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A Histopathological Study on Side Effects of Large Doses of Dexamethasone on Kidney

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Introduction. Renal glomeruli form a complex structure composed of several cell types and a highly organized basement membrane whose important function is the ultrafiltration of plasma to produce urine. Severe glomerular injury frequently results in an irreversible loss of renal function. In this survey, we investigate the pathologic features of glomerular lesions as a result of excessive exogenous glucocorticoid therapy.

Methods. In this limited study a total of 18 stray dogs divided into one control (n = 6, 3 male and 3 female) and two experiments groups (n = 6). The two experiments groups were administrated daily dose of 40 and 125 microg/kg body weight of dexamethasone intramuscularly for 16 weeks, respectively. In order to eliminate probable pathologic lesions, animals of less than a year old were used. The nutritional conditions and care were similar for all the dogs. During the treatment, no changes were observed on food intake. Decreased body weight gain was observed in all treated dogs. One of the low dose treated dog died during the study (not related to treatment).

Results. At post-mortem examination extreme macroscopic changes including swelling and paleness of kidneys were seen in dogs receiving a dose of 125 microg/kg. The renal specimens were prepared for routine histopathological study after fixation (in formalin 10% and alcohol) and staining by hematoxylin-eosin and PAS method respectively. Microscopically, glomerular lesion including of mild mesangial hypercellularity, synechia, thickened basement membranes were seen.

Conclusions. The cause of this lesion is unknown; however, hypertension, because of its occurrence due to increased plasma glucocorticoid concentrations has been postulated.

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Effect of Losartan and Enalapril on Inflammatory and Anti-Oxidative Markers in Renal Transplant Recipients With Renin-Angiotensin System Polymorphisms

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Introduction. As renin-angiotensin system (RAS) activity could affect the severity of oxidative stress and inflammatory markers; we assessed the effect of enalapril and/or losartan on these markers in renal transplant recipients (RTRs) with RAS polymorphisms.

Methods. After determination of RAS genotypes consist of the angiotensin converting enzyme (ACE I/D), angiotensinogen (AGT M235T) and angiotensin II type 1 receptor (ATR1 A1166C) by PCR, seventy-six RTRs recruited to four groups randomly: first (17 patients) and second (24 patients) groups were treated with E (E+: 10mg/d) and L (L+: 50 mg/d) alone, respectively. The third group (17 patients as positive control) received E+L (E+L+: 10mg/d + 50 mg/d) and the forth group (18 patients as negative control) received no medication (E-L-). Hs-CRP and total anti-oxidant (TA) as inflammatory and anti-oxidative markers were measured after 2 months. After 2 weeks as washout period, E group changed to L and vice versa as a cross-over design. They were followed for another 8 weeks and hs-CRP and TA were retested.

Results. Following up the patients (after 2 and 4 months of treatment) in drug regimen revealed that hs-CRP and TA levels were significantly decreased and increased (consequently) in E+L+, L+, E+ groups ($P < .05$). On analyzing the relationship between RAS polymorphisms with baseline hs-CRP and TA levels, CC genotype of ATR1 had lower hs-CRP levels ($P = .04$). But none of the RAS polymorphisms could predict the anti-oxidative and anti-inflammatory response rate to the drugs ($P > .05$).

Conclusions. Although hs-CRP is lower in CC genotype of ATR1 polymorphism; E and/or L reduce hs-CRP and increase TA regardless of the RAS genotypes.

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Correlation of Clinical and Pathologic Findings According to World Health Organization and ISN/RPS Classification in Patients With Lupus Nephritis: A Five-Year Experience in Shiraz, Iran

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Introduction. Background: Systemic Lupus Erythematosus (SLE) is a multiorgan autoimmune disease. Lupus nephritis (LN) is the most common and serious manifestation of SLE. WHO classification and now ISN/RPS 2003 classification tend to correlate with the clinical syndrome and provide valuable information regarding prognosis and guideline for treatment. Objective ; to determine retrospectively the frequency and comparison of clinical and Paraclinical findings in

each class of lupus nephritis according to WHO and ISN/RPS 2003 classification and also compare these two popular classification methods of lupus nephritis.

Methods. we conducted a retrospective study of 144 patients with biopsy proven lupus nephritis during five years to find whether clinical and laboratory parameters used to evaluate lupus nephritis related to WHO and or ISN/RPS 2003 class on renal biopsy.

Results. A total of 144 patients entered the study, of whom 84.7% were female and 15.3% male with mean age of 25.6 ± 10.3 years at the time of biopsy. The most frequent SLE presenting features were arthralgia, edema and hypertension. WHO class IV and ISN/RPS class IV were detected the most frequent SLE presenting features with 56% and 54.9%, respectively. Edema, hypertension, increased BUN and creatinine, increased 24-hour urine protein excretion and decreased serum albumin level were related with a worse class of lupus nephritis.

Conclusions. However there is relative correlation between some clinical and paraclinical findings and lupus class on biopsy, we concluded that still renal biopsy with determination of lupus class, activity and chronicity index provide information over and above clinical and paraclinical variables and remain a pivotal element in management of lupus nephritis.

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Renal Involvement in Behcet Disease

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Introduction. Behcet's disease (BD) is a multisystem disorder characterized by vasculitis. BD consists of a triad of recurrent oral and genital ulcer with relapsing uveitis. There are conflicting reports about the renal involvement in BD. Renal glomerular, vascular and interstitial involvements and complications of drug therapy all have been reported in BD.

Methods. To determine the frequency of renal problem in BD, routine urine analysis and serum creatinine level measurements were performed in 100 patients with BD (58M/ 42F, 22-50 years). Those with hematuria and proteinuria, further were examined for dysmorphic red blood cells and twenty four hours urine collection for quantitative degree of proteinuria. Serologic examination, for systemic lupus (SLE), ANCA-associated vasculitis and antiphospholipid syndrome, were also performed in those with positive findings.

Results. Icteric hematuria was detected in 6 male patients (6%, 25 to 38 years), further microscopic examination revealed dysmorphic red blood cells in three of them (3%). Significant proteinuria (500 mg/24 hours) was also detected in a patient with neuro-behcet. There was mildly elevated serum creatinine (> 1.5 mg/dL) level in two patients (1M/1F), both had been taking cyclosporine for treatment of ophthalmo-behcet

for more than 2 years. Serum cyclosporine level in both of them was below 250 ng/mL. Serologic examination for systemic disease was negative. Kidney biopsy was performed in both of them and revealed glomerular and interstitial involvement.

Conclusions. Renal involvement in BD is not infrequent, although, it is mostly mild in nature. Better understanding of the prevalence and significance of renal insolvent in BD led to better understanding of this complication. Glomerular lesion is probably the most frequent type of renal disease observed in BD.

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Effectiveness of Every Other Day Gentamicin Injection in Treatment of Urinary Tract Infection in Rat

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Introduction. Aminoglycosides are common antibiotics in treatment of urinary tract infections. Their dosages and interval have been changed during years. The last recommendation is daily administration. In the present study, we evaluated the effectiveness of every other day gentamicin administration in treatment of urinary tract infections in experimental model.

Methods. Forty-eight Sprague Dawley rats were infected by inoculation of 0.1 mL *E coli* suspension 10^9 /mL to their left kidneys. Gentamicin was administered intraperitoneally at dosages of 10 mg/kg (daily), 10 mg/kg every other day (every 4 hours) or 20 mg/kg (every 4 hours). Responses were evaluated after one week by counting colony forming U/mL homogenized kidney tissue and percentage of sterile kidneys.

Results. The results showed no significant difference between responses in various groups. Colony counts and percent of sterile kidneys were not different in groups.

Conclusions. It was concluded that gentamicin usage in every other day interval can be as effective as daily injection, without causing increased scar formation.

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Relation of Microalbuminuria and Coronary Artery Disease in Patients Undergoing Coronary Angiography

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Introduction. Prospective studies confirm that microalbuminuria is predictive, independently of classic

risk factors, of cardiovascular disease events and all-cause mortality within groups of patients with diabetes or hypertension and in the general population. However, there is limited evidence linking angiographic severity of coronary artery disease (CAD) to microalbuminuria. We examined coronary angiograms for extent of severe CAD (luminal narrowing > 50%) in patients with diabetes mellitus (DM) and general population.

Methods. Our study consisted of 153 patients who underwent coronary angiography in Fatemeh Zahra Hospital in Iran (M/F, 79/74; mean age, 57 ± 11 year). Urinary albumin excretion was measured in random samples by nephelometry technique (albumin/creatinine ratio). Age and sex distributions of coronary risk factors were compared between patients with and without CAD.

Results. A total of 75.5% of patients had CAD and 24.5% had no coronary lesion. Microalbuminuria was detected in 25.9% of patients with CAD and 8.9% of those without coronary Artery lesion ($P < .05$). The presence of 1- or 2-vessel CAD showed a linear increase in group with microalbuminuria to group without microalbuminuria ($P < .05$). But, microalbuminuria in patients with 3-vessel disease was similar to normal population.

Conclusions. Patients with microalbuminuria more frequently suffer from angiographic CAD than those without microalbuminuria. This relation is independent of other risk factors and is particularly evident in patients with DM. There is no relation between microalbuminuria and number of affected vessels.

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Alteration of Plasma Oxidative Stress Biomarkers and Hepatocyte Growth Factor in Living Donor Kidney Transplant Recipients

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Introduction. The effects of renal transplantation on oxidative state are incompletely understood and there are some reports of hepatocyte growth factor (HGF) relation with oxidative stress. The aim of this study was to evaluate the plasma oxidative status and HGF in living donor renal transplant recipients.

Methods. Nineteen patients who underwent living donor renal transplantation were used. All of the patients were on cyclosporine-based immunosuppression with normal graft function. Blood samples were obtained before the transplantation and on the 2nd, 7th, and 12th days after transplantation. Plasma MDA, ferric reducing antioxidant power (FRAP), HGF, vitamin E, erythrocyte

reduced glutathione (GSH), and superoxide dismutase (SOD) activities were determined.

Results. There was a significant decrease in plasma vitamin E, FRAP and HGF, 2 days after transplantation. Although, there was no significant alteration in GSH and MDA, a reduction in SOD activity was observed. There was also a significant reduction in FRAP, MDA and HGF 7th and 12th days after the transplantation. Direct correlations were determined between HGF and FRAP as well as HGF and plasma indices like creatinine or uric acid.

Conclusions. Renal transplant recipients display a persistent oxidative stress. A direct correlation between plasma HGF changes and total antioxidant activity suggests a possible relation between HGF and redox status of these patients.

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Renal Ischemia/Reperfusion Injury Ameliorates Liver Antioxidant Level in Male Rat

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Introduction. Ischemic acute tubular necrosis remains a significant medical problem and a major cause of renal failure in hospitalized patients. Although most researches in this area have focused on the renal response to this injury, recent works suggest that renal injury is also regulated by extrarenal organs. The aim of this study was to assess the hepatic changes after renal ischemia/reperfusion injury.

Methods. Twenty male Sprague Dawley rats were subjected to either sham operation or various degrees of renal ischemia/reperfusion injury (30, 45, and 60 minutes). Reperfusion time in all groups was 60 minutes. Hepatic tissue ferric reducing antioxidant power (FRAP) and reduced glutathione (GSH) levels were evaluated to show hepatic response to renal ischemia/reperfusion injury.

Results. Hepatic GSH was found to be decreased significantly after 45-minute ischemia and 1-hour reperfusion (1.95 ± 0.55 versus 3.62 ± 0.41 ; $P < .05$) and remained low through 60-minute ischemia and 1-hour reperfusion. Decreased levels of GSH supported the ROS-mediated biomolecular alterations. On the other hand, FRAP did not show any significant changes between the control and the other experimental groups.

Conclusions. Forty-five-minute renal ischemia plus 1-hour reperfusion induces antioxidant alterations in the hepatic tissue. Experimental period may not be long enough to determine the changes in FRAP level. Care should be taken to protect other organs remote from ischemia/reperfusion sites especially during renal surgery.

P309

Blood Superoxide Dismutase Activity in Hemodialysis Patients

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Introduction. Oxidative stress occurs as the result of imbalance between free radicals production and anti-oxidant power of the tissues. In the recent studies, it is suggested that hemodialysis increases formation of oxygen radicals resulting in reduced anti-oxidant capacity of different tissues. The aim of the present study was to investigate the changes in the red blood cells superoxide dismutase activity (SOD, an anti-oxidant enzyme) in hemodialysis patients.

Methods. Blood samples were taken from 17 patients on hemodialysis and 12 healthy people (control group). Packed cells were extracted from blood samples by centrifuging. The SOD activities were assayed in packed blood cells in both groups by Paoletti's method.

Results. The SOD activity was significantly lower in the patients on hemodialysis compared to that in the control group ($P < .05$).

Conclusions. The result of the present study suggests that anti-oxidant capacity of the blood in patients receiving hemodialysis may decrease due to increased oxidative stress.

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Thrombotic Microangiopathy as a Complication of Medicinal Leech Therapy

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Introduction. Medicinal leeches (*hirudo medicinalis*) are increasingly used as a useful therapeutic option in various medical and surgical settings. The potential complications associated with this therapy include infections with aeromonas species, bleeding, anemia, and allergic reactions.

Methods. We present history of a patient who had developed thrombotic microangiopathy and acute renal failure following leech therapy.

Results. A 32-year-old man developed thrombocytopenia

and moderate hemolysis following leech therapy three weeks earlier. Fragmented schistocyte was found on peripheral blood.

Conclusions. To the best of our knowledge, the present report is the first to demonstrate TMA and renal failure as a potential complication of medicinal leech therapy. Clinicians should also consider thrombotic microangiopathy and renal failure as potential complications of this emerging therapy. Leech saliva contains many non-human proteins, the biological effects of which remain to be fully understood. It is proposed that the series of non-human proteins within leech saliva may be capable of injuring endothelium.

P311

Comparison of Urologic Complications of Nylon With Catgut Chromic in Ureteral Anastomosis in Kidney Transplantation

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Introduction. This study was performed to compare urologic complications of fine prolene with Catgut chromic in ureteral anastomosis in kidney transplantation; with our study selection between two above sutures will be easier.

Methods. This study was an experimental interventional survey. 115 patients whom their ureteral anastomosis was performed with Catgut chromic and 115 patients whom their ureteral anastomosis was performed with fine prolene were participated in our study. The ureteral implantation was performed with modified lich technique. All patients were followed for 18 months. Urologic complications included stone on the site of anastomosis, stenosis, urinary leakage, urinary tracts infections and collection were collected from data files in hospital and office and paraclinical tests in follow-up period. The analyses were done with the chi-square, the Fisher exact and the *t*, the Mann-Whitney U, and Kaplan-Meier tests.

Results. We detected no stones in the two groups. At least 18.8% in catgut chromic group and 19.8% in prolene group had experienced one episode of urinary tracts infection ($P > .05$). Three patients had urinary leakage and one patient had ureteral stricture in catgut group. 24.3% in catgut chromic group and 18.1% in prolene group had collections ($P > .05$).

Conclusions. In our study urologic complications in prolene group was not more than catgut chromic group and prolene can be used in ureteral implantation in renal transplantation.

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Clinico-Pathological Study in the Elderly Kidney Patients

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Introduction. The number of renal specimens from elderly (age > 65) which is referred to pathology department of our Hospital is increasing during last years. Data have shown some differences in pathology and clinical presentations in this group. We planned a study to investigate the cause of renal biopsy and clinico-pathologic presentations of the elderly patients in our center.

Methods. The study was retrospective. From March 2001 to September 2007, 1374 kidney obtained from all age groups which 86 cases (6.3%) were from the elderly patients. Data including epidemiologic findings, pathology reports, clinical and lab findings extracted from the files and analyzed.

Results. There were 57 (66.3%) males and 29 (33.7%) females. The mean age was 69 ± 3.6 years (range: 65 -84yrs). The indication for renal biopsy was renal failure in 30 (34.3%), nephrotic syndrome in 52 (61.2%), subnephrotic proteinuria in 4 (4.7%) patients. The most common pathology was membranous glomerulonephritis (GN) in 24 (27.9%) followed by focal glomerular sclerosis in 14 (16.3%), amyloidosis in 12 (14%), crescentic GN in 6 (7%), membranoproliferative GN in 5 (5.8%), tubulointerstitial nephritis in 4 (3.7%), IgA nephropathy, light chain nephropathy and acute tubular necrosis each in 3 (3.5%) cases. Two patients (3.2%) had diabetic nephropathy. Atheroembolic disease, minimal change disease, lupus nephritis and mesangial proliferative diagnosed each in one case (1.2%). Clinical and lab findings showed: high serum creatinine level (> 1.4 mg/dL) in 56 cases (65.1%), hyperlipidemia in 26 (30.2%), high blood pressure in 59 (69.4%), hematuria in 31 (36.5%) cases. Viral markers including hepatitis C and B, HIV were negative in all patients. Anti neutrophilic cytoplasmic antibody test was positive in 6 cases (7%). Ten patients (11.6%) discharged on chronic dialysis program. Multiple myeloma and breast cancer detected in 4 cases.

Conclusions. In our study the third common pathology was amyloidosis, kidney involvement due to viral infections was not reported and 65.1% of our cases had high serum creatinine at the admission time. We conclude that clinico-pathologic findings were different in our elderly patients. We need a program for early detection and refer of this age group for diagnosis and treatment.

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Schistosomias nephropathy in South-West Iran and the Role of Prevention Strategies

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Introduction. Chronic exposure to infectious agents is a major factor in the increased prevalence of glomerular diseases in developing countries. Malaria is the best-documented parasitic infection associated with glomerular disease, but other parasitic infections including schistosomiasis, filariasis, leishmaniasis, and possibly helminth infections may also induce nephritis or nephrosis. Urinary schistosomiasis due to *Schistosoma haematobium* is a significant cause of clinical morbidity and disability in disease-endemic countries of Africa and the Middle East, where more than 110 million people are infected. Accumulation of parasite eggs in body tissues leads to acute and chronic injury, and long-term infection is associated with increasing structural urinary tract damage, with consequent bladder and kidney dysfunction, and risk for cancer.

Methods. During a 10-year field survey from 1980 to 1989, a total of 1518 cases of *Schistosoma haematobium* were detected in Khoozestan province, the only area in south-west Iran where urinary schistosomiasis is prevalent.

Results. Most of the cases were detected by urine examination and a few by bladder biopsies. The incidence of infection was 0.653% in 1980, 0.021% in 1988, and 0.042% in 1989, but after that this incidence had more descending pattern and now Khoozestan is a low endemic region for this infection.

Conclusions. Strict control measures including; education, environmental modification, mass chemotherapy and mollusciciding were used to help reduce the prevalence of urinary schistosomiasis.

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A Prospective Comparison of Spot Urine Protein-Creatinine Ratio Versus 24-Hour Urine Protein Excretion in Women With Preeclampsia

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Introduction. Proteinuria is an important diagnostic component of preeclampsia. We prospectively compared the spot urine protein-creatinine (P/C) ratios with 24-hour urine collections for protein in women with preeclampsia.

Methods. A total of 81 pregnant women with preeclampsia were prospectively recruited from Emam Khomeini Hospital in Ahwas, Iran. Protein to creatinine ratio (mg/gram of creatinine) was determined in a spot mid-stream urine sample, and proteinuria was measured

in 24-hour urine collected on the subsequent day. The correlation between the spot P/C ratio and 24-hour urine protein excretion was assessed. Diagnostic performances of P/C ratio were expressed in terms of specificity, sensitivity. The receiver operating characteristic curve analysis was used to determine the best discriminative values of the spot urine P/C ratios for preeclampsia (proteinuria \geq 300 mg/24 hours) and severe proteinuria (proteinuria \geq 5000 mg/24 hours).

Results. 81 pregnant women with preeclampsia were recruited. 7 patients had severe proteinuria. There was a strong correlation between the spot P/C ratio and 24-hour urine protein excretion ($r = 0.84$; $P < .001$). The optimal spot P/C ratio cut-offs, were 0.20 for 300 mg/24 hours (preeclampsia) and 3.40 for 5000 mg/24 hours urine protein excretion (severe proteinuria). The negative predictive value for P/C ratios 0.20 was 96.76% and the positive predictive value for P/C ratios 3.4 was 98.38%. The spot P/C ratio cut-offs of < 0.19 yielded sensitivity of 100% for exclusion of preeclampsia and cut-offs of > 3.9 yielded specificity of 100% for severe proteinuria.

Conclusions. There is a well correlation between the spot urine P/C ratio and 24-hour urine protein excretion in women with preeclampsia. This index could be used for either exclusion of preeclampsia or rapid detection of severe proteinuria.

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The Association of Serum Lipoprotein (a) With Hypertension in Diabetic Patients

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Introduction. We aimed to elucidate whether and how in diabetes mellitus (DM) patients, the serum Lp (a) concentration influences hypertension. A cross-sectional study was conducted on DM patients under treatment of oral hypoglycemic agents or insulin injections.

Methods. Hypertension (HTN) was diagnosed according to WHO guidelines and serum lipoprotein (a) [Lp (a)], glycosylated hemoglobin (HbA1c) and other lipids were measured, also Body mass index (BMI) and Creatinine clearance (CrCL) were assessed.

Results. Study group included 122 patients ($f = 82$, $m = 40$). The mean age was 63 ± 10 years. The duration of DM and HTN were 7.4 ± 5.8 and 3.2 ± 4.6 years, respectively. The mean systolic and diastolic blood pressure (BP) were 138 ± 23 mm Hg and 83 ± 12 mm Hg, respectively. The mean serum Lp (a) was 22.2 ± 24.7 mg/dL (median: 18.3 mg/dL) and serum Lp (a) levels > 30 mg/dL was found in 29 patients (23.8%). In this study, significant positive correlations of duration of DM with duration of hypertension and also with duration

of systolic and diastolic BP, also a significant inverse correlation of serum Lp (a) with CrCL were seen. In this study, significant positive correlations of serum Lp (a) with systolic and diastolic BP were existed too.

Conclusions. Renal dysfunction is a primary determinant of higher Lp (a) levels in diabetic patients and results aggravation of hypertension. This has important implications for the increased susceptibility to vascular disease associated with Lp (a) in diabetic patients. Higher plasma concentrations of Lp (a), though with in the normal range, could be an independent risk factor for developing hypertension or its aggravation. This study addressed the hypothesis that kidney function is an independent determinant of Lp (a) and aggravates or emerges HTN in diabetic patients.

P316

Three Directional Blockade of Renin Angiotensin Aldosterone System and Diabetic Nephropathy

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Introduction. Diabetic nephropathy is the leading cause of ESRD in the world and DM-related morbidity and mortality. Proteinuria in individuals with DM is associated with markedly reduced survival and increased risk of cardiovascular disease. The aim of this study was determination of Beta blockers role in control of diabetic nephropathy process.

Methods. During 1 year (2006) we enrolled 103 diabetic patients and divided them in two groups. We had 50 patients as control group taken ACE-Is plus ARBs and second one that account for 53 patients as experiment group that in addition to ACE-Is and ARBs, used beta blocker (Metoral). These patients were followed as long as 7 months and also proteinuria, blood pressure, serum creatinine, BUN, HbA1c was determined in all patients monthly during this period.

Results. Case and control groups respectively had 54.92 ± 13.00 and 50.82 ± 12.33 years old. Duration of disease presentation in case and control groups respectively was 10.54 ± 7.25 and 9.49 ± 4.37 years ($P = .37$). In case group systolic blood pressure decreased significantly more than control group during first 2 months and 5 months after this first 2 months ($P = .001$ and $P = .001$, respectively), but diastolic blood pressure was not changed significantly. Microalbuminuria in case group also decreased significantly more than control group during first 2 months and 5 months after this first 2 months (215.70 ± 56.20 mg/d versus 33.92 ± 17.42 ; $P = .001$, 236.10 ± 22.09 versus 130.00 ± 29.07 ; $P = .001$). Cr and BUN in case group significantly decreased more than control group ($P = .001$ and $P = .001$). Also HbA1c

was decreased significantly in case group during 5 months after first 2 months of utilization of this combination ($P = .028$).

Conclusions. Beta blockers in combination with ACE-Is and ARBs are more effective in controlling proteinuria, renal function and blood pressure in patients with diabetic nephropathy. We must perform greater clinical trials.

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Effects of Regular Exercise on Experimental Diabetic Nephropathy in Rat

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Introduction. Diabetes mellitus and its complications are a public health problem. Exercise is frequently recommended in the type I and type II diabetes mellitus and can improve glucose uptake by increasing insulin sensitivity and lowering body adiposity. Diabetic nephropathy has become the main cause of renal failure. The purpose of this study was to investigate the effect of regular exercise on diabetic nephropathy.

Methods. In this study, 56 rats were selected (12-week-old, 200 g to 300 g) and were divided into two groups (treatment and control). In these two groups, diabetes was induced by intraperitoneal injection of streptozotocin (50 mg/kg). The rats in the treatment group were kept in normal conditions of food and place with regular exercise (treadmill) for 12 weeks; 5 days in a week, an hour every day. For the control group, normal conditions (food and place) without any physical activity/regular exercise were provided. After 12 weeks, renal tissues were sampled in both groups and 5- to 6-micrometer tissue sections were prepared through hematoxylin-eosin staining method.

Results. Histopathological analysis of the tissue sections in the control group demonstrated that glomerulosclerosis, arteriosclerosis, perivascular cuffing of mononuclear inflammatory cells, proteinuria, and hyaline cast in the lumen of renal tubules and a little pathological changes in treatment group were observed. Mean deference of histopathological changes in the two groups were significant ($P < .005$).

Conclusions. We demonstrated that regular exercise (treadmill) is able to reduce pathological changes and improve diabetic nephropathy in diabetic rats resulting in the reduction of glycosylated hemoglobin, oxidative stress, hyperglycemia, very low density lipoprotein, expression of apoptosis regulatory gene and transforming growth factor beta, and increase insulin sensitivity of tissues, heparan sulphate proteoglycans, heparan

sulphate, high density lipoprotein, insulin-like growth factor, and epidermal growth factor.

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Correlation Between high sensitive C-Reactive Protein and Microalbuminuria in Patients With Diabetic Nephropathy

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Introduction. Diabetic nephropathy is a common cause of end-stage renal disease. The importance of microalbuminuria as the first marker of diabetic nephropathy is well established. Recently high sensitive CRP (HS-CRP) as a marker of diabetic nephropathy was introduced. In this study, we assessed the correlation between these two parameters.

Methods. A total of 87 patients with type 2 diabetes mellitus (33 men and 54 women) were evaluated for microalbuminuria and HS-CRP. The average age of patients was 52.04 years and the mean duration of diabetes mellitus was 5.84 years. For measurement of HS-CRP, we used CRP Latex test kit.

Results. Of 45 patients with microalbuminuria, 31 (68.9%) had a positive HS-CRP and of 42 patients without microalbuminuria, 33 (78.6%) had a negative HS-CRP ($P < .001$).

Conclusions. With logistic regression multistage analysis, it was revealed that HS-CRP is a simple and valuable test for detection of diabetic nephropathy.

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The Prevalence of Cough Induced by Angiotensin Converting Enzyme Inhibitors Between 2006 and 2007 in Sari

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Introduction. Angiotensin converting enzyme inhibitors (ACEI) are drugs for the treatment of hypertension, heart failure and some nephropathies. One of the most frequent side effects of these drugs is dry, nonproductive and persistent cough (15% to 19%) that leads to discontinuation of them. This study aims to determine the prevalence of cough in Iranian patients.

Methods. All of patients that referred to Imam Khomeini hospital clinics in Sari and used ACEI entered to our study (2006 to 2007). A total of 1306 patients under

ACEI treatment (74% enalapril, 26% captopril) were studied. At the time visit a questionnaire containing demographic data, underlying disease, age, sex, type of ACEI were completed.

Results. Among the 1306 patients (mean age, 53 ± 14.5), 124 (4.4%) of these patients were detected to have cough after ACEI usage. In patients with cough, 68% were female. In Captopril group 1.2% of patients and 3.2% in Enalapril group had cough.

Conclusions. The result of this study like the other studies shows high prevalence of cough in Iranian patients.

P320

Incidence and Risk Factors of New-Onset Diabetes Mellitus Among Renal Allograft Recipients

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Introduction. New onset diabetes mellitus after transplantation contributes to the risk for cardiovascular disease and DM, reducing graft and patient survival. Then, this study was conducted to identify incidence and risk factors for development of post-transplant DM in Mashad.

Methods. Nondiabetic adult end stage renal failure patients awaiting renal transplantation were studied prospectively. An oral glucose tolerance test (oGTT) was performed pre- and posttransplantation (2 months after transplantation). Pre- and posttransplantation risk factors such as age, weight (BMI), dialysis modality, family history of diabetes, duration of renal failure were assessed to find any relationship among them and post-transplant DM (PTDM).

Results. Before transplantation based on oGTT1, 13 patients had unknown DM; however, after transplantation only 9 patients from them had DM again. Then, in 15 patients that had DM based on oGTT2, only 6 patients had actually PTDM. The incidence of PTDM in 50 patients studied over a 1-year period was 16.22% (in 6 patients). There was a significant relation between age and PTDM, as mean age in patients with impaired oGTT were 43.85 ± 17.33 year old and in patients with PTDM were 38.69 ± 14.02 year old but in patients with normal oGTT were 31 ± 11.04 year old ($P = .025$). There was an insignificant difference between BMI and PTDM. The mean of BMI in group with impaired oGTT was 21.99 ± 3.43 Kg/m² and in group with PTDM was 19.64 ± 2.65 Kg/m² and in normal oGTT was 21.67 ± 3.63 kg/m² ($P = .147$). There was no significant relation between dialysis modality and family history of diabetes and also duration of dialysis with PTDM ($P > .05$).

Conclusions. Pretransplant risk factors for DM in our study were age, and maybe family history of DM

and duration of dialysis before transplantation. Then, identifying them might allow modification of post transplant immunosuppressant with nondiabetogenic agents.

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Posttransplant Diabetes Mellitus

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Introduction. Posttransplant diabetes mellitus (PTDM) is a frequent complication in renal transplant recipients. The report incidence of new-onset diabetes after transplantation has varied between 2% and 35% whereas the prevalence of diabetes in general population is estimated at ~4%. We evaluated prevalence of PTDM in renal transplant patients in a private clinic in Isfahan.

Methods. In a retrospective cohort study the medical records of 67 renal transplant patients seen over the start of our clinic in Isfahan (January 2000 till September 2007). Patients were divided into 3 groups (previous DM, PTDM, normal). The DM and PTDM were considered if the patient had twice FBS more than 125 mg/dL or is on antihyperglycemic agents. The data were analyzed by SPSS version 13 and qui-square and 1-way ANOVA statistic tests.

Results. There were 27 (40.3%) female and 40 (59.7%) male, mean (\pm SD) age was 41 ± 13 . Eight patients (11.9%) had previous DM, 7 patients (10.4%) developed PTDM and 52 (77.6%) were normal during the study period. Hypertension was the most common cause of ESRD in 13 patients (20.6%) followed by DM (11.1%), urological complication (7.5%), and polycystic kidney disease (4.8%). Minimum and maximum follow up was 1 and 150 months respectively. The mean follow up of grafts was 33.1 ± 32.7 months. In 5 patients (7.5%), graft became nonfunctional during follow up. Duration of PTDM in patients was 5 ± 3 months. The first post transplantation serum creatinine after stabilization of the patients was 1.3 ± 0.65 mg/dL. The last measurement reveals 1.6 ± 1.3 mg/dL. The difference between first and last serum creatinine was 0.26 ± 1.2 mg/dL. At the period of the study, 2 patients (3%) died. By 1-way ANOVA Test there is significant difference in serum creatinine change between 3 groups ($P = .014$). By post hoc test in PTDM patients, increase of creatinine is more than others. We found no relationship between PTDM and age, sex, education, functioning of kidney transplanted and survival of the patients.

Conclusions. In our study prevalence of PTDM was 10.4% that was compatible with previous reports. Serum creatinine in PTDM was higher than normal group, tight control of hyperglycemia after transplantation may be warranted in patients with PTDM.

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Posttransplant Diabetes Mellitus in Hasheminejad Hospital

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Introduction. Post transplant diabetes mellitus (PTDM) increases the rate of cardiovascular disease and infection, and is a major cause of morbidity and mortality in renal transplant recipients. We planned a study to evaluate the prevalence rate, risk factors of PTDM, patient and graft survival in this group in comparison to non diabetic Tx recipients.

Methods. The study group was consisted of 203 renal transplant (Tx) recipients that were transplanted from January 2001 to march 2005 with negative history of DM before Tx. Since some patients received intravenous serum therapy in first month after Tx, DM diagnosed on the basis high blood sugar from 3 months to 24 months after Tx. All data extracted from the patient's charts and analyzed.

Results. The prevalence rate of PTDM were 10.8%, 9.5%, 8%, 9.6 % in 3, 6, 12, and 24 months after Tx respectively. Increasing age was a significant risk factor for PTDM ($P < .05$). Recipient's weight and gender, donor's age and gender, source of kidney and ESRD cause were not the risk factors for PTDM in our study. Five-year graft survival rate in PTDM group was 95.5% versus 97.8% in non PTDM ($P = NS$) and five year patient survival in PTDM group was 95.5% versus 97.9% in non PTDM group ($P = NS$).

Conclusions. We had a high rate of PTDM in our patients. We need to continue our follow up with increased patient population for better understanding of the risk factors and survival in our PTDM recipients.

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Correlation of Serum Uric Acid and 24-Hour Urine Protein in Patients With Diabetes Mellitus Referred to Diabetes Center of Mashhad

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Introduction. Uric acid is detrimental to the kidneys in animal models. However, its role in human diabetic nephropathy has not been extensively studied. This study evaluated the association between serum uric acid and 24-hour urine protein among patients with type 2 diabetes mellitus in Mashhad.

Methods. This is an analytic descriptive study with the aim of specifying the correlation between uric acid and 24-hour urine protein in 193 type 2 diabetes patients (54 males and 139 females) and not using uric acid-lowering agents, diuretics and alcohol, referred to Mashhad Diabetes Center since May to December s correlation coefficient method was, 2006. For this purpose, Pearson used.

Results. Age mean was 56.3 ± 9.9 years. The mean \pm SD value of serum uric acid in the total of patients was 3.29 ± 0.70 . There was no significant correlaton between serum uric acid levels and total 24 hour urine protein in all patients. However, in the patients with excretion more than 140 mg/d, the mean \pm SD values of serum uric acid level was 3.22 ± 0.56 . In later group of patients there was a significant correlaton between serum uric acid levels and total 24-hour urine protein ($P = .02$), but it was not strong (r square = 0.43).

Conclusions. Serum uric acid is an independent correlate of 24-hour urine protein in type 2 diabetic patients with excretion more than 140 mg/d of protein in their urine.

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Daule Blockade of Renin Angiotensin System With Enalapril and Losartan in Type II Diabetic Patients with Diabetic Nephropathy

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Introduction. Proteinuria and hypertension are predictors of poor renal and cardiovascular outcome in diabetic patients. Pharmacologic blockade of the renin-angiotensin system is an established strategy to interfere with progression of renal failure in diabetic patients. Angiotensin-converting enzyme inhibitors (ACEIs) and Angiotensin receptor blockers (ARBs) prevent the progression of diabetic nephropathy (DN). Combination renin-angiotensin-aldosterone system (RAAS)-inhibiting therapy provides additive benefit in type I diabetic patients with diabetic nephropathy. This study tested whether dual blockade of the RAAS with both an ACEI and ARB is superior to either drug alone in type II diabetic patients with diabetic nephropathy (DN).

Methods. To assess and compare the effects of enalapril (up to 40 mg/d), losartan (up to 100 mg/d) and combination therapy (enalapril up to 40mg/day plus losartan up to 100 mg/d) on urinary protein excretion and renal failure progression, 144 type II diabetic patients with diabetic nephropathy (proteinuria > 300 mg/24 h) and normal or slightly reduced renal function (Cr clearance, 76 ± 42 mL/min) were enrolled in a

twelve month, prospective, open, randomized trial. All patients were visited at second, 6th and 12th month and biochemical markers especially serum potassium level, creatinine clearance and urinary protein excretion were recorded in each visit.

Results. 144 type II diabetic patients with diabetic nephropathy (88 male and 66 female; mean age, 53 ± 16.32 years) were recruited. Renal function, estimated by creatinine clearance, remained stable throughout the study. Hyperkalemia was more frequent in patients treated with enalapril alone or enalapril plus losartan ($P < .002$) than in those on losartan alone. The blood pressure goal ($< 125/75$ mm Hg) was achieved by week 8 in all treatment groups ($P < .005$ when compared to baseline), and afterwards the mean arterial blood pressure remained below these values until the end of the trial with no statistically significant differences between groups. Proteinuria decreased significantly in all patients after two months ($P < .001$) and remained stable afterward. Proteinuria at the end of study in comparison with baseline values showed statistical significant reduction and combination therapy was statistically more effective in proteinuria reduction than treatment with losartan alone ($P = .021$) and than treatment with enalapril alone ($P = .018$).

Conclusions. Dual blockade of the RAAS with both an ACEI and ARB is associated with more reduction in proteinuria to either drug alone in type II diabetic patients with diabetic nephropathy. Antiproteinuric effect during the combined therapy was not related to changes in renal function and blood pressure.

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Kidney Transplantation and Diabetes Mellitus

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Introduction. The purpose of this study is to evaluate blood sugar before and after kidney transplantation. The effects of diabetes on function of transplanted kidneys, patient survival and high blood sugar complications have also been studied.

Methods. A total of 640 kidney transplantation has been performed in our center (1989 to 2001). Of whom, 250 patients have been studied retrospectively for approximately 6 years. Pre and postoperative blood sugar, immunosuppressive medications, familial history of diabetes mellitus, pre and postoperative diabetic induced complications. Transplanted kidneys function and patient survival were evaluated.

Results. Twenty-three (9%) of 250 patients had high blood sugar, among them diabetes has been the etiology for end stage renal disease in 11 (4.4%) patients, (8 cases

of IDDM and 3 cases of NIDDM) 12 (4.8%) patients had normal blood sugar before transplantation but developed diabetes thereafter. In patients who had IDDM before transplantation, mean insulin dose increased from 28 IU/d to 53 IU/d. In patients who had NIDDM (3 cases). The mean blood sugar before and after transplantation were 135 mg/dL and 190 mg/dL respectively. Patient's condition changed to IDDM after transplantation, which was controlled with average of 50 IU/d insulin. The mean creatinine level was 1.5 mg/dL, postoperatively. In patients who developed diabetes post transplantation (12 cases). There was familial history of DM in 3 cases, the mean blood sugar before and after transplantation were 107 mg/dL and 190 mg/dL respectively. The mean Creatinine level was 1.4 mg/dL.

Conclusions. In DM patients, insulin dosage increases after transplantation. Renal transplantation can switch NIDDM to IDDM. Transplantation can induce DM in non diabetic patents. Acute kidney rejection, creatinine level, blood sugar and mortality are higher in diabetic patients.

P326

Effect of Spironolactone in Patients With Proteinuria

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Introduction. Studies have raised the possibility that aldosterone has a role in mediating renal damage. Studies have shown that dual therapy with angiotensin-converting enzyme inhibitors (ACEI) and either angiotensin II receptor blockers (ATRB) or aldosterone receptors antagonists is more effective in reducing proteinuria than either agent used alone.

Methods. A randomized controlled trial was performed in 17 patients with proteinuria more than 1.5 g/d. Patients randomly divided in two groups. Group 1 (n = 8) received ACEI (enalapril), ATRB (losartan) and spironolactone, and group 2 (n = 9) received enalapril, losartan. Comparison between two groups and baseline were performed. The percentage change in protein excretion differed according to treatment arm (ANOVA).

Results. This study showed that greater reduction in protein excretion occurred in group 1 (who received spironolactone). The reduction in proteinuria after 3 month was as follows: group one 22.7% (2.2 ± 0.12 to 1.7 ± 0.13) and group two 12.5% (2.4 ± 0.11 to 2.1 ± 0.09). This change was significant ($P < .05$).

Conclusions. This study showed spironolactone was additive effect when used with ACEI and ATRB therapy for the reduction of proteinuria.

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Ways to Improve the Medical Care After Catastrophes and Designing a Special Earthquake Chart Based on Bam Experience

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Introduction. Many large cities around the world located in the vicinity of earthquake zones waiting for the “fate ordeal.” To minimize the purported morbidity and mortality of such inevitable catastrophes, one may refer to the experience gained from previous earthquakes.

Methods. Based on personal observations in the scene of the catastrophe and specific questionnaire, a comprehensive database was established to evaluate different aspects of these victims. Results of 4552 patients were available. Retrospectively, the pitfalls were detected and ways to improve were suggested, as well as designing an earthquake chart.

Results. Weak points noticed in the management of Bam victims which mainly is due to poor knowledge in dealing with these kinds of patients are as follows: overloading local hospitals (majority of patients admitted in 14 centers out of region), delay in hospitalization (48 hours, at least in 14% of admitted patients), deficient patient records (not any chart available for out patients victims), poor patient observation (urine discoloration was noticed only in oligoanuric patients, and urine output was recorded in less than 2% of patients), delay in laboratory examinations (24 hours in 86% of patients), insufficient laboratory data (muscle injury markers were only checked in about 10% to 20% in the first day), delayed (18 hours) and insufficient (1.8 L ± mean) hydration therapy.

Conclusions. Tomorrow expects us to have learned something from yesterday. Bam experience, with all its weaknesses and shortcomings, may be utilized to successfully cope with the looming future earthquakes. We developed specially designed earthquake chart for the first time in literature as a mean to complement social and formal training of the paramedics and rescue teams.

It also would contribute to correct and comprehensive management of the patients as well as data collection.

P328

Study of Relationship Between Anti-Chromatin Antibodies with Renal and Extrarenal Features and Rate of Disease Activity in Patients with Systemic Lupus Erythematosus (SLE)

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Introduction. Systemic Lupus Erythematosus (SLE) is an autoimmune disease of unknown etiology and it may have serious renal complications. SLE is characterized by the presence of autoantibodies against nuclear antigens. Anti-ds DNA antibodies are considered the main diagnostic tool for SLE and a useful marker of disease activity but they have low specificity for the diagnosis of SLE, because they are found in most systemic autoimmune disease and even in healthy individuals. Recently, it was proposed that the nucleosome is the principal antigen in the pathophysiology of SLE. Specific reactivities are associated with distinct clinical features of SLE.

Methods. We conducted a cross-sectional study among 55 consecutive patients with SLE (according to ACR criteria) who attended rheumatology department of Sina hospital and Sheikhorariss clinic in Tabriz either as inpatients or outpatients between 2005 and 2006 and three anti-chromatin antibodies (anti-ds DNA, anti-Sm, anti-NCS) measured by ELISA method in the single laboratory. Disease activity was assessed using the SLE Disease Activity Index (SLEDAI). Clinical and serologic characteristics of all patients were consecutively collected by the questionnaires.

Results. This study consisted of 51 women, 4 men and mean age of them is 29.9 years. The most frequent SLE involvement was articular involvement and cutaneous involvement (85.5%). Significant associations were found between anti-NCS with disease activity, duration of disease ($P < .001$), renal damage and raynaud ($P < .05$), and we found close relationship between anti-DNA and disease activity and renal damage ($P < .05$), between anti-Sm with Raynaud's phenomenon ($P < .001$) and cutaneous involvement ($P < .05$).

Conclusions. This study has shown anti-NCS antibodies could be a useful tool in the diagnosis of disease and its renal & extra renal involvements before development of other anti-chromatin antibodies and assessment of disease activity in patients. The accurate evaluation of clinical features and laboratory markers at disease diagnosis and during evolution may improve the clinical treatment of SLE and its complications.

P329

Efficacy of Low-Dose Spironolactone in Chronic Kidney Disease With Resistant Hypertension

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Introduction. Recent clinical trials show 30% of hypertensive patients may be resistant to triple therapy combination. Previous reports have demonstrated the anti-hypertensive efficacy of high dose of spironolactone in subject with primary aldosteronism and, to a lesser degrees, in subject with resistant hypertension.

Methods. In current analysis we examined the antihypertensive benefit of adding low dose sprinolactone to multidrug regimens including a diuretic, a calcium channel blocker and angiotensin-converting enzyme inhibitor or angiotensin receptor blocker in subjects (chronic kidney disease) with resistant hypertension. Subjects referred for resistance hypertension were evaluated 24 hour urinary sodium for assessment of dietary salt ingestion. After primary evaluation, spironolactone 25 mg/d to 50 mg/d was added to each subject antihypertensive regimen. Follow up was determined in 6 weeks and 3 months. Patients were regularly evaluated for hyperkalemia and in case of $K > 6$, kayexalate started.

Results. A total number of 19 subjects were included in analysis. Low-dose spironolactone was associated with an additional mean decrease in blood pressure of $29 \pm 19/13 \pm 10$ mm Hg in 6 weeks and $26 \pm 21/14 \pm 11$ mm Hg in 3 months follow-up. Hyperkalemia was found in 4 patients that received kayexalate.

Conclusions. We conclude the low dose spironolactone provides significant additive blood pressure reduction in chronic kidney disease (stages 2 and 3) subjects with resistant hypertension.

P330

Evaluation of Serum Calcium Level in Hemodialysis Patients With Hypotension During Hemodialysis in Fatemeh Zahra and Imam Khomeini Hospitals in Sari, Iran, in 2007

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Introduction. Hypotension is the most important

complication in hemodialysis (HD) patients. Over half patients have symptomatic hypotension during HD. Etiology of hypotension during HD is important. Therefore, we decided to measure serum calcium and albumin level because hypocalcaemia is an etiology of hypotension during HD.

Methods. This study is a descriptive study. One hundred of HD patients assessed in 2 hospitals of Sari. Blood pressure registered before, during and after dialysis. The blood sampling took before dialysis. The method of calcium measurement was Aresenazo 3 and for albumin was Bromocresol Green.

Results. We studied 100 HD patients that 28 patients had hypotension during HD. Eleven patients of 28 patients had hypocalcaemia after correction of albumin level.

Conclusions. We recommend an analytic study for hypotension during HD because significant results achieved between case and control group ($P < .05$).

P331

Diuretic Effect of Powdered Cerasus Avium (Cherry) Tails on Healthy Volunteers

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Introduction. Decocted Cerasus avium tail, sold over the counter, and has been traditionally prescribed by herbal druggist to cure renal stone, edema, and hypertension. We decided to study the effect of powdered cherry stalk on urinary volume and its parameters.

Methods. A double blind field trial was conducted on 13 healthy volunteers (aged 20-40 year old). Two gram of placebo and powdered cherry stalk were given in three divided doses in one week apart while identical diet and fluid was taken during study. 26 urine aliquots were respectively collected from 8 am to 8 am. The *t* test was used to compare means.

Results. After placebo and cherry stalk prescription, the mean of urine calcium (mg/dL) was 124.6 versus 181.1, of sodium (mEq/L) was 116.3 versus 134.8, of potassium (meq/l) was 43.2 versus 45.15, of chloride (meq/L) was 109.8 versus 128.3, volume (mL) 808 versus 1037.5 and urine osmolality (mosml/kg/H₂O) 764.15 versus 857.15, respectively. The difference was statistically significant for increment of urine volume as well as urinary calcium, sodium and chloride excretion ($P < .05$).

Conclusions. This part of plant has a mild diuretic effect. Because of rising calcium excretion, it should be used with cautious in those with urolithiasis.

P332

Effects of Kidney Transplantation on Feet Bones Density and Fractures

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Introduction. One of the effects of kidney transplantation on the patients' skeletal system is increase in the rate of the bone fractures. These fractures are vary from one bone to another. This fact can be the result of bone density and calcium deposition amount in the various bones. In this research we evaluated the effects of kidney transplantation on the fractures of bones almost after three years later than the date of transplantation occurred.

Methods. In this research we studied the medical history of 22 patients that had kidney transplantation surgery between 1998 and 2000, and their clinic records from 2000 to 2003 for various reasons.

Results. Nineteen of the 22 patients had fractures in their bones during this period of time. Three had radius fracture, 5 had fibula fracture, 3 had hip fracture, and 8 had tibia fracture. This is noticeable that the average time from transplant to fracture was 18 months.

Conclusions. Bone fracture rates increase and bone density decreases after renal transplantation. Most of these fractures occur in the bones of feet.

first 3 days had 3+ urine blood or more versus 31.7% of non-AKI patients had 3+ urine blood or more. The sensitivity and specificity of 3+ urine blood or more in urine Tes-tape for prediction of AKI was 100% and 76.1%, respectively. Negative predictive value of this test was 100%. Victims who were entrapped more than 3 hours were more prone to AKI (33.34% versus 0%; $P < .0001$). Patients whose CPK was more than 2400 IU/L, LDH more than 900 IU/L, SGOT more than 350 IU/L, uric acid more than 8 mg/dL and potassium more than 4.5 mEq/L.

Conclusions. Considering the ease of use of urine Tes-tape we believe this test is suitable for early detection of rhabdomyolysis and those prone to AKI. We also found that CPK, LDH and uric acid have equal value in predicting AKI but they are not easily accessible.

P334

Clinico-Pathologic Correlation of Renal Biopsy Finding, Case Series Report From a Tertiary Kidney Center

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Introduction. Glomerulonephritis is one of the most common causes of ESRD. Membranous GN (MGN) has been introduced as the most common cause of nephritic syndrome in many reports and IgA nephropathy (IgAN) as the most frequent type of primary glomerular disease in some parts of the world.

The aim of this study was to describe the results of kidney biopsies done during the last 10 years in Hasheminejad kidney center (HKC).

Methods. A total of 1407 hospital charts from patient who had undergone renal biopsy in HKC from September, 1999 to September, 2007 were reviewed. Demographic data, laboratory findings, pathologic diagnosis and clinical syndromes at presentation were studied. Charts with no definite pathologic diagnoses were excluded. Almost all kidney specimens had been studied with light and immunofluorescent microscopes.

Results. In 1409 biopsy specimens 761 patients were male (54.2%) and 645 were female (45.8%). The mean age of patients at the time of biopsy was 36.4 ± 15.5 years. The most frequent type renal pathology was MGN in 378 (26.9%) followed by IgAN (155 cases; 11%), lupus nephritis (LN) (154 cases; 10.9%), FSGS (140 cases; 10%), minimal change disease (116 cases; 8.2%), diffuse crescentic GN (80 cases; 5.7%) and membranoproliferative GN (78 cases; 5.5%). The most common clinical presentation was nephritic syndrome in 892 (63.4%) which was most prevalent in almost all renal pathologies except

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Factors Predictive of Acute Kidney Injury Due to Rhabdomyolysis After Bam Earthquake

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Introduction. Early detection of rhabdomyolysis in earthquake victims is very important since prophylactic hydration therapy can prevent important complications such as Acute Kidney Injury (AKI). Management of these complications requires transportation of victims to equipped centers. Considering the huge numbers of victims, and limited resources it is necessary to have a rapid and easily accessible test for detection of high risk patients. We attempt to find a test suitable for this purpose by studying of Bam earthquake victims admitted in Dr Shariati hospital in Tehran in 2003.

Methods. A questionnaire was used to collect data from patient files. The results of time under the rubble, urine blood in Tes-tape, and the first measurement of the ten biochemical factors during the first three days were compared between AKI and non AKI patients

Results. All AKI patients having urine Tes-tape in the

for TIN and ATN. 47% of patients were hypertensive and 44.3% had high serum creatinine (> 1.4 mg/dL) at presentation. Glomerular hematuria was reported in 23.5% of patients.

Conclusion. In our case series report MGN and IgAN were the most frequent renal pathologies similar to reports from most western countries. FSGS was the 3rd cause of primary GN and its prevalence seems to be

rising as in western reports. LN was the most common secondary cause of GN again similar to western reports and MPGN had a less important rank which is in contrast to some reports from neighbor countries. The unusually high frequency of presentation as nephritic syndrome especially in pathologies such as IgAN may be due to referral nature of our center.