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respectively ( $p < 0.05$ ). While 90% ( $n = 27$ ) of the subjects needing mechanical ventilator died, overall mortality was 63.45% ( $n = 47$ ) in group 1, 95.6% ( $n = 22$ ) of the subject needing mechanical ventilator died, overall mortality was 55% ( $n = 55$ ) in group 2 ( $p < 0.05$ ). While the mean cost was  $1366.25 \pm 1119.58$  Euro (€)/patient in group 1, the mean cost was  $1583.75 \pm 1014.58$  Euro (€)/patient in group 2 ( $p < 0.05$ ).  
**Conclusions:** Even though CAKI which can often be seen among the elderly and very elderly subjects is a hinderable disease, and it still has a high morbidity and mortality rates. The most important factors for cost and mortality are older age, along with intensive care unit, mechanical ventilator needing, and RRT needs.  
**Key Words:** Acute renal injury, elderly, cost, mortality.

SAP126

### CLINICAL PRESENTATION, COURSE AND OUTCOME OF ACUTE KIDNEY INJURY DUE TO VITAMIN D INTOXICATION

Muzafar Wani<sup>1</sup>, Dr Imtiaz Wani<sup>1</sup>, Dr Mohd Ashraf Bhat<sup>1</sup>, Dr Khurshid Bandyal<sup>1</sup>, Dr Mohd Saleem Najjar<sup>1</sup>, Dr Abdul Rashid Reshi<sup>1</sup> and Dr Nazir Ahmed Palla<sup>1</sup>  
<sup>1</sup>Skims, Soura, Srinagar, India

**Introduction and Aims:** Most of the Kashmiri population is Vitamin D deficient. Overall vitamin replacement, including vitamin D is very common in this part of the world either as self medication or malpractice related, with most of the elderly being given oral or injectable forms. At times doses prescribed are far above the permissible limit. This has resulted in many cases of vitamin D toxicity, some reported in literature. Its incidence has been on the rise in Kashmir valley recently and more cases are reporting to hospitals with complications. Vitamin D toxicity is a known cause of hypercalcemia and reversible acute kidney injury (AKI). We report 32 patients who had evidence of malpractice-related vitamin D intoxication, presenting with hypercalcemia and AKI. This is perhaps the largest case series ever reported.  
**Methods:** 40 cases of Vitamin D toxicity were admitted in Department of Nephrology over last 18 months. Detailed investigations and follow up was available in 32 cases. The diagnosis of vitamin D intoxication was made on basis of history of excessive vitamin D injection intake (600,000 IU/injection), toxic levels of 25 OH Vitamin D and after ruling out common causes of hypercalcemia (malignancy and hyperparathyroidism). Their presentation was either AKI (Group 1) or acute on top of chronic kidney disease (Group 2).  
**Results:** In Group 1, there were 21 patients, whose mean age was  $61.33 \pm 14.48$  years, with a male predominance (12:7). The average in-patient days were  $7.05 \pm 3.03$ . The number of vitamin D injections received ranged from 2 to 28. Their creatinine at presentation was  $2.95 \pm 0.96$  mg/dl, which decreased to  $1.41 \pm 0.27$  mg/dl on follow up of 5.2 ± 6 months. Serum calcium on admission was  $13.76 \pm 1.47$  mg/dl and it decreased to  $10.79 \pm 1.23$  mg/dl on follow up. The vitamin D level was  $313.33 \pm 54.84$  nmol/L and PTH was  $18.13 \pm 9.62$  pg/ml. In Group 2, 11 patients were studied; their mean age was  $64.11 \pm 13.01$  years, with a female predominance (4:5). The average admissions days were  $7.77 \pm 3.86$ . The number of injections received ranged from 3 to 24. Their creatinine at presentation was  $4.03 \pm 1.17$  mg/dl, which decreased to  $3.32 \pm 1.09$  mg/dl on follow up. Calcium on admission was  $13.68 \pm 2.12$  mg/dl and it decreased to  $11.11 \pm 1.08$  mg/dl. The vitamin D level was  $303.73 \pm 48.41$  nmol/L and PTH was  $22.31 \pm 12.69$  pg/ml. The clinical presentation was weakness in 100%, constipation in 80%, abdominal pain in 60%, nausea and vomiting in 60%, anorexia in 50%, oliguria in 20%, altered sensorium in 20%, hearing impairment in 2%. The treatment received was intravenous fluids in all, normal saline and steroids (short course) in 28 and bisphosphonates in 5.  
**Conclusions:** This case series elucidates the increasing incidence of vitamin D toxicity in Kashmiri population. It is an important cause of reversible AKI which responds to conservative measures. It is necessary to educate the people about vitamin D deficiency, its appropriate treatment, and as well inform the caregivers in the peripheries about the symptoms of acute vitamin D intoxication, and stress about the possible dangers of mega doses vitamin D.

SAP127

### RENAL ARTERY STENOSIS: THE COMPARISON OF THE DOPPLER USG, CONTRAST-ENHANCED MAGNETIC RESONANCE ANGIOGRAPHY AND SELECTIVE RENAL ARTERIOGRAPHY

Kenan Turgutalp<sup>1</sup>, Ahmet Kiykim<sup>2</sup> and Ilter Helvacı<sup>3</sup>  
<sup>1</sup>Mersin University Division of Nephrology, Department of Internal Medicine Mersin/Turkey, <sup>2</sup>Division of Nephrology, Department of Internal Medicine, School of Medicine, Mersin University, Mersin, Turkey, <sup>3</sup>Department of Biostatistic School of Medicine, Mersin University

**Introduction and Aims:** Conventional selective renal arteriography (SRA) is the gold standard diagnostic method for renal artery stenosis (RAS). SRA is an invasive procedure and has puncture-site related and systemic complications including contrast-mediated nephropathy. Therefore, there is a need for a diagnostic method that is both accurate and safe. Contrast-enhanced 3D magnetic resonance angiography (CEMRA) and renal artery Doppler ultrasonography (DUSG) have been used increasingly for RAS. But, diagnostic utility of these methods is still controversial. To assessment of diagnostic specificity and sensitivity of CEMRA and DUSG.

**Methods:** Sixty-five consecutive patients who have been investigated for resistant

hypertension were assessed. The patients were divided into two group with respect the age, <60 yr group 1, and >60 yr group 2. DUSG was performed to 12 of group 1 and 8 of group 2 patients. CEMRA was performed to 12 of group 1 and 11 of group 2 patients. Both DUSG and CEMRA were performed to 12 of group 1 and 10 of group 2 patients. After these methods, SRA was performed to all patients.

**Results:** There were 36 patients (12 male, 24 female) in group 1, and 29 patients (13 male, 16 female) in group 2. Mean age was  $42.15 \pm 12.1$  (range, 18-59) years in group 1 and  $68.75 \pm 22.34$  (range, 60-86) years in group 2. SRA was used as the standard of reference. Total of 132 renal arteries were evaluated. DUSG and SRA were concordant in 82.60% and 56.25% of the arteries in group 1 and 2, respectively. CEMRA and SRA were concordant in 66.66% and 90.47% of the arteries in group 1 and 2, respectively. In the evaluation of clinically significant renal artery stenosis (=50%) with DUSG, the overall sensitivity, specificity, positive predictive value, and negative predictive value were 83.33%, 81.82%, 83.33%, 81.82% in group 1 and were 69.23%, 0%, 75%, 0% in group 2 respectively when compared with SRA. In the evaluation of clinically significant renal artery stenosis (=50%) with CEMRA, the overall sensitivity, specificity, positive predictive value, and negative predictive value were 92.31%, 36.36%, 63.16%, 80.00% in group 1 and were 100.00%, 33.33%, 90.00%, 100.00% in group 2 respectively when compared with SRA.

**Conclusion:** CEMRA and DUSG are the accurate non-invasive techniques for identifying RAS in patients above 60 years of age and under 60 years of age, respectively.

**Key Words:** Renal artery stenosis, MR angiography, selective renal arteriography, Doppler USG.

SAP128

### THYROID FUNCTION TESTS IN ACUTE KIDNEY INJURY

Pedro Iglesias<sup>1</sup>, Teresa Olea<sup>2</sup>, Cristina Vega-Cabrera<sup>2</sup>, Manuel Heras<sup>3</sup>, M. Auxiliadora Bajo<sup>2</sup>, Gloria Del Peso<sup>2</sup>, M.J. Anas<sup>1</sup>, Rafael Selgas<sup>2</sup> and Juan Jose Diez<sup>1</sup>

<sup>1</sup>Hospital Ramón Y Cajal, <sup>2</sup>Hospital Universitario La Paz, <sup>3</sup>Hospital General de Segovia

**Introduction and Aims:** Little is known about thyroid function in the course of an acute kidney injury (AKI). The aim of our study is to define these changes in thyroid function.

**Methods:** A prospective study in 35 patients hospitalized for AKI for 2 consecutive years was carried out. TFT (serum thyrotropin, TSH; free thyroxine, FT4; and total triiodothyronine, T3 concentrations) were measured in each patient on three occasions: at admission, at hospital discharge and at their first outpatient visit.

**Results:** Total prevalence of alterations in TFT was 82.9% ( $n = 29$ ). Of those, euthyroid sick syndrome (ESS) with low T3 only was the most common ( $n = 13$ , 37.1%) derangement. In the whole group of patients TSH [ $0.93$  ( $0.35$ - $2.27$ )  $\mu$ U/ml] and FT4 ( $1.2 \pm 0.3$  ng/dl) were normal, whereas T3 was low ( $0.7 \pm 0.1$  ng/ml). TSH, FT4 and T3 were similar in different types of AKI. In the simple regression analysis we only found a negative correlation between TSH and serum urea concentrations ( $r = -0.382$ ;  $p = 0.024$ ). At hospital discharge [median hospital stay 6 days (2-10)], TFT showed significant changes only in T3 concentrations ( $0.8 \pm 0.3$  ng/ml,  $p = 0.013$ ). At this point, the percentage of patients with normal TFT increased from 17.1% at baseline to 40% at discharge and then to 66.7% at their first outpatient visit. We found no association between the presence and type of alterations in TFT and clinical (sex, age, personal history of diabetes and/or hypertension, number and type of drugs used, signs and symptoms, and degree, type and etiology) and prognostic (hospital stay, recovery of renal function, need of renal replacement therapy, residual chronic renal failure and mortality) factors associated to AKI.

**Conclusions:** Over 80% of AKI patients exhibit alterations in TFT. The commonest derangement is ESS (~70%), mainly low T3 syndrome, which is present in about one third of the patients with altered TFT. ESS recovers spontaneously as renal function improves. The presence of TFT alterations seems not to be associated with clinical and prognostic implications in AKI patients.

SAP129

### THE KIDNEY-LUNG CROSSTALK AND MORTALITY IN A COHORT OF PATIENTS WITH SEVERE LEPTOSPIROSIS (WEIL SYNDROME) IN BRAZIL

Elizabeth Daher<sup>1</sup>, Pedro Lucas Costa<sup>1</sup>, Eduardo N.S. Perera<sup>1</sup>, Renata D.P. Santos<sup>2</sup>, Krasnalhia Livia Abreu<sup>1</sup>, Geraldo Silva Junior<sup>3</sup> and Eanes D.B. Perera<sup>1</sup>  
<sup>1</sup>School of Medicine, Federal University of Ceara, Fortaleza, Brazil, <sup>2</sup>School of Medicine, University of Fortaleza, Fortaleza, Brazil, <sup>3</sup>School of Medicine, University of Fortaleza, Fortaleza, Brazil

**Introduction and Aims:** Leptospirosis is the most important zoonosis in the world. The severe form (Weil syndrome) is characterized by acute kidney injury (AKI), jaundice and pulmonary hemorrhage, with high mortality rates. The aim of this study is to investigate the kidney-lung interactions and its impact in mortality among patients with severe leptospirosis.

**Methods:** This is a retrospective study conducted at a tertiary infectious diseases-specialized hospital in Fortaleza city, Northeast Brazil, including 45 patients with confirmed diagnosis of severe leptospirosis admitted to the intensive care unit. AKI was defined according to the RIFLE criteria, and it was compared the results