known to be a risk factor for urinary system of infants and children with urinary tract infection. It can induce permanent adverse effect such as scar, hypertension, and ongoing declining renal function. DMSA renal scan is still a main pointer of acute and chronic damages of kidneys due to VUR. Other unsuccessful attempts including measuring interleukin-6 (IL-6), tumor necrosis factor (TNF)-alpha, and soluble TNF receptor-1 have been done to eliminate its invasive and expensive undesirable effect. The aim of this study was to determine and compare urine mean microalbumin and creatinie and their ratio between 3 groups of 2 to 10- year-old children affected by and recovered from reflux in comparion with normal

matched age group.
Methods. In this cross-sectional study, thirty-three 2- to 10-year children without UTI during the last 3 months, whose reflux or recovery had been diagnosed by VCUG or DRNC, were divided into 2 groups of 16 children affected by reflux, 17 recovered from reflux, and 18 matched normal children groups. Then, the point urine specimens were collected with permission of their parents in a single laboratory, and urine micro-albumin (MA) and creatinine (Cr) for each specimen were measured. Alb/Cr ratio was calculated for each child to evaluate Alb excretion from urine possible without collecting 24-hours urine. MA/Cr ratio mean and MA were compared between the groups. To analyze our data, one way ANOVA test was used.
Results. A total of 51 children, included 16 children affected by reflux,17 recovered from reflux, and 18 normal children were entered to our study. The mean of MA/Crea and MA were 5.039±4.737 and 19.68±13.42 in affected group, respectively, 0.118±0.187 in recovered group and 20.66±12.5 in normal group. There was not a significant statistical difference between the 3 groups for MA and MA/Cr.
Conclusion. Urine mean micro-albumin and its ratio with creatinine did not have any difference in children with reflux, with improved urinary reflux, and normal age matched group.

P109

Comparison of Lipid Profile in Kidney Transplant Patients Who Received MMF or Azathioprine with Cyclosporine and Steroid

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Introduction. Hyperlipidemia is the one of CAD causes (chronic allograft dysfunction) after transplantation and is very prevalent in renal transplant patients. Optimal control of cardiovascular risk factors, especially hyperlipidemia is important in the long–term management of these patients. Immunosupperssive therapy plays an important role for hyperlipidemia.
Methods. In our study, we evaluated the lipid profile of 2 groups of the patients. The first group received cyclosporine A, prednisolone, and MMF, and the second group received cyclosporine A, prednisolone, and AZA. The two groups were matched for age, sex, weight, and lipid profile and serum creatinine at baseline. The patients were followed for lipid profile and serum creatinine at 6, 12, 18 months after transplantation. Exclusion criteria were familial hyperlipidemia, smoking, and post-transplant diabetese mellitus. Inclusion criteria were cholesrole level > 200, TG level > 200, prednisolone dosage < 15mg/day, and serum creatinine level < 2mg/dl.
Results. A total number 58 patients were divided into two groups: group 1 (30 patients) received cyclosporine A, prednisolonem, and MMF, and group 2 (28 patients) who received cyclosporine A, prednisolonem, and AZA. In the first group, serum TG rose after 6 and 12 months but there was no significant rise after 18 months. Change in total cholesterol, VLDL, and HDL was not significant after 6, 12, and 18 months. In the second group, there was a significant increase at the 6 and 12 months after transplantation but at 18 month both values fell back to baseline. No significant change in LDL, VLDL and HDL was seen during our study. There were no significant changes in total cholesterol, LDL, HDL, VLDL between the two groups after 12 and 18 months of transplantation.
Conclusion. Our study showed there these drug regimens had no favorable effects on lipid profile.

P110

Anxiety and Depression in Kidney Transplant Recipients

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Introduction. The receipts of a new kidney may give rise to a new set of stressors, psychosocial challenges and adaptive demands. During the early years post-transplant, psychiatric morbidity is associated with poorer medical compliance and with the occurrence of infections and acute and chronic graft rejection.
Methods. A cross sectional study was undertaken in Shiraz Organ Transplant Center to evaluate depression and anxiety between renal transplant recipients. The study participants consisted of 109 male and 91 female, ages ranged from 17 to 73 years with a mean age of 39.64 years (SD = 12.85) with a mean duration of 51.7±49.2 months of follow-up after transplantation. All patients were assessed with the validated Beck Depression Inventory (BDI) and Beck Anxiety Inventory. SPSS-PC statistics program was used for the statistical evaluation of this study.
Results. Of the 200 participants [109 males (54.5%) and 91 females (45.50/0)] who participated in this study, 75% were depressed and 50% of them had anxiety. Between variables, donor type, dialysis period, post transplant period and rejection had significant relation with depression and anxiety.
Conclusion. In conclusion, our findings regarding prevalence and risk factors point to assessment-related and intervention-related activities that need greater attention in renal transplant recipient population. With respect to assessment, just as psychosocial and psychiatric evaluations are a routine part of most pre-transplant candidacy work-ups, routine evaluation of mental health

status and outcomes is needed and predict longer-term physical health outcomes.

P111

Pediatric Renal Stone: A Problem in Pediatrics

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Introduction. Urolithiasis is a major problem among adult population in fasa. This was attributed to genetic as well as environmental factors. It is known that pediatric stone disease varies geographically, incidentally as well as stone type. This study evaluates the extent of such problem among children and to review the pattern of this disease in our area (south east of Fars-Iran) in comparison with other parts of the world.
Methods. The medical records of all children with renal stone referred to the pediatric nephrology clinic at valiasr hospital during 1year period were reviewed. The clinical history, disease manifestation and all laboratory data including blood gases, serum biochemistry, urine analysis, spot urine calcium, creatinine and uric acid were analyzed. Statistical analysis was carried out by ANOVA test.
Results. A total of 37 patients (<5 years old) were included in this study, with a mean age of 12 months at first renal stone finding. The male to female ratio was 1.84: 1.0. Family history of renal stones was reported in 83% of patients. However, stones were localized in 20.4%, to the right kidney and 23.2% to the left and bilateral stones were found in 60%. Clinical manifestation shows abnormal urine analysis in 50% including pyuria and or hematuria, UTI occurred in 32.43% of patients, While, hypertension and chronic renal failure were not found in patients. Hypercalciuria found in 13.3% of the patients, which may be due to excess use of multivitamin or vitamin A-D in children under 2 years old and appetizer drugs containing vitamin D or Calcium in older children.
Conclusion. Though genetic predisposition, nutrition and metabolic disorders may have an important role in stone formation, but excess use of synthetic drugs like vitamins and appetizers cannot be rule out in stone formation.

P112

Transient Pulmonary Hypertension and Severe Sinus Bradycardia After a High-Dose Intravenous Methylprednisolone; A Case Report

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Introduction. Intravenous glucocorticoid pulse therapy is an important therapeutic modality for many patients with rapidly progressive, immunologically mediated diseases. The most serious and uncommon adverse effect of this therapy is cardiovascular disturbance such as cardiac arrhythmia. Here, we report a patient with ARF who developed transient pulmonary hypertension and severe sinus bradycardia after treatment with intravenous methylprednisolone.
Case Report. The patient was a 20-year-old man that was admitted to our center with acute tubulointerestitial nephritis. We advised a 3-day course of high-dose pulse of metylprednisolone (500 mg/day) for him. Sixteen hours after the first dose, the patient developed persistent resting bradycardia with heart rate of 40 beats per minute and his blood pressure was normal. ECG revealed severe sinus bradycardia. Ecocardiogeraphy was also performed one day later and demonstrated pulmonary hypertension (PAP = 45 to 50 mmhg) with normal LV function (60%). He did not have any symptoms. No specific therapy was given; however, the second and third doses of methylprednisolone were omitted, and high- dose oral corticosteroids were commenced instead. His resting bradycardia and pulmonary hypertension resolved over 40 days and 2 months, respectively.
Conclusion. Severe sinus bradycardia and transient pulmonary hypertension may occur after high-dose intravenous methylprednisolone and we recommend cardiac monitoring in patients who receive this therapy.

P113

Seroprevalence of Cytomegalovirus Antibody in Renal Transplant Recipients and Donors in Khuzestan Province

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Introduction. Cytomegalovirus (CMV) has been recognized as one of the most important opportunistic pathogens in kidney transplant patients. The aim of this study was to determine the prevalence of CMV antibody in donors and recipients before transplantation.
Methods. In a cross-sectional study between March 2008 and August 2009, we prospectively studied donors and recipients who had referred to our kidney transplant center. All of the routine pretransplant laboratory studies

including liver function tests and CMV IgG and IgM antibody were performed for them.
Results. A total of 127 patients (69 donors and 58 recipients) were included in the study. Mean age of donors and recipients were 30 ± 5 years and 45 ± 6 years, respectively. Liver function tests (SGOT and SGPT) were at normal range and marker of HBV infection was negative in both groups but HCV antibody was positive in 3.44 percent of the recipients (n=2) and negative in all of the donors. CMV IgG antibody was positive in 100% of the recipients and 97.1% of donors (n = 67). CMV IgM antibody was negative in 98.27% of the recipients (n = 57) and 97.1% of the donors (n = 67).
Conclusion. CMV infection is very common in donors and recipients candidated for kidney transplantation and in this study, almost all of them had CMV IgG antibody.

P114

Does Kidney Transplant Nephrectomy Stop Disease Progression in Plasma Resistant Post-Transplant Hemolytic Uremic Syndrome; A Case Report

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Introduction. In two different case reports, 5 cases have been reported in whom bilateral nephrectomy (native) could improve severe and refractory hemolytic uremic syndrome (HUS) in adults without a history of transplantation.Here, we evaluate this approach, kidney transplant nephrectomy, in a patient with severe post-transplant HUS.
Case Report. The patient was a 55-year-old man with single small size kidney and ESRD. He had unrelated kidney transplantation 3 months before admission. He was admitted with fever and acute renal failure. Clinical and laboratory evaluation confirmed severe de novo HUS. Different regimens were tried in this patient including intensive plasma exchange and plasma infusion (48 days), high dose of corticosteroid (3 weeks), intravenous gancyclovir (3 weeks), change of cyclosporine to tacrolimus, and empirical antibiotics. Two weeks after admission, hemodialysis was also prescribed (4 times a week) for him because of severe renal failure. Forty-five days later, his condition was very bad and he still had HUS and severe thrombocytopenia (platelets: 10000 to 15000/µl). He also suffered from severe hypersensitivity reaction (fever, chills, and itching) after each plasma exchange. At this time, we also advised kidney transplant nephrectomy. Severe bleeding occurred during and after operation and HUS and thrombocytopenia did not improve. Unfortunately, he died two days after the operation.
Conclusion. Kidney transplant nephrectomy was not effective in the treatment of severe and refractory post-transplant HUS and according to this case it is not recommended.

P115

Outcome and Short-Term Complications of Renal Transplantation between Cadaver and Live Donors

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Introduction. Renal transplantation is one of the common treatments for chronic renal failure. This procedure can be performed either via harvest surgery or a live donor. This study evaluated outcome and short-term complications of renal transplantation among cadaver and live donors.
Methods. This is a cohort retrospective study among all patients who underwent kidney transplantation surgery in our hospital between 2003 and 2005. Demographic characteristics, outcome, and complications were evaluated using a standardized questionnaire. Finally, all data was analyzed by SPSS version 16.
Results. One hundred patients (66 males and 44 females) were enrolled in the present study. 22% of them got the kidney from cadaver (group A), and 10% and 68% from live related and live non-related donors, respectively (group B and C). Rate of overall complication among groups A, B, and C were 81%, 40%, and 70% respectively ($P < 0.05$). There was a positive association between need for hemodialysis and rate of complications, as well.
Conclusion. Acute renal failure and subsequent need for hemodialysis as well as organ donation from cadaver or non-related live donors may lead to higher rate of complications among patients undergoing renal transplantation.

P116

Improvement of Lipopolysaccharide (LPS), Induced Oxidative Stress by Pretreatment with Low Dose LPS

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Introduction. Lipopolysaccharide, the endotoxin present in the cell wall of gram negative bacteria, is known to produce renal and liver toxicity. Endotoxin tolerance is a state in which prior exposure to low-dose lipopolysaccharide (LPS) induces resistance to subsequent LPS attack. This phenomenon has been widely studied in myocardial and brain tissues. In the present study, we

aimed to investigate the protective effects of pretreatment with low dose lipopolysaccharide (LPS) on LPS- induced liver and kidney oxidative stress status.
Methods. Male Sprague-Dawley rats were divided into two groups: Pretreatment group who received an injection of LPS (0.2mg/kg, intraperitoneally), and control non-pretreated group (normal saline injection). After 24 hours a high dose of LPS was injected (8mg/kg, intraperitoneally). Six hours later, blood was collected from the abdominal aorta. At the end of the experiments, tissue samples were collected for renal and liver functional measurements and tissue MDA (Malondialdehyde) evaluation as an oxidative stress index.
Results. Administration of high dose of LPS decreased renal function demonstrated by significant increase in BUN and creatinine levels. This was accompanied by increased liver enzymes (ALT, and AST) activities, as well as significant increase in tissue MDA (Malondialdehyde) levels. Pretreatment with low dose of LPS prevented the enhancement in BUN, creatinine, liver enzyme activities, and MDA levels. The MDA changes in liver tissue were more prominent comparing to renal tissue.
Conclusion. The results of this study show that low dose of LPS preatretment has a protective effect on LPS-induced liver and kidney injury.

P117

Disorders of Growth and Bone Mineral Density in Pediatric Renal Transplant Recipients

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Introduction. Incomplete resolution of CKD-associated abnormalities of bone and mineral metabolism results in the relatively high prevalence of renal osteodystrophy (ROD) in pediatric kidney recipients.
Methods. This is a non-randomized, cross-sectional, and analytic-descriptive study on bone growth and density in 57 children and adolescents who had received 60 renal allografts before the age of 20 years in Shiraz, Iran. The patients' height and weight were measured and their bones evaluated by "conventional left hand-wrist radiography" and "bone mineral densitometry (BMD)" by dual-energy X-ray absorptiometry (DEXA) technique. Advanced specialized software that could adjust all measured scales of BMD for pediatric age-group, gender, and patients' BMI (weight and height) was used to determine BMD Z-score. SPSS software version 15 was used for statistical calculations and analyses. *P* value less than 0.05 was considered as significant.
Results. We studied 27 (47.4%) male and 30 (52.6%) female patients with mean age of 18.7 ± 4.25 (range, 9 to 27 years) years old. The patients had a well functioning renal allograft for a meann period of 67.1 ± 33.8 (range, 6 to 132 months) months after transplantation. Mean age at transplantation was 13.1 ± 3.46 (range, 4.5 to 20 years) years. They had a past history of CKD lasting for a mean period of 32.4 ± 25.8 (range, 3 to 108months) months before transplantation that included a period of regular hemodialysis in 44 out of 57 (77.2%) cases for a mean period of 13.5 ± 12.8 (range, 2 to 60months) months. The patients height was 149.4 ± 11.1 (range, 116 to 172 cm) centimeters while their mean height age and bone age were 11.9 ± 1.8 (range, 6 to 15.5) and 15.6 ± 3.3 (range, 7 to 19) years, showing a mean height age and bone age retardation of 5.7 ± 2.3 (range, 0.5 to 10.5) and 1.22 ± 1.47 (range, 0 to 7) years; respectively, if compared with their chronological age [Height age < Bone age < Chronological age; 2-tailed, $P < 0.001$). Height age retardation was more significant than bone age retardation (2-tailed, $P < 0.001$). Although left hand-wrist radiography was clearly normal in 46 (80.7%) cases and showed osteopenia in 11 (19.3%) patients, none of the other radiologic signs of ROD were seen. The patients' BMD Z-scores were determined to be -1.77 ± 1.13 (range, -4.2 to 1.1) for lumbar spine and -1.64 ± 0.89 (range, -3.9 to 1.9) for femoral neck that was interpreted as osteopenia in 16 (28.1%) and 29 (50.9%) patients, as well as osteoporosis in 28 (49.1%) and 17 (29.8%) cases, respectively. Both bone age and height age showed significant direct correlations with age at transplantation. There was no meaningful correlation between different types of kidney donors and bone-mineral abnormalities in recipients.
Conclusion. Our study revealed a relatively high prevalence of bone-mineral disorder in pediatric kidney recipients, which necessitates a routine program for periodic screening of these patients to facilitate early diagnosis of either persistent or evolving manifestations of disturbed mineral metabolism, especially ROD.

P118

Measurement of Plasma Creatinine in Newborns with Hyper-bilirubinemia

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Introduction. In Jaffe reaction, Cr reacts with alkaline picrate. This reaction is not very specific and negative interference by bilirubin makes it questionable in jaundice. Also, it has been stated that high performance liquid chromatography (HPLC) is the standard and specific method for estimating Cr in these situations but it is not available in every hospital and is expensive. Thus, we tried to improve our results by another method.

We are treated samples with H2O2 for preventing bilirubin interference by dissociating it from albumin and preventing its subsequent oxidation.
Methods. We measured plasma Cr in 17 newborn term infants (9 males, 8 females) with moderate hyperbilirubinemia (bilirubin range: 17 to 20mg/dl) who were admitted for phototherapy. Mean age of the newborns was 4.5 days (range, 3 to 6 days) and all of these infants were uncomplicated, with average weight of 3700 gr (range, 3200 to 4100 gr). All of them were hydrated with normal urine volume and they never received any drugs. We measured plasma Cr by 3 methods. First, we measured it by Jaffe reaction; then the same sample was evaluated by HPLC and finally, with pretesting peroxidase and Cr level determination by Jaffe reaction.
Results. Our results in this modified method were similar to HPLC results with average plasma level of Cr 0/6 mg/dl and with $P < 00.1$. Rate of hyperbilirubinemia was not important in this way.
Conclusion. We suggest this simple modified method for plasma Cr evaluation in neonates prone to ARF such as asphyxia or jaundice or septicemia, because it is reliable and also available in every hospital.

P119

The Relationship between Social Support and Mental Health in the Patients Referred for Kidney Transplantation Before and After Transplantation

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Introduction. Mental health status in patients with chronic disease has been considered since long time ago. The aim of this study was to evaluate mental health and social support before and after transplantation in CRF patients.
Methods. This study has been done to analyze epidemiology method, as a predictor on 28 patients, who suffered from ESRD, referred to transplantation ward of Golestan Hospital, Ahvaz, between 2005 and 2006. Instrument of the study was a questionnaire consisted of 3 parts: 1. Demographic data such as age, sex, married status, and renal disease duration; 2. Symptom Check List-90-R (SC-90R); and 3. Social support rating scale. Required information was analyzed during two stages: before transplantation and 3 months after transplantation.
Results. The above-mentioned patients were 13 women and 15 men. Twelve subjects were single and 16 were married, 20 suffered from renal disease less than 3 years and 8, more than 3 years. Age average was 33.7 ± 11 years. The results showed that mental health had no significant difference regarding sex, marrital status, and renal disease duration before and after transplantation. Also, there was no significant relation between social support and mental health before and after transplantation ($P = 0.64$ and $P = 0.51$, respectively). Emotional behavioral problems after transplantation had increased significantly ($P = 0.02$) and social support had decreased significantly ($P = 0.001$).
Conclusion. Although we had not observed significant relation between sex, marriage, and renal disease duration in social support and mental health, we showed that emotional – behavior problems after transplantation significantly decreased but more studies in this regard are suggested.

P120

Clinical Course and Outcome of Children with Steroid-Sensitive Nephrotic Syndrome

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Introduction. In order to evaluate the clinical course of steroid-sensitive nephrotic syndrome (SSNS) in children, we conducted a retrospective study of 386 children who were referred to our clinics with SSNS between January 1978 and September 2002 and had followed for at least 5 years.
Methods. A total of 268 boys and 118 girls were entered into the study.
Results. Mean age of the patients at the disease onset was 4.77 ± 2.96 years. Duration of follow-up was between 5 and 20 years (mean, 8.01 ± 3.33 years). Twenty-eight (7.25%) out of 386 cases had no relapse after initial treatment with corticosteroids, but others had several relapses; 151(39%) out of 386 children were controlled satisfactorily with steroids but 235 (61%) needed other drugs for controlling NS. Levamisole was effective for reducing prednisolone dose in 125 (68.3%) out of 183 patients, but only 13.6% of the patients had not recurrence after its stop; 42 out of 113 cases (37.2%) who were treated by cyclophosphamide showed long-term remission. Cyclosporine was used for 64 patients; 8 cases (12.5%) had long-term remission, 7 (10.9%) relapsed after cessation of the drug, and 32(50%) became cyclosporine dependent. In 17 patients (26.6%), cyclosporine was not effective. MMF was used for 22 patients and 12(54.5%) patients had relapses during usage or after discontinuation of this drug. Some of our patients had taken all of the above mentioned drugs but still had multiple recurrences. At final visits, 168(43.5%) out of 386 patients were in remission more than 3 years and could be presumed cured; 72 patients (18.6%) were in remission less than 3 years and 141 (36.5%) were on

treatment because of recurrences. In 4 patients, NS had progressed to chronic renal failure and 1 patient had died because of pulmonary thromboembolism.
Conclusion. Although most children with SSNS enter remission with available drugs and progression to CRF is not common, unfortunately a considerable number of the patients (in our study 36.5%) have multiple recurrence episodes which may continue to adult life.

P121

The Efficacy of Heparin and Aspirin in Prevention of Renal Vascular Thrombosis After Renal Transplantation in Children and Adolescents

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Introduction. Since two decades ago renal transplantation has been the best treatment of ESRP in children and adolescents. According to the NAPRTCS study among grafts done during 1996-2001, vascular thrombosis has been the most prevalent cause of early renal graft loss in children which can be venous (RTV) or arterial that is irreversible in most instances and leads to renal allograft losses. Many anti coagulant agents are used for prophylaxis of thrombosis.
Methods. In this prospective study, unfractionated heparin and low-dose aspirin has been used in order to examine their influence on the incidence of vascular thrombosis in renal transplant recipients. In April 2007, unfractionated heparin (50-100 U/Kg Q 8h, SO for 7 days) and aspirin (3-5 mg/Kg o.d. starting after 3 days and continuing for 3 months post transplant) were prescribed as routine prophylaxis against vascular thrombosis in Labaffinejad hospital. Vascular thrombosis was determined by low urine output, high serum creatinine or it's increase,anemia,thrombocytopenia,D oppler ultrasongraphy,absence of perfusion on DTPA scan. These patients were compared with a control group. Recipient characteristics and immunosuppressant were similar in both groups: age,sex, weight,height,cause of renal failures, type of dialysis before transplantation,urine output, hgb level, PIT, serum creatinine,type of dialysis before transplantation, age and sex and type of donors, recipient's and donor's blood group were inspected. Serologic studies of infectious disease in both groups were made and the collected data were analyzed by SPSS.
Results. There were no cases of vascular thrombosis in 24 transplants (Although there were 5 thrombosis in 63 transplants in control group this difference was not significant $P = 0.050$)
Patients were also studied for urine protein, serum creatinine and graft failure happening for at least one year and significant improvements were observed in the instance group.
The mean age of the recipients was 9.4 ± 3.2 and the mean weight of them was 24.82 ± 11.98. Cause of renal failure in these patients were cystinosis, reflux nephrology, FSGS, hypoplasia/dysplasia neurogenic bladder, MGN, RPGN, MPGN, PUV, diffuse global sclerosis and typical HUS, respectively.
Conclusions. A reduction in the heparin and aspirin was seen but was not significant. a significant improvement in renal transplant outcome was demonstrated by lower serum cr level and lower graft losses. In order to prove these results more studies would be necessary with higher patient numbers in two groups, in form of RCT.

P122

Brucellosis Epididmyo-Orchitis in Pediatric patients

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Introduction. We evaluated a series of 21 patients in pediatric ages (3 to 16 years) presented with epididymo-orchitis between October 1993 and 2003.
Methods. In 8 cases, brucellosis was diagnosed and in others (13 cases) non-specific bacterial epididmyo-orchitis was confirmed. Brucellosis group was compared with the other group.
Results. Patients in the brucellosis group were older, without lower urinary tract symptoms, and lower grades of tenderness and inflammatory sings. There were fever, leukocytosis, and increased RBC sedimentation rate only in a few cases.
Conclusion. In endemic areas, all of the patients with epididmyo-orchitis must be worked up for brucellosis. The distinction between brucellosis and nonspecific epididmyo-orchitis is essential since the treatment is entirely different.

P123

Circumcision for the Prevention of Urinary Tract Infection in Preschool Boys

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Introduction. Urinary tract infection (UTI) is common in childhood with serious sequela. Among infants, boys are more likely to develop UTI. The aim of this study

was to determine circumcision effects in decreasing UTI incidence and appropriate age of circumcision.
Methods. During a 7-year period, in a prospective study, 166 boys younger than 6 years old with UTI were allocated into 2 groups. They had not any urinary tract abnormalities. In the first group, 79 boys with mean age of 11.3 ± 3.1 months (range, 2 months to 5.5 years) were circumcised after treatment of UTI and then observed for 6 month using evaluation of urinalysis (U/A) and urine culture (U/C) every 1 to 2 months. The second group, as control subjects, included 87 boys with mean age of 12.1 ± 3.4 (range, 40 days to 5.5 years). These patients were followed for 6 months after treatment of UTI using evaluation of U/A and U/C; then, they were circumcised and followed for another 6 month period. Incidence of UTI in first group (circumcised) and second (uncircumcised period) was compared using Chi-square test. For comparing the incidence of UTI in second group (6 months before and 6 months after circumcision), we used Mc Nemar method.
Results. There was significant difference ($P = 0.009$) in occurring of UTI in first and second groups. There was also significant difference ($P < 0.0001$) in incidence of UTI in 6 month period before and after the circumcision in second group patients.
Conclusion. The present study indicated that circumcision decreases the risk of UTI in boys, independent of the age. Therefore, circumcision should be considered in newborn period and any patient with UTI or urinary tract abnormalities. Routinely performing cystourethrography in boys with first attack of UTI without urinary tract abnormalities (proven by history, physical examination, and sonography) is questionable and needs further studies.

P124

Combining Radiocontrast Cystourethrography with Radionuclide Cystography for Detection of Elusive Vesicoureteral Reflux in Children

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Introduction. Vesicoureteral reflux (VUR) is an important risk factor in childhood urinary tract infection and its sequelaes. Radiocontrast cystourethrography (standard VCUG) or radionuclide cystography (DRNC) is necessary for detection of VUR, although they may miss it. Some patients with strong clinical and sonographic suspicion of VUR may show normal cystogram. Combination of the two studies in these patients may detect VUR.
Methods. Twenty three patients with high suspicion to VUR but with normal cystogram (14 standard VCUG, 9DRNC) were subjected to cystography different from the previous one.
Results. VUR was showed in 6 and 3 cases (totally 9 cases), respectively.
Conclusion. Combining standard VCUG with DRNC in selected patients may enhance the predictive value for diagnosis of VUR.

P125

Comparison between Diuretic Urography (IVP) and Diuretic Isotope Renal Scan (DTPA) for Diagnosis of Ureteropelvic Junction Obstruction (UPJO) in Children

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Introduction. Ureteropelvic Junction obstruction (UPJO) is one of the most common causes of urinary tract obstruction in children. Several methods are used to diagnose upper urinary tract obstruction, including renal ultrasonography (US), intravenous pyelogram (IVP), diuretic renal scan, and antegrade or retrograde pyelography. Whereas nowadays it is suggested to use diuretic renal scan as the best method for diagnosis of UPJO, there is no comparative study between IVP and DTPA scan. The aim of the present study is to compare IVP mixed with furosemide and diuretic renal scan in diagnosis of UPJO.
Methods. This study is a cross-sectional investigation that was done on 40 children (28 boys and 12 girls) suspected to UPJO who had been presented with urinary tract infection (UTI), prenatal hydronephrosis, abdominal or flank pain, abdominal mass, and hematuria. Renal ultrasound was used as an initial screening tool for detection of urinary tract abnormality. Vesicoureteral reflux (VUR) was ruled out by voiding cystourethrography (VCUG). Serum creatinin, blood urea nitrogen, urinalysis, and urine culture was performed for all cases. IVP with furosemide and TC-99m diethylene triamine penta-acetic acid (DTPA) diuretic renal scan were performed as soon as possible.
Results. During a two-year period, 40 patients were diagnosed as UPJO.Mean age of the matients was 9.2 years (range, 40 days to 13 years). There was significant higher proportion of UPJO in the boys (70%) and in left side (65%). The sensitivity of renal scan in diagnosis of UPJO was 100% and sensitivity of IVP was 95%, respectively. Based on Mc-nemars test, there was a significant difference between the two procedures for diagnosis of UPJO ($P < 0.001$).
Conclusion. There was a significant difference between the two procedures (IVP and DTPA scan) for diagnosis of UPJO in kidneys with normal or near normal function; therefore, isotope DTPA-scan was the best method for diagnosis of UPJO. However, in many places such as small cities with fewer facilities, there is no advanced

isotope imaging technology, use of IVP with diuretic maybe an acceptable procedure for diagnosis of UPJO.

P126

Oral Vitamin E and Renal Anemia in Chronic Hemodialysis Children

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Introduction. Renal anemia is one of the most frequently observed complications in patients undergoing chronic hemodialysis (HD). Reduced red blood cell survival due to oxidative damage is one of the causes of anemia in these patients. Vitamin E (alpha – tocopherol) is a natural biological antioxidant, which protects red cells from the effects of reactive oxygen metabolites and could be useful as a collateral therapy for anemia in HD patients. The aim of the present study was to investigate the potential beneficial effect of anti-oxidant vitamin E supplementation (oral) on renal anemia and to find out whether this improvement mechanism is attributable to the enhanced hematopoietic function or to the prolonged RBC life.
Methods. This clinical trial study included (8 cases with mean age of 14 ± 2.9 years and 7 controls with mean age of 14 ± 2.7 years) stable children on chronic hemodialysis, at hemodialysis center in Sheikh children hospital, Mashhad. At the time of entry, there was no evidence of iron deficiency or history of blood transfusion. All of the children (case and control) received subcutaneous erythropoietin (EPO) with the dose of 120 ± 80 u/kg/BW/week, folic acid with the dose of 1 mg/day, and iron with the dose of 1 to 2 mg/kg/day. Oral vitamin E (200 u/day) for 3 months was only prescribed to the cases. Laboratory parameters determined at the beginning of the study were: iron, ferritin, transferrin, total iron binding capacity, hemoglobin (Hb), hematocrit, reticulocyte count, and peripheral blood smear. Hb and HCT were checked every month during the study and the results were compared with those obtained earlier.
Results. Prescription of oral vitamin E for 3 months resulted in significantly higher levels of Hb and HCT in the cases compared to those in the controls (11.4 ± 1.7 vs. 10.1 ± 1.9 Hb and 35.3 ±5 vs. 31.3 ± 6 Htc, $P < 0.05$).
Conclusion. Antioxidant vitamin E supplementation improves renal anemia by decrease of oxidative stress and RBC life span in hemodialysis patients.

P127

Clinical Presentation of Hyperuricosuria in Children

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Introduction. Hyperuricosuria (HU), defined as an increased urinary acid excretion, has different symptoms in children and is responsible for the kidney stone formation. We aimed to outline the clinical presentation and natural history of HU in children with hematuria, dysuria, discoloration of urine, and recurrent abdominal or flank pain.
Methods. In this cross-sectional study, 88 children with hyperuricosuria were evaluated between 2002 and 2006. Urinalysis, urine culture, 24-hour urine collection for measurement of uric acid, calcium, and creatinine, serum evaluation for BUN, creatinine, uric acid, calcium, phosphorous, and bicarbonate and renal ultrasonography were done for all patients.
Results. Fifty-one percent of the patients were boys and 48.8 % were girls. The mean age of children was 5.3 ± 1.2 years. The mean urine uric acid was 13.4 mg/kg/24h and mean urine PH was 5.3. Forty-one patients had no hematuria. Thirty-three patients had normal urinalysis at our first examination, 28 of them had microcalculi (< 3 mm in diameter) at renal ultrasonography, and 12 had stones (4 to 13 mm). Dysuria and abdominal or flank pain was present in 22 and 17 patients, respectively. There was no microscopic hematuria in 24.3% of the patients with microcalculi or stone. Family history of urolithiasis was positive in 63 of the children.
Conclusion. Hyperuricosuria has to be suspected in children with dysuria, recurrent abdominal or flank pain, discoloration of urine, and familial history of urolithiasis. Lack of hematuria is not predictive for absence of urolithiasis.

P128

Renal Transplantation in Children

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Introduction. Previous studies of renal transplantation in children have focused on the survival of grafts and patients. Little information is available about the cause of renal disease or the sources of donated organs. The aim of this study was to identify the diseases that require transplantation and to analyze factors that affect the success of transplantation in children.
Methods. We collected data from pediatric hemodialysis center between 1997 and 2007. These data included information about demographic characteristics of the patients, graft function, and rate of graft rejection.
Results. Totally, 242 children with end stage renal diseases were managed at our hemodiaysis center, and 53 children received renal transplantation during this period. Sixty-two percent of the transplanted kidneys came from a living donor (82% unrelated donor, 18% related donor), and 38 percent from a cadaver. The major causes of renal failure that led to transplantation were reflux nephropathy (28%), neurogenic bladder

(15%), glomerulonphritis (13%), nephrolitiasis (9%), and nephrotic syndrome (5%). Mean age at transplantation was 13.1.
Conclusion. The most common causes of end-stage renal disease in children and adolescents in our center were reflux nephropaty and neurogenic bladder. The rate of graft survival was the same in patients who received a kidney from a living unrelated donor and those who received a kidney from a cadaver. Our study suggests that living related donor is superior to other options and must be encouraged whenever available.

P129

Labial Adhesions and Urinary Tract Symptoms

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Introduction. Labial fusion is a common benign prepubertal gynecologic condition that is defined as partial or complete adherence of the labia minora. Most cases are mild and/or asymptomatic, but some cases may be present with urinary symptoms.
Methods. Clinical course and management of 87 cases with labial fusion and urinary tract symptoms, presented between 1372 and 1382, was reviewed retrospectively.
Results. Mean age of the patients was 2 years and 8 months (range, 8 months to 6years). A total of 56 cases had been visited by physicians but without genital examination. None of the mothers was informed of normal genital condition, and 36 cases (41%) had UTI without urologic abnormalities. Topical conjugated estrogen was effective in all patients with minor side effects. Recurrence was noted in 23 cases (26%) which responded to estrogen retreatment.
Conclusion. All of the girls with any complaints especially urinary symptoms and UTI must be examined with high index of suspicion for labial fusion.

P130

Transplant Renal Artery Stenosis

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Introduction. Transplant renal artery stenosis (TRAS) is an important cause of hypertension and renal allograft dysfunction occurring in the kidney transplant recipients. Since conflicting predisposing risk factors for TRAS exist in the literature, we aimed at assessing the potential correlation between possible risk factors and TRAS in a group of living donor renal transplant recipients 1 year after the transplantation.
Methods. We evaluated the presence of renal artery stenosis in 16 recipients who had presented with refractory hypertension and/or allograft dysfunction one year after transplantation. Screening for TRAS was made by magnetic resonance angiography and diagnosis was confirmed by conventional renal angiography. Multiple potential risk factors that might contribute to TRAS (age, sex, history of acute rejection, plasma lipid profile, serum creatinine, blood urea nitrogen (BUN), serum uric acid, calcium phosphate (CaPO4) product, alkaline phosphatase (ALP), fasting blood sugar (FBS), hemoglobin, and albumin) were compared between TRAS and non-TRAS group.
Results. Of the 16 recipients evaluated, TRAS was diagnosed in three patients (two men and one woman). CaPO4 product and low density lipoprotein (LDL) cholesterol significantly associated with the risk of TRAS following the transplantation ($P < 0.05$). Meanwhile, uric acid also tended to have a significant association ($P = 0.05$). However, no significant difference was detected between TRAS and non-TRAS cases in terms of age, sex, history of acute rejection, serum creatinine, BUN, hemoglobin, triglyceride, cholesterol, albumin, ALP, and FBS ($P > 0.05$).
Conclusion. The present study revealed that high levels of CaPO4 product, LDL cholesterol, and uric acid might increase the risk of TRAS in living donor renal transplant recipients following the transplantation. The authors tightly recommend the importance of the treatment of these potential risk factors.

P131

Prevalence and the Risk Factors of Postoperative Acute Renal Failure after Cardiac Surgery

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Introduction. Acute renal failure requiring renal replacement therapy after cardiac surgery remains a cause of major morbidity and mortality. A number of risk factors for the development of acute kidney injury after cardiac surgery have been previously described and, based on these variables, several groups have proposed scoring algorithms. Predictive value of these algorithms for our patients in Iran is unclear. This prospective

study designed to investigate some of these risk factors among our patients.
Methods. A total of 240 patients with normal kidney function who were candidates for cardiac surgery were selected and baseline data was collected from them. Diabetes mellitus and age were selected as more controversial pre-operative risk factors. Clamp time and pump time were also selected as intraoperative risk factors, and the type of operation was also considered as an independent risk factor. All the patients were followed with serial measurement of serum creatinine postoperatively.
Results. The incidence of acute renal failure among our patients (11.25%) was similar to that in other studies (1% to 30%). Statistical analysis identified that increase in the incidence of postcardiac surgery acute renal failure was not related to the patients' age (P = 0.805), diabetes mellitus (P = 0.218), pump time (P = 0.944), clamp time (P = 0.506), and type of the operation (P = 0.310).
Conclusion. Although several scoring algorithms are available for prediction of postcardiac surgery complications, these must be matched with our patients' criteria to enhance their accuracy for our situation.

P132

Gum Overgrowth and Atherosclerosis in Renal Transplant Recipients

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Introduction. Gingival overgrowth (GO) is the main oral manifestation in transplant recipients (TR). The risk factors for GO occurrence are calcineurin inhibitors, bacterial dental plaque, gingival inflammation index, calcium channel blockers, transforming growth factor-beta, HLA-A24, IL-1A polymorphisms, and down-regulation of matrix metalloproteinase levels in gingival fibroblast. Interestingly, some risk factors for atherosclerosis such as bacterial dental plaque and gingival inflammation are similar to the risk factors of GO. Therefore, we suggest that there may be a correlation between GO and atherosclerosis.
Methods. In this cross-sectional case-control study, we enrolled 343 renal TRs who received their allograft between 1997 and 2004. Carotid intimal medial thickness (CIMT) as a marker of atherosclerosis was measured by ultrasonography in TRs by asingle radiologist and a CIMT of 7.5 mm was considered positive. All TRs were examined by a single dentist and GO scoring was determined based on Mc Gaw scoring system. Other demographic and clinical data were obtained from medical records and the RTs. Data was analyzed using Chi-square, t test, and logistic regression.
Results. Among 343 RTs, 57.7% were male and mean age was 40.54 ±13.08 years. A CIMT of 7.5 mm and GO were found in 33.8% and 37.6% of the RTs, respectively. We found a strong correlation between CIMT and GO (P = 0.0001). Also, there were correlations between age (P = 0.0001), dyslipidemia (P = 0.0001), diabetes (P = 0.002), BMI (P = 0.006), and dialysis duration (P = 0.02) and CIMT. There were correlation between age (P = 0.007), and using calcium channel blocker (P = 0.03) and GO. Using logistic regression analysis, GO (P = 0.0001, OR= 0.19, 95% CI: 0.1-0.35), age (P = 0.0001, OR=9.28, 95% CI: 3.97-22.68), sex (P = 0.019. OR=0.47, 95%CI: 0.25-0.88), dialysis duration (P = 0.02, OR=0.97, 95%CI: 0.96-0.99), dyslipidemia (P = 0.007, OR= 0.34, 95%CI: 0.23-0.79), and diabetes (P = 0.01, OR=0.27, 95%CI: 0.1-0.73) remained correlated with CIMT.
Conclusion. We found a correlation between CIMT and GO. To our knowledge, this is the first study on this correlation. We suggest further studies to clarify this correlation which may be used in clinical practice as a risk factor of atherosclerosis.

P133

Biochemical Serum Markers of Mineral Disorders in Pediatric Renal Allograft Recipients

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Introduction. The abnormalities of calcium (Ca) and phosphorus (P) homeostasis that accompany chronic kidney disease (CKD) may persist after kidney transplantation and play a significant role in the development or aggravation of renal osteodystrophy (ROD) in many pediatric renal allograft recipients.
Methods. This non-randomized, cross-sectional and analytic-descriptive study was performed on vitamin-D and mineral metabolism of 57 children and adolescents with well-functioning renal allograft (GFR ≥ 50 ml/min/1.73m^2) in Shiraz, Iran. The patients height and their serum Ca, P, alkaline phosphatase (Alk-P), PTH, 25(OH)-vitamin D3, and creatinine were measured. SPSS software version 15 was used for statistical calculations and analyses. P value less than 0.05 was considered to be significant.
Results. Twenty-seven (47.4%) male and 30 (52.6%) female patients with mean age of 18.7 ± 4.25 (range, 9 to 27 years) years were studied. Mean age of transplantation was 13.1 ± 3.46 (range, 4.5 to 20 years) and mean follow-up period was 67.1 ± 33.8 (range, 6 to 132 months) months. They had a past history of CKD lasting for a mean length of 32.4 ± 25.8 (range, 3 to 108 months)

months before transplantation that included a period of hemodialysis in 44 out of 57 (77.2%) cases for a mean period of 13.5 ± 12.8 (range, 2 to 60 months) months. Hyperphosphatemia, hypercalcemia, hypophosphatemia, and hypocalcemia were found in 9 (15.8%), 9 (15.8%), 5 (8.8%), and none of the patients. Seven out of 57 (12.3%) patients had a (Ca × P) product of more than 55 mg^2/dl^2. Hyperparathyroidism was found in 27 (47.3%) and vitamin-D3 deficiency in 4 (7%) cases. The serum level of Alk-P was higher than normal range in 20 (35%) patients. Logarithmic regression test (backward method) showed a significant inverse correlation between PTH serum level and GFR of transplanted kidney, which was independent from the influences of other variables such as Ca, P, and Alk-P ($P = 0.011$, $\beta = -1.556$). There was no meaningful correlation between different donor types and mineral abnormalities in recipients.
Conclusion. Our study revealed a relatively high prevalence of mineral disorders in pediatric kidney recipients, which necessitates a routine program for periodic screening of these patients to facilitate early diagnosis of either persistent or evolving manifestations of disturbed mineral metabolism, especially ROD.

P134

Delayed Graft Function in Children Under Kidney Transplantation: A Report from a New Founded Center

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Introduction. Kidney transplantation is the best and final solution for ESRD children. Many countries have programs for extending and improving the transplanted centers. Owing to the fact that we need to improve our transplanted centers, we evaluated the frequency of delayed and slow graft function (DGF and SGF, respectively), its etiologies, and the final short-term outcome of kidney transplanted children in a new established center in Isfahan, Iran.
Methods. The data of 24 kidney-transplanted children under 18 years were collected between February 2002 and September 2008,. A phone call was made for each patient to reconfirm demographic data.
Results. Thirteen patients (54.2%) were male and 11 (45.8%) were female. The mean age was 14.16 ± 2.72 years. FSGS was the most frequent cause of ESRD followed by renal hypodysplasia and SLE. Mean duration of dialysis before transplantation was 19.95 ± 18.82 months. Eighteen kidneys (75%) were extracted from living donors (mostly unrelated) and 25% from cadavers. About 45% of the patients experienced some degrees of delayed graft function mostly due to ATN followed by acute humoral rejection. Five of them had slow graft function (starting kidney function in less than 7 days) and 4 patients had delayed graft function. Three patients had no graft function leading to nephrectomy. Only one of the nephrectomized kidneys was donated to a girl with SLE from cadaver and the etiology of DGF was renal vein thrombosis. Two kidneys were nephrectomized due to technical problems. Kidney function of all patients with DGF or SGF improved in a mean time of 3.66 ± 1.1 days. The final glomerular filtration rate of these patients was 88.54 ± 6.83ml/min/m^2.
Conclusion. Assessment of kidney transplanted patients is a main part of evaluating transplanted centers. It seems that a further revision of transplantation protocol and fluid therapy during surgery should be done.

P135

Male Susceptibilities to Acute Uremia in Rats

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Introduction. Recent studies suggest gender differences and susceptibilities to some disease states. This results in different responses to injury in many organs including brain, heart, and kidney. However, the effects of gender on the changes during acute uremia are not completely understood. The aim of this study was to evaluate the effect of uremia on liver oxidative stress status and production of inflammatory cytokines in both genders.
Methods. Bilateral nephrectomy was performed on male and female Wistar rats. They were sacrificed four hours later and serum and liver tissues were collected. Liver function tests and tissue injury indices were measured in all rats.
Results. Uremia caused liver oxidative stress in male rats determined by increase in MDA (malondialdehyde) levels and decrease in GSH (reduced glutathione) contents. Increase in pro-inflammatory cytokine concentration was seen in male rats while the anti-inflammatory cytokine level was more elevated in females.
Conclusion. Uremia has a different effect on male and female rats and this may be related to a reduction of oxidative stress indices and inflammatory agents.

P136

There Are Less IL-2, IL-12, and INF-Gamma Gene Transcripts in Peripheral Blood of the Patients with Bladder Cancer Compared to Normal Individuals

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Introduction. Type 1 T helper lymphocytes (TH1) could trigger the anti-tumor activity of natural killer and cytotoxic T cells through the production of cytokines such as interleukin-2 (IL-2), IL-12, and interferon (IFN) gamma. However, in many solid tumor malignancies, a deviation from TH1 to TH2 has been detected in favor of tumor survival, progression, and escape mechanism. To determine possible differences in cytokine production profile in peripheral blood of the patients with bladder cancer, transcripts of IL-2, IL-12, and IFN-gamma were compared to healthy individuals.
Methods. Fifty patients with confirmed bladder cancer and same number of age/sex matched healthy subject were enrolled in the study. The expression of mentioned cytokines was determined by real time PCR using syber green as reporter dye.
Results. Results showed a significant decrease in abundance of IFN-gamma, IL-12, and IL-2 transcripts. In overall, a general reduction in the level of major TH1 cytokine transcripts was observed in peripheral blood of the bladder cancer patients compared to normal individuals.
Conclusion. This may reflect unfavorable micro-environment for the immune effector cells around tumors which weaken the immune response against tumors. Several other mechanisms such as tumor soluble products and activation of regulatory T cells may also contribute to the poor response against tumors.

P137

Post-Transplant Lymphoma of the Bone

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Introduction. The risk of B-cell lymphoma is greatly increased in patients with solid organ transplantation. We report bone lymphoma in an 11 year old boy, 7 months after kidney transplantation.
Case Report. He presented with fever unresponsive to antibiotic therapy. We found a round shape opacity in inferior zone of the right lung in CXR that had placed on anterior part of the 4th rib in HRCT scan of the lung. Bone biopsy revealed high grade diffused large B- cells positive for CD20 and negative for CD3. He was treated with standard combination chemotherapy for NHL. Cyclosporine was changed to Sirolimus. The patient had an excellent response, with resolution of his symptoms and maintenance of stable graft function.
Conclusion. Although PTLD has been reported in CNS, lung, skin, and allograft itself, it is most often seen in GI tract. Bone lymphoma is a rare disorder that accounts for 3% to 5% of all lymphomas in children in general population. There is limited data about bone lymphoma in kidney recipients.

P138

Vitamin D Intoxication Presenting as Acute Renal Failure

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Introduction. Vitamin D toxicity is a known cause of hypercalcemia and renal failure. The daily requirement of vitamin D is about 200-600 Iu. We report here a case of self medication vitamin D intoxication in young male who presented with hypercalcemia, acute renal failure and gastrointestinal symptoms.
Methods. Our patient was a 17 year-old male who had been talking 5 vitamin D3 pearls on a daily basis for body-building without a prescription.
Results. After 2 months of regular consumption, he suffered from nausea, vomiting, anorexia, constipation and enuresis. Examinations revealed a pulse of 76/min, blood pressure of 110/80 and no systematic abnormalities except dry mucosa. Routine chemistry revealed: WBC 11500µl(N=65%,L=25%), Hb 13.3g/dl, plt 329000µl, FBS 94mg/dl, Urea 94mg/dl(17-43), Creatinine 4.6mg/dl (0.7-1.4), uric acid 6.3mg/dl, calcium 13.4mg/dl (8.5-11), phosphorous 5.9mg/dl (2.5-5), Albumine 4.3g/dl, Na 140mEq/l, K 4.3mEq/l, AST 19Iu/l, ALT 19Iu/l, Alp 183u/l, total billirubine 0.5, Urine Analysis (WBC many, RBC negative, calcium oxalate many, protein negative, bacteria negative). The patient was managed by continuous saline infusion, diuretic (furosemide), cortone (dexamethasone), bisphosphonate (pamidronate) and calcitonin. Further paraclinic studies revealed: PTH 22pq/ml (10-65), 25(OH) vitaminD >100ng/ml (5-53), negative urine culture and normal chest X-Ray, Electrocardiography and kidney ultrasonography. The level of serum calcium on the 6th day of treatment was 10.5mg/dl that of phosphorus was 4.7mg/dl and the cratinine level stabilized at 1.8mg/dl. Urine analysis became normal at this stage. During hospitalization gastrointestinal symptoms disappeared and in further follow-up visit the cratinine level decreased to 0.8mg/dl.
Conclusion. Although vitamin D has a wide therapeutic index, its toxicity is well known and various cases of accidental ingestion, self-medication and malpractice

have been reported. This intoxication with mechanism of hypercalcemia due to increased intestinal absorption and in more serious cases increased bone resorbtion leads to several clinical manifestations including kidney disorders (65%), renal failure (51%), gastrointestinal tract disorders (23%) and hypertension (52%). Calcium serum levels of 12-15mg/dl which are gradually caused by ingestion of over than (40000-100000Iu/day) in a long period of time may decrease GFR reversibly by the mechanism of renal vasoconstriction and natriuresis–induced volume contraction. A positive drug history other than cratinine rise and high serum levels of vitamin D3 represents renal failure on the grounds of vitamin D3 intoxication. Although vitamin D is not regarded as a routine supplement for body-building, our patient took 250000 iu of vitamin D3 on a daily basis for 2 months. In spite of few reported cases of vitamin D intoxication, it should not be taken without indication as it may cause intoxication.

P139

A Patient with Membranous Glomerulonephritis after Onset of Bullous Pemphigoid

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Introduction. Bollous pemphigoid (bp) is an uncommon autoimmune disease, coexistence of it and membranous glomrerulonephritis (mgn) is a rare phenomenon just introduced as case reports. Although these are autoimmune diseases but there is not any common specified mechanism to explain coexistence of them. We hope systematic reviews on these case reports reveal other unexplained aspects of this phenomenon and guide us to the common pathophysiology of Bollous pemphigoid and glomrerulonephritis.
Case Report. Patient was 60 years old woman who has had extremities & priorbital swelling and decrease of urine volume. In primary investigations, she had edema, proteinuria (8.79 gr/day), hyper-cholestrolemia. In sonography corticomedulary segregation of both kidneys was decreased. DIF study in eight glomeruli revealed granular GBM depositions with IgM & C3 and light microscopy was compatible with membranous glomrerulonephritis. By prednisolon therapy (0.5 mg/kg) her proteinuria decreased to 0.8 gr/kg and edema was resolved. Patient has been a known case of Bollous pemphigoid from eight months before and came with newly onset of nephrotic syndrome. Immunopathology reported diffuse global fine granular IgM & C3 deposits in wall of glomeruli as linear IgG & C3 deposits in basement membrane of skin epithelial cells. In light microscopy of skin biopsy there was some eosinophilic infiltrations in sub epithelial area that was compatible with Bollous pemphigoid. In light microscopy of kidney needle biopsy,there was 26 glomeruli that 9 of them showed global sclerosis and one of them revealed extra capillary cell proliferation. Remaining 15 glomeruli showed global and mild GBM thickening. There was no endocapillary cell proliferation. Vascular changes were unremarkable.
Conclusion. In this patient global sclerosis in 9 glomeruli demonstrates chronic glomerular pathology and no endocapillary cell proliferation rules out membranoprolifrative glomrerulonephritis. Also granular GBM depositions and GBM thickening is compatible with membranous glomrerulonephritis.

P140

Complications of Percutaneous Kidney Biopsy Performed by Nephrologists

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Introduction. There is no doubt that percutaneous renal biopsy is extremely useful in clinical nephrology to establish an accurate diagnosis, obtain data of prognostic value, and choose the most appropriate treatment for most patients affected by renal disease. Nevertheless, the morbidity and, rarely, mortality associated with this procedure requires a careful evaluation of the risk to benefit ratio for each patient.
Methods. We reviewed the chart of patients for whom percutaneous renal biopsy of native kidneys had been done between April 2003 and March 2006. Ultrasonography was done to point out the kidney before biopsy. Data including age, gender, serum creatinine, hemaglobin level before and after biopsy, preparation of patients prior to biopsy such as blood transfusion, FFP, and cryo administration, hemodialysis, clinical and histopathological diagnosis, complications (minor: hematuria, severe pain, local infection, hematoma, hypotension; major: transfusion, septicemia, and surgery) were determined.
Results. We analyzed 363 renal biopsies (RB), 54.3% of whom were males. Male to female ratio was 1.2 and mean age of the patients was 36.80 ± 14.4 (range, 12 to 88 years).The most common indication to perform RB were nephrotic syndrome (36.6%) and nephrotic syndrome with hematuria (17.9%) followed by subnephrotic

proteinuria (13.5%). Primary (PGN) accounted for 57% of all biopsies and membranous GN (MGN) was the predominant pathology (48.5%), followed by FSGS (20%), and IgA nephropathy (16%). Of the patients with secondary glomerulopathy, lupus nephritis (41.5%) and amyloidosis (17%) were notable. Non-glomerular renal disease consisted 5.8% of histopathological results. The incidence of complications was 28.7%. The more frequent minor complication was severe pain (10%) and the most important major complication was blood transfusion (2.5%).
Conclusion. It is necessary to study patients regularly and continuously (renal registry). The renal biopsy is a low-risk procedure when it was done by expert nephrologists.

P141

Fever and Gross Hematuria, Which Is the Cause?; A Case Report

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Introduction. Glomerulonephritis has a wide variety of secondary causes that should be considered before labeling it as idiopathic. Brucellosis may rarely cause glomerulonephritis. We present a case of brucellosis glomerulonephritis with fever and gross hematuria.
Case report. A 16-year-old boy referred to our hospital due to intermittent fever and bloody discoloration of urine since one month earlier. He suffered from flank pain on both sides which was associated with suprapubic pain especially at the end of micturation. He had history of nocturia, anorexia, nausea without vomiting, and 5-kilogram weight loss during his illness. His physical examination was unremarkable except for low-grade fever of 38ºC on admission.
Results. Laboratory evaluation was as follow: WBC= 3.7×10^9 /l; Hb = 10.5g/dl; platelets = 107×10^9/l; BUN = 16mg/dl; Cr = 1.1 mg/dl; urine sediment: hemoglobin 4+, protein : +1, RBC: 15-20 /HPF, and 24-hour urine protein = 785 mg. ANA, ANCA (C,P), HBS Ag, and HCV Ab were negative and level of C3, C4, CH50, and IgA were in normal range. Acid fast bacillus smear and culture of urine was negative. Brucella agglutinins were present at a titer of 1/1280 and 2-ME test was positive with titer of 1/512. Kidney and urinary system sonography was normal. Treatment with doxycyclim and rifampin was started and continued for 6 weeks and the patient was followed. All of his symptoms improved and the result of urine anlaysis was normal after 3 months.
Conclusion. Despite improvement in sanitary and pasteurization of dairy products in our country, we are occasionally facing with these patients and should not forget infections as causes of glomerulonephrtis especially for urban residents.

P142

Asymptomatic CMV Infection after Renal Transplantation in Children and its Effect on Graft Survival

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Introduction. CMV disease is the most important opportunistic infection in renal transplant recipients (RTR) receiving immunosuppressants. We conducted a study to identify silent CMV infection in pediatric renal transplantation and the effect of this infection on graft survival.
Methods. Twenty children with recent transplantation (within the recent 1 year) were included in the study. In all patients, assessment of CMV Ag (PCR) and Ab (IgG, IgA) was performed at 3, 6, and 12 months after transplantation regardless of manifestations.
Results. Four patients had CMV infection; of them, three fourth had symptoms concurrently with CMV infection. One patient had positive CMV Ag PCR (with 2500 copies) but without symptom and signs. The graft survival in these patients was not different from those without CMV infection.
Conclusion. Some researchers suggest that the asymptomatic CMV infection is common in patients with renal transplantation especially in children. They suggest CMV screening in these children. But, we showed that only 1/20 of our patients had asymptomatic CMV infection. We suggest larger studies to determine the incidence of asymptomatic CMV infection in pediatric renal transplantation.

P143

TH2 Cytokine Gene Expression in Peripheral Blood of Patients with Bladder Cancer

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Introduction. TH2 cytokines, including IL-4, IL-10, and IL-13, encompass important role in humoral immunity against tumor cells. In most solid tumors, TH1 to TH2 deviation has been detected in favor of tumor survival, progression, and escape mechanism from immunity. In

this study, we have evaluated the expression profile of IL-4, IL-10, and IL-13 mRNA in bladder cancer patients.
Methods. Forty cancer patients and 40 age-, sex-matched control subjects were enrolled in this study. IL-4, IL-10, and IL-13 expressions were assessed using Real Time RT-PCR method.
Results. Data of this study revealed an increase in the level of mRNA of IL-4, and IL-10 in patients. Also, the results showed expression of IL-13 was the same in the 2 groups.
Conclusion. Deviation of the immune effectors mechanism from TH1 to TH2 is probably affected by release of tumor soluble antigens or reactivation of T regulatory lymphocytes. Our data concludes that levels of expression of TH2 cytokine gene is more expressed in cancer patients in comparison with normal subjects. The exact mechanism by which this deviation is regulated remains unknown.

P144

Increased CTLA-4 and FOXP3 Transcripts in Peripheral Blood Mononuclear Cells of Patients with Bladder Cancer

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Introduction. Bladder cancer is the 4th most common diagnosed malignancy in men and the 10th most common diagnosed malignancy in women worldwide. Generation of T- Regulatory cells (Tregs) is known to play a major role in progression and modulation of the immune escape mechanisms in cancer. These cells express Forkhead/winged helix transcription factor (FOXP3) also a marker of Treg activation and Cytotoxic T-lymphocyte antigen-4 (CTLA-4), a negative regulatory molecule, which is a potential target for immunotherapy. In this study, we aimed to examine gene expression of FOXP3 and CTLA-4 in bladder cancer patients using real-time PCR.
Methods. Gene expressions were evaluated in 50 patients with bladder cancer and 40 healthy volunteers using quantitative RT-PCR.
Results. This data has shown that patients had a significantly higher expression in FOXP3 and CTLA4 genes in peripheral blood sample in comparison with healthy controls.
Conclusion. Consequently, up-regulation of FOXP3 and CTLA4 displays their essential role in tumor progression and can be used as suitable prognostic biomarkers in bladder cancer and immunotherapy target.

P145

Liver Changes Due to Different Periods of Renal Ischemia/Reperfusion Injury in Male Rats

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Introduction. Although the effect of ischemia/reperfusion (I/R) injury to the kidney has been under investigation for many years, the changes in liver function and oxidative stress status in renal I/R injury is not well known. Recent studies suggest a crosstalk between the liver and the kidneys. The aim of the present study was to assess the liver changes after induction of various degrees of renal I/R injury.
Methods. Twenty male rats were subjected to either sham operation or ischemia (30, 45, and 60 min) followed by 60 minutes of reperfusion. Blood samples were drawn post-operatively and serum creatinine, BUN, ALT, and AST were measured. Hepatic glutathione (GSH) and FRAP (ferric reducing antioxidant power) levels, and the concentration of IL-10 and tumor necrosis factor (TNF)-alpha were evaluated.
Results. Induction of 45 minutes of renal ischemia-60 minutes of reperfusion caused a significant reduction in renal function demonstrated by increase in plasma BUN and creatinine concentrations. These rats showed a significant decrease in liver GSH as well as significant increase in TNF-α and IL-10 concentrations.
Conclusion. Renal ischemia causes changes in liver function and oxidative stress status. A minimum of 45-minute ischemia is needed to study the effects of renal injury on liver as a remote affected organ.

P146

Aminoglycoside and Nephrotoxicity: The Effect of Virgin Olive Oil

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Introduction. Aminoglycoside produce nephrotoxicity in humans. Gentamicin is an aminoglycoside that its nephrotoxic action cause acute renal failure and limit the extent of its use. Reactive oxygen species have been proposed as one of the causative factors of the drug renal

side effects. This study was designed to evaluate the protective effects of virgin olive oil that has antioxidant component against Gentamicin nephrotoxicity in rats.
Methods. 32 Male rats were randomly assigned to one of the following groups: Group 1 (Control), Group 2 (Sham) olive oil (5g/100g Diet) was added to diet for 4 weeks. Group 3 (Gentamicin) gentamicin (100mg/kg ip) injected for 6 days. Group 4 (Gentamicin + Olive oil) the same as group 2 but gentamicin (100mg/kg ip) administrated in last 6 days. Finally, Animals were anaesthetized with i.p. injection of ketamine and blood sample and kidneys were removed from the body.
Results. No difference existed between serum BUN and Creatinine in group 1 and 2. Histological sections from these groups showed normal histology. In group 3 significant increase in serum BUN and Creatinine existed in contrast to control and sections showed moderate degrees of tubular damage. In group 4 although olive oil could decrease serum BUN and Creatinine, but there were not significant change in contrast to group 3. In this group sections showed mild degrees of tubular damage.
Conclusion. In this study gentamicin injection caused nephrotoxicity that demonstrated by elevation in serum BUN and Creatinine and moderate degrees of tubular damage that characterized with the presence of luminal debris, cellular vacuolation and pyknosis. However, there was a trend of prevention from injury in the olive oil group, demonstrated by less tubular damage (mild degree of damage). Virgin olive oil has effective antioxidant component, like orthophenoles, that has beneficial effects on renal preservation in gentamicin-induced nephrotoxicity.

P147

Urinary Risk Factors for Calcium Stone Disease Based on Spot Urine and 24-Hour Urine Specimens

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Introduction. The 24-hour urine collection test is still the gold standard method for metabolic evaluation in renal stone-forming patients. Recently, some investigators have proposed the spot urine sampling that might be a suitable substitute for 24-hour urine collecting in assessment of recurrent stone-formers. In this study, we evaluate urinary risk factors for calcium stone disease in spot urine and 24-hour urine specimens in recurrent calcium stone formers and non stone formers.
Methods. We selected 106 male recurrent stone-formers as cases based on their previous documents versus 109 male healthy volunteers as controls without a history of urolithiasis established by ultrasonography. The age of cases and the control group ranged between 30 to 55 years. Two specimens of 24-hour urine collection in addition to 2 samples of morning spot urine were obtained from all participants. The values of some stone-precipitating solutes as well as some inhibitory factors were measured in all specimens and the results were compared between the 2 groups.
Results. In spot urine specimens, the calcium/creatinine, oxalate/creatinine, citrate/creatinine, uric acid/creatinine, and sodium/potassium ratios were significantly higher among stone formers, while the magnesium/creatinine and potassium/creatinine were significantly lower among stone formers. There were no significant differences in sodium/creatinine and phosphate/creatinine ratios and also, urine specific gravity and PH between two groups. By measuring pearson correlation coefficient, it was demonstrated that there was a significant correlation between the spot urine and 24-hour collection specimens regarding the creatinine-corrected solutes concentrations such as calcium, oxalate, uric acid, phosphate, citrate, sodium, chloride, potassium, and magnesium.
Conclusion. One may conclude that morning spot void sample can be a time- and cost-saving alternative for the 24-hour urine collection technique in evaluating recurrent kidney stone-forming patients. Some day-to-day variations in the results of the spot urine solutes exist that can be overcome by performing this test more than one time on consecutive days.

P148

Senior-Loken Syndrome

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Introduction. NPHP/medullary cystic disease is a group of tubulo-genetic kidney disorders. NPHP is the cause of 15% to 20% of ESRD cases in children and adolescents and is inherited as autosomal-recessive. Frequently, NPHP is accompanied with extra-renal disorders including mental retardation, ocoulomotor apraxia (cogansyndrom), retinitis pigmentosa (senior-loken syndrom), liverfibrosis, and skeletal disorders. NPHP is divided into 6 types.
Case Report. A 17-year-old boy with ESRD referred to our clinic for initiation of emergency hemodialysis. Sonography showed that both kidneys were small. On physical examination, he had horizontal nystagmus; following ophthalmologist consult, he exhibited retinitis pigmentosa (senior-loken syndrom). He had a past history of polyuria and nocturia from 5 years of age until the day of reference. He had a sister who had

died following kidney trasplantation. His parents have gotten a familial marriage.
Conclusion. I conclude that the start of ESRD in a 17-year-old boy, with familial history of kidney transplantation, existence of cogan syndrome (horizontal-nystagmus), senior-loken syndrome, and familial marriage of his parents (autosomal recessive), suggest NPHP type 4 disease.

P149

Urinary Stones in Children; Metabolic Factors

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Introduction. Although pediatric urolithiasis is rare in Western countries, it remains a common health problem in some parts of the world. Some epidemiological studies have shown that annual incidence of urolithiasis in asymptomatic primary school children is 1%. Although metabolic defects, urinary stasis, and infection seem to be the major causes of stone disease in many Western countries, in countries where pediatric stone disease is considered to be endemic, the etiology remains idiopathic in the majority of the cases. Metabolic and genitourinary anomalies which predispose to urolithiasis often coexist in pediatric patients. Metabolic abnormalities have been reported in 30% to 86% of the children with urolithiasis depending on the location of the studies. Various anatomical abnormalities such as ureteropelvic junction obstruction, ureterocele, VUR, hydronephrotic renal pelvic or calices, calyceal diverticulums, horse-shoe kidney, ureteral stricture, and tubular ectasia (medullary spongy kidney) promote urine stasis and increase the risk of stone formation. Natural inhibitors and promoters of crystal and stone formation exist in the urine. Natural inhibitors consist of magnesium, citrate, and glycoproteins. Glycoproteins (nephrocalcin and Tamm-Horsfall proteins) are probably extremely important inhibitors. This study was conducted to determine the association of metabolic risk factors in pediatric patients with nephrolithiasis.
Methods. Metabolic evaluation was done in 142 pediatric stone formers. Evaluation included serum biochemistry, measurement of daily excretion of urinary calcium (Ca), uric Acid (UA), oxalate, citrate, Mg (in older children), and measurement of Ca, UA, Cr and oxalate in random urine samples (in non-toilet-trained patients) as well as urinary tests for cystinuria.
Results. A total of 61 patients (42.7%) had metabolic abnormalities. Anatomical abnormalities were found in 12 (8.4%) patients. Urinary analysis revealed hypercalciuria in 25 (17.6%), hyperuricosuria in 23 (16.1%), hyperoxaluria in 17 (11.9%), cystinuria in 9 (6.3%), hypocitraturia in 3(2.1%), and low urinary Mg level in 1 (0.7%) patients. Sixteen patients (11.2%) had mixed metabolic abnormalities.
Conclusion. Metabolic abnormalities are common in pediatric patients with urolithiasis. In our study, calcium and uric-acid abnormalities were the most common and VUR seemed to be the most common urological abnormality which leaded to urinary stasis and stone formation.

P150

Voiding Cystourethrography without Fluoroscopy

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Introduction. Diagnostic procedures represent the main source of medical radiation exposure. Voiding cystourethrography (VCUG) is the most common fluoroscopic procedure performed in children and 80% of the entire radiation dose in a VCUG relates to fluoroscopic examination. Different diagnostic methods for detection of VUR which accompany low-dose radiation have been studied. One of them is VCUG without fluoroscopic examination.
Methods. In a cross-sectional study, 368 pediatric patients with documented urinary tract infection were enrolled in the study. Voiding cystourethrography was performed without using fluoroscopic spot or preliminary films. We took two radiographs in all patients in right and left oblique positions.
Results. VUR was detected in 202 of 734 KUUs (27.5%) in 138 patients (37.5%). It was grade 2 or less in 62 KUUs and grade 3 and more in 140 KUUs.
Conclusion. The overall prevalence of VUR (39.5% of patients) was compatible to what was found using fluoroscopic monitoring VCUG; thus, we concluded that VCUG performed without using fluoroscopic monitoring was as sensitive as VCUG with fluoroscopic monitoring for detection of VUR.

P151

Five Cases of Severe Vesico-Ureteric Reflux in a Family Compatible with X-Linked Inheritance

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Introduction. Vesico-ureteric reflux (VUR) is one the most common inherited disorder in humans. Even though this defect is common among siblings and parents of index patients (27–40%), the mode of inheritance is not

well defined.
Methods. Parents and siblings (three females and two males) of a 13-year-old girl with end-stage renal failure (ESRF) due to reflux nephropathy were screened for VUR, although they had not presented episodes of urinary tract infection.
Results. VUR was identified in the father (44 years old) and in all the three sisters (aged 15, 16, and 18 years) while the two brothers (aged 5 and 8 years) had normal renal ultra sonograms and cystograms. A technetium-99m Di-mercapto-succinic acid (99mTc-DMSA) scan demonstrated renal scars in the father and in two of the sisters with VUR. No episodes of urinary infection had been documented for any relatives. Haplotype analysis on the X-chromosome confirmed paternity.
Conclusion. This is the first description of VUR compatible with an X-dominant trait. This mode of inheritance must be added to what is already known on familial VUR, and future studies should also consider this possibility.

P152

Idiopathic Focal Segmental Glomerulosclerosis in Children

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Introduction. This study was conducted to determine the prognostic value of some clinical, laboratory, histopathologic, and therapeutic factors in children with focal segmental glomerulosclerosis.
Methods. Sixty-two children were enrolled in this historical cohort. Patients were divided into two groups: responsive and non-responsive. All patients received steroid; 35 patients received cyclophosphamide, and 16 received cyclosporine.
Results. Comparisons between groups were performed by χ^2, Fisher's exact, or Mann- Whitney test. Correlations between variables and prognosis were evaluated. We did not find any significant difference (P >0.05) except for severe interstitial fibrosis which was more frequent in patients with chronic kidney disease (P =0.03). Prevalence of chronic kidney disease in non-responder groups was significantly higher (P <0.05).
Conclusion. Our study showed that therapy with cyclophosphamide was promising in focal segmental glomerulosclerosis.

P153

Effect of Plasminogene Activator Inhibitor 1 (PAI-1) Polymorphisms on Lipid Profile in Renal Transplant Recipients

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Introduction. Plasma lipid peroxidation is increasingly seen in renal transplantation. We assess the correlation of PAI-1 polymorphisms and lipid profile in renal transplant recipients (RTRs).
Methods. The present study was performed during September 2003 to December 2005 on 61 RTRs [35males and 26 females, with a mean age of 36.47 (range 12-61) years] with stable allograft function (Cr<2.2 mg/dl). Following the DNA extraction from the blood leukocytes, the genotypes of PAI-1 were determined by amplification refractory mutation system polymerase chain reaction (ARMS-PCR). The level of LDL, HDL, cholesterol and triglyceride (TG) were measured in the setting of each of the above PAI-1 polymorphisms. Values were expressed as mean ±SD and $P < 0.05$ was considered to indicate statistical significance.
Results. There was no association of each genotype of the PAI-1 with level of LDL, HDL, and cholesterol. Although the presence of 5G alleles had positive correlation with TG ($P < 0.03$, r=0.401) in the patients younger than 30 years but this correlation became inverse but again significant ($P < 0.05$, r=-0.404) in the recipients older than 30 years.
Conclusion. The presence of 4G/5G and 5G/5G were correlated with TG level in RTRs: positive in younger ones and negative in the older ones.

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Prevalence and the Risk Factors of Post Operation Acute Renal Failure After Cardiac Surgery in Southern Iran

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Introduction. Acute renal failure requiring renal replacement therapy after cardiac surgery remains a cause of major morbidity and mortality. A number of risk factors for the development of acute kidney injury after cardiac surgery have been previously described and based on these variables several groups have proposed scoring algorithms. Predictive value of these algorithms for our patients in Iran is unclear. This prospective study designed to investigate some of these risk factors

among our patients.
Methods. A total of 240 patients with normal kidney function who were candidates for cardiac surgery were selected and baseline data were collected from them. Diabetes mellitus and age were selected as more controversial preoperative risk factors. Clamp time and pump time were also selected as intraoperative risk factors, and the type of operation was also, considered as an independent risk factor. All the patients were followed with serial measurement of serum creatinine postoperation.
Results. The incidence of acute renal failure among our patients (11.25%) was similar to that in other studies (1-30%).Statistical analysis identified that increase in the incidence of postcardiac surgery acute renal failure is not related to patients' age (P = 0.805), diabetes mellitus (P = 0.218), pump time (P = 0.944), clamp time (P = 0.506) and type of operation (P = 0.310).
Conclusion. Although several scoring algorithms are available for prediction of postcardiac surgery complications, these must be matched with our patients' criteria to enhance their accuracy for our situation.

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Frequncy of Renal Artery Stenosis In Coronary Artery Disease

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Introduction. Ischemic nephropathy is common in the atherosclerotic patients. Early diagnosis of renal artery stenosis is very important because it is frequently asymptomatic and presents with progressive renal failure.
Methods. In this study, 228 patients with coronary artery disease (135 patients with 2 vessel disease (2VD); 93 patients with 3 vessel disease (3VD)), with GFR>90 cc/min, were evaluated with coronary angiography and abdominal aortography simultaneously for screening of renal artery stenosis.
Results. At the end of the procedure, 98 patients had renal artery stenosis > 50% (62 patients with 3VD, 36 patients with 2VD) and 34 patients had stenosis > 70% (28 patients with 3VD, 8 patients with 2VD) in one or both renal arteries. Average age in renal artery stenosis group was 74 ± 4 years and in second group was 53 ± 4 years. There is no significant difference between diabetic and non-diabetic patients (P = 0.55) and hypertensive and normotensive patients (P = 0.38).
Conclusion. Renal artery stenosis should be suspected in patients with coronary artery disease, even when no symptom of renal artery stenosis is present.