

49th ERA-EDTA CONGRESS

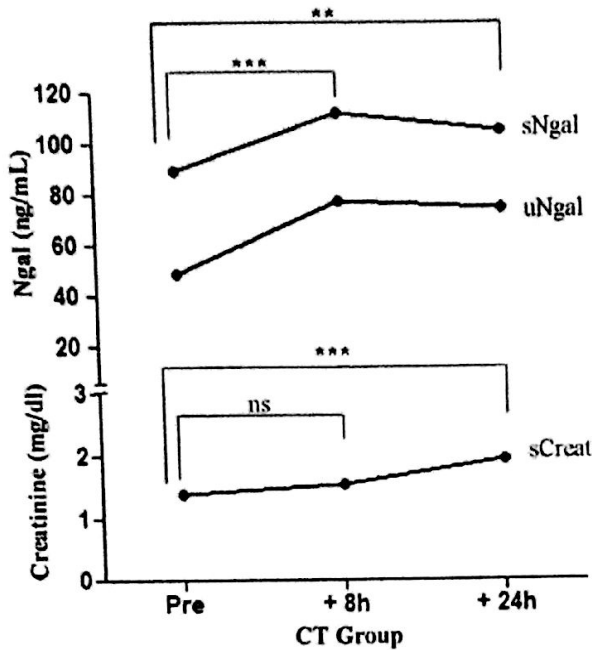
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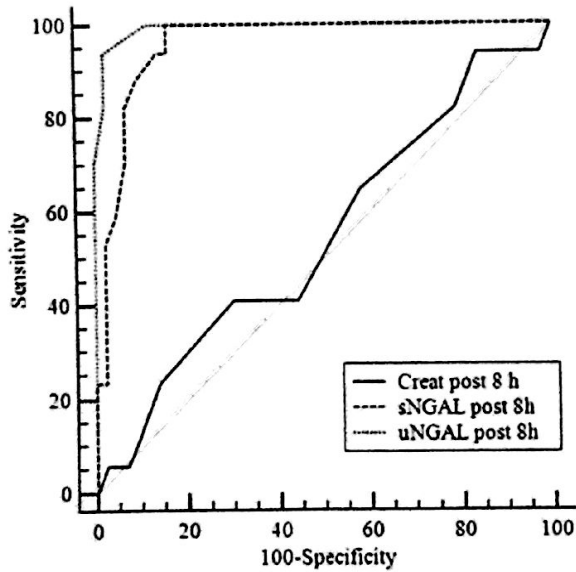
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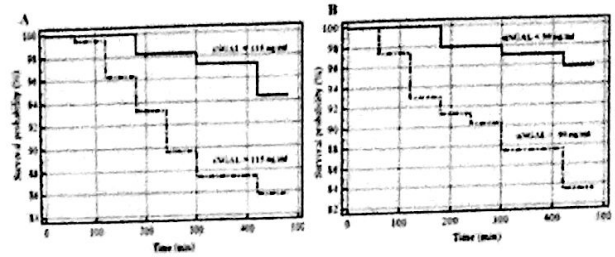


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Subjects with NGAL values above 115 ng/ml experienced a significantly faster evolution to endpoint ($p=0.002$), with a hazard ratio of 3.70 (95% CI, 1.62 to 8.45). A multiple Cox regression was also constructed. All patients were also randomly divided into three arms based on the type of drug infusion: NAC, SF and BIC. We do not found any statistical differences of NGAL in the three groups. **Conclusions:** This is the first research that utilizes NGAL to identify renal damage after administration of a radiopharmaceutical such as ^{99m}Tc -DTPA and meglumine gadoterate. In both cases, we found no events of CIN. NGAL levels did not show any statistically significant change, indicating a non-renal involvement. In condition of CIN, sCreat levels showed a statistically significant increase only 24 hours after administration of contrast medium. In contrast, NGAL was an early marker, with its



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Univariate and Multivariate Cox proportional hazards regression model for incidence of CIN

	Univariate Analysis			Multivariate Analysis		
	HR	95% CI	p value	HR	95% CI	p value
Age	1.01	0.95 - 1.07	0.22	1.00	0.98 - 1.02	0.48
GFR	0.86	0.79 - 0.94	0.002	0.96	0.94 - 0.98	0.05
sNGAL	1.03	1.03 - 1.09	0.0001	1.02	1.01 - 1.03	0.003
uNGAL	1.11	1.06 - 1.17	<0.0001	1.03	1.02 - 1.04	0.0001
Contrast amount	0.98	0.96 - 1.00	0.15			

HR: hazard ratio; CI: confidence interval; sNGAL: serum NGAL; uNGAL: urinary NGAL; GFR: glomerular filtration rate

variations observed just 8 hours after drug administration. We have also shown NGAL possesses a high diagnostic sensitivity and specificity, an excellent prognostic power representing the most valuable independent factor for detecting CIN. This study suggests no significant difference in the development of CIN between groups treated with preventive drugs, emphasizing the importance of hydration alone in the prevention of CIN.

SAP125 COMMUNITY ACQUIRED ACUTE KIDNEY INJURY IN THE ELDERLY AND VERY ELDERLY PATIENTS: A SINGLE CENTER EXPERIENCE

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Introduction and Aims: Data about the community-acquired acute kidney injury (CAKI) around the world including our country seems to be insufficient. In this sense there might be differences not only between countries, between age groups as well. It is important to exhibit the features of CAKI to develop preventive medicine strategies. Our aim is to evaluate the application reasons, etiologies, clinical complications, renal replacement treatment (RRT) needs, clinical outcomes and cost analysis of patients above 65 years of age with CAKI who admitted to emergency department.

Methods: Totally 3290 subjects with ages above 65 admitted to emergency department between May 2010 and May 2011. CAKI prevalence was 7.17% (n=236) in the elderly. The patients diagnosed as CAKI were evaluated retrospectively. The admission reasons, medical histories, co-morbidities, using medications, clinical symptoms and signs, etiologies, complications, treatment modalities, RRT necessities and features, clinical outcomes and cost analysis were investigated and recorded. Patients were divided into two groups with respect to age 65-75 yrs (n=136) (group 1) and >75 yrs (n=100) (group 2). **Results:** The mean age of the patients was found to be 69.6±3.2 years in group 1 (n=136, male/female: 78/58), and 81.2±4.2 years in group 2 (n=101, male/female: 58/43). The most seen admission reason was vomiting in group 1 (n=54, 39.7%) and group 2 (n=43, 43%). Prerenal AKI was the most common CAKI type in group 1 (% 57.4, n=78), and also in group 2 (%63, n=63) subjects ($p>0.05$). Nephrotoxic agent use was found in % 88 (n=120) in group 1 and %91 (n=91) in group 2 ($p>0.05$). 57 (41.9%) of the patients in group 1 and 36 (36%) of the patients in group 2 had treatment history of ACE inhibitors, respectively ($p<0.05$). The intensive care unit, mechanical ventilator and RRT needs were found to be 51.4% (n=70), 22% (n=22) and 38.2% (n=52) in group 1 and 64% (n=64), 31% (n=31), 48% (n=48) in group 2.

respectively ($p < 0.05$). While 90% ($n = 27$) of the subjects needing mechanical ventilator died, overall mortality was 34.5% ($n = 47$) 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 ± 1119.58 Euro (€)/patient in group 1, the mean cost was 1583.75 ± 1014.58 €/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

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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 ± 14.48 years, with a male predominance (12:7). The average in-patient days were 7.05 ± 3.03. The number of vitamin D injections received ranged from 2 to 28. Their creatinine at presentation was 2.95 ± 0.96 mg/dl, which decreased to 1.41 ± 0.27 mg/dl on follow up of 5.2 ± 0.6 months. Serum calcium on admission was 13.76 ± 1.47 mg/dl and it decreased to 10.79 ± 1.23 mg/dl on follow up. The vitamin D level was 313.33 ± 54.84 nmol/L and PTH was 18.13 ± 9.62 pg/ml. In Group 2, 11 patients were studied; their mean age was 64.11 ± 13.01 years, with a female predominance (4:5). The average admissions days were 7.77 ± 3.86. The number of injections received ranged from 3 to 24. Their creatinine at presentation was 4.03 ± 1.17 mg/dl, which decreased to 3.32 ± 1.09 mg/dl on follow up. Calcium on admission was 13.68 ± 2.12 mg/dl and it decreased to 11.11 ± 1.08 mg/dl. The vitamin D level was 303.73 ± 48.41 nmol/L and PTH was 22.31 ± 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

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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 ± 12,1 (range, 18-59) years in group 1 and 68,75 ± 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

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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) μ U/ml] and FT4 (1.2 ± 0.3 ng/dl) were normal, whereas T3 was low (0.7 ± 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 ± 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

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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