in a tertiary referral paediatric and specialist neonatal ICU. Cohort identified from National PICU Dataset (PICANET). Medical discharge summaries and electronic bedside chart reviewed. RRT modality, indication, complications, need for continued RRT and patient demographics were analysed. Inclusion criteria: RRT on ICU first year of life, Exclusion criteria: RRT on cardiac intensive care unit (separate unit). **Results:** 96 infants received RRT: 59 male, age 3.2 months (+/-3.8), ICU days 10(1–48), 18 neonates(<29 days). Mode:Continuous veno-venous haemofiltration 82, peritoneal dialysis 20, continuous haemofiltration 2, not known 10. 19 >1 modality. Diagnosis: Sepsis/MOF 20, primary renal 14, Inborn error 31, oncology/tumour lysis 8, surgical 5, liver 1, cardiac 1, autoimmune 5, respiratory 5, unknown 4. Indications: anuria 32; hyperammonemia 26; fluid overload 12; resistant acidosis 9; fluid balance 8; electrolytes 5; rhabdomyolysis 1; not known 2 500% RRT increase over study period (no change case mix/admission rate) Complications 11% - difficulty establishing access 4, site leakage 4, circuit clotting 3, catheter-associated blood stream infection 1 and metabolic acidosis caused by dialysate 1 (0.87%). lCU mortality 34.38% - PICU 30.76% & NICU 55.56%. Of those surviving to discharge 9 continued RRT and 4 were referred for palliative care. **Conclusions:** Infant-RRT in our hospital has markedly increased over the last decade, despite no change in case mix/admissions. The most common indication is renal failure/causes. Overall ICU mortality higher in patients needing RRT, especially neonates.

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NEPHROPATHY BY CONTRAST IN ACUTE CORONARY SYNDROME (ACS)

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Learning Objectives: Study of predictors of acute renal damage by iodinated contrast after performing angioplasty in ACS. **Methods:** Retrospective descriptive study of patients admitted to ICU for ACS between 2009 and 2011. Variables: demographics, cardiovascular risk factors, other co-morbidities according to Charlson Index, presentation and location of infarction, scores, Killip and TIMI on admission, APACHE II. femoral or radial vascular access selected in the coronarography. Renal dysfunction post- coronarography according to the RIFLE scale, percentage of patients premedicated with bicarbonate after and prior to contrast. Significance rated at P< 0.05.X2 for qualitative analysis and T-student for quantitative analysis. **Results:** 110 patients were analysed, 81.8 % men, 18.2% women. Mean age was 62.3 ± 14 years. Average stay, 2.3 ± 1.8 days. TIMI, I-II 4.5%, III 29.5%, IV 39.8%, V 26.1%. Killip, I, 78.7%, II, 10,2%, III 4.5%, IV, 6.8%. In univariable analysis differences were found P< 0.05 in the following variables: advanced age 64 % vs 41%, previous arterial hypertension 80% vs 42.9%, state of pre-angioplasty cardiogenic shock, 32% vs 7.9%, and post- coronarography, 28% vs 7.9%. No differences were observed between groups in APACHE II gravity scores or Charlon Index, and subsequent development of renal insufficiency. The multivariable study P< 0.05 showed the following variables were independently and significantly linked to the development of nephropathy: previous arterial hypertension OR 2.36 (CI 95% 2–10.4), pre-angioplasty cardiogenic shock, OR 1.16 (CI 95% 1–10.9), and posty post angiography, OR 1.4 (CI 95% 1.3–11.4). **Conclusions:** The results of this study suggest it is necessary to institute new strategies for the prevention of nephropathy, especially in patients whose condition is not optimum, with cardiac failure or established cardiogenic shock.

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EVALUATION OF VANCOMYCIN DOSING AND CVVH INTENSITY ON VANCOMYCIN TROUGH CONCENTRATIONS ATTAINMENT

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Learning Objectives: Achieving therapeutic vancomycin trough concentrations in critically ill patients treated with continuous venovenous hemofiltration (CVVH) is subjected to the dose of vancomycin and the intensity of CVVH therapy (hemofiltration rate "HFR" dose). Different dosing regimens of vancomycin and HFR may affect the vancomycin trough attainment in those patients. **Methods:** A retrospective, observational study of adult patients who received concurrent CVVH and vancomycin therapy over one year period. Patients included if received ≥ 1 dose of vancomycin within 24 hrs of CVVH initiation, or during CVVH therapy, and had a vancomycin trough level while on CVVH. Vancomycin level was considered to be a trough if it was drawn 21 to 27 hrs after the previous dose. A vancomycin trough concentration of 15–20 mg/dL was considered to be therapeutic. **Results:** Among 46 patients received vancomycin while on CVVH, 17 patients who did not have true trough levels, were excluded, leaving 29 patients for evaluation with the following demographics: age (61 ± 12 yrs), male (76%), actual body weight "ABW" (92 ± 21 kg). Based on ABW, the mean vancomycin dose and HFR were 13 ± 3 mg/kg/day and 20 ± 6 ml/kg/hr, respectively. Of the 155 vancomycin levels that were taken, 62 were troughs, and the mean trough concentration was 18 ± 4 mg/dL. The percentage of levels that were < 15mg/dL, between 15–20 mg/dL, and > 20 mg/dL was 21%, 52%, and 27%, respectively. Patients who were on vancomycin at <15mg/kg/day had a mean vancomycin dose of 12 ± 2 mg/kg/day, a mean HFR of 18 ± 4 ml/kg/hr, with 53% of levels therapeutic and 47% non-therapeutic. Patients who were on vancomycin at ≥15mg/kg/day had a mean vancomycin dose of 17 ± 2 mg/kg/day, a mean HFR of 27 ± 8 ml/kg/hr, with 47% of levels therapeutic and 53% non-therapeutic. An inverse relationship was observed between HFR dose and vancomycin trough concentrations (r = - 0.14), with 72% of all therapeutic levels occurring at HFR of 15–25 ml/kg/hr. **Conclusions:** Therapeutic vancomycin trough concentration attainment appeared to be decreased with the increase of the vancomycin dose or CVVH intensity.

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HYDRATION FOR CONTRAST-INDUCED ACUTE KIDNEY INJURY PREVENTION: A META-ANALYSIS

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Learning Objectives: The reports on efficacy of oral hydration compared to intravenous hydration for the prevention of contrast-induced acute kidney injury (CIAKI) in radiological procedures and cardiac catheterization remains controversial. The objective of this meta-analysis was to assess the efficacy of these hydration regimens for prevention of CIAKI. **Methods:** Comprehensive literature searches for randomized controlled trials (RCTs) of outpatient oral hydration treatment was performed using MEDLINE, EMBASE, Cochrane Database of Systematic Reviews, Cochrane Central Register of Controlled Trials Systematic Reviews and clinicaltrials.gov from inception until July 4th, 2014. Primary outcome was the incidence of CIAKI. **Results:** Three prospective RCTs were included in our analysis. Of 242 patients undergoing procedures with contrast exposures, 22 patients (9%) had CIAKI. These 3 RCTs, however, included only patients with relatively normal kidney function to CKD stage 3 and excluded those who had contrast exposure for urgent indications. There was no significant increased risk of CIAKI in oral fluid regimen group compared to IV fluid regimen group (RR = 1.83, 95% CI = 0.41–8.21). **Conclusions:** According to our analysis, there is no evidence that oral fluid regimen is associated with more risk of CIAKI in patients with contrast exposures compared to IV fluid regimen. This finding suggests that the oral fluid regimen is a possible treatment option for CIAKI prevention in non-urgent procedures in patients with normal to moderately reduced kidney function.

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EARLY DETECTION OF NGAL IN PLASMA AND URINE TO ASSESS ACUTE RENAL FAILURE IN PATIENTS AFTER CARDIAC

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Learning Objectives: Acute Renal Failure (ARF) is an important cause of morbidity and mortality in critically ill patients. Neutrophil gelatinase associated lipocalin (NGAL) emerge as a new biomarker of renal function and it seems it may be used for early diagnosis of ARF. **Methods:**Prospective, observational study in post-surgical cardiac patients, without previous renal disease, from March 2012 to November 2013. Determinations of NGAL were performed in all patients in urine and plasma at 0, 2, 6 and 12 hours after ICU admission. Simultaneously, plasma creatinine determinations were also performed. In each of the study groups, categorical variables were summarized as frequencies and percentages and the numerical variables were summarized in means and standard deviations or medians and interquartile ranges depending if they gave or not, assumptions of normality. Percentages were compared, as appropriate, with the test of chi-square or Fisher's exact test, means with the t-test and medians with the Wilcoxon test for independent groups. For each period and marker a ROC analysis was performed. The discriminant value of the corresponding marker was assessed using the area under the ROC curve. **Results:** Table 1 summarizes the study variables in studied groups defined by the presence or absence of acute renal failure. Variables were similar in both groups. The maximum values of NGAL