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Research Article

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[Gender and left ventricular structural and functional differences in pulmonary hypertension among end stage renal disease patients on maintenance hemodialysis](#)

Introduction: Pulmonary hypertension (PH) is prevalent in hemodialysis (HD). In the general population, more women than men have PH due to left ventricular (LV) disease with preserved ejection fraction (EF). Little is known about the gender-specific prevalence of PH and associated LV abnormalities in patients with end stage renal disease (ESRD) on HD. Our aim was to evaluate gender differences and LV structural and functional changes in PH among ESRD patients on HD.

Methods: Ninety-four patients (ages 23-77 years) underwent echocardiography after HD. Patients were divided based on estimated pulmonary artery systolic pressure (PASP) (Group A PASP < 40 mm Hg, Group B PASP ≥ 40 mm Hg). LV measurements included LV mass, LV internal dimensions, and LV ejection fraction (EF). LV diastolic function (LVDF) was assessed from mitral inflow deceleration time (DT) and E/A ratio.

Results: Fifty-five patients (59%) had PH, including 32 of 49 men (65%) and 23 of 45 women (51%). LVEF was lower in Group B (46.4 ± 17.6 vs. $62.4 \pm 14.4\%$, $p < 0.001$). Men with PH had higher LVIDd, cm (5.52 ± 0.89 vs 4.78 ± 0.75 , $p < 0.001$), LVIDs, cm (3.75 ± 0.94 vs 3.14 ± 0.91 , $p = 0.03$) LV mass, g (236 ± 74 vs 189 ± 56 , $p = 0.02$) and lower LVEF (40.0 ± 16.7 vs 52.0 ± 15.6 , $p = 0.008$) than women.

Conclusion: Patients on HD have a high prevalence of PH. PH was not associated with clear LV structural changes. There was a depression in LV systolic function without changes in LVDF. PH patients were more often men with hypertrophied LV with depressed LV systolic function.

Research Article

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[Prognostic implications of vitamin D deficiency in chronic kidney disease](#)

Chronic kidney disease (CKD) is a highly prevalent disease, imposing high mortality rates worldwide, and it is closely related to cardiovascular events. Vitamin D deficiency is very prevalent in patients with CKD from the earliest stages of the disease, and it has been associated with higher mortality. In order to assess the prognostic implications of vitamin D deficiency in CKD, we undertook a literature review, searching different databases in October 2018 for publications related to vitamin D in patients with CKD and hypovitaminosis D, and not on dialysis. The main cause of death in these patients is cardiovascular disease. Vitamin D is one of the first parameters that CKD changes and has an important prognostic role in this entity. Deficient levels in blood are associated with increased cardiovascular risk and survival impacts, independently of cardiovascular disease. Treatment with paricalcitol appears to reduce this risk. However, the evidence analyzed is insufficient to establish an association between vitamin D levels and the progression of kidney disease.

Research Article

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[Is there improvement in renal function in patients undergoing bariatric surgery?](#)

Introduction: Obesity may cause progressive chronic kidney disease. Weight loss in the postoperative follow-up of bariatric surgery may improve renal function in these patients. Thus, the purpose of this study was to give insight on the subject using a sensible biomarker.

Methods: This cross sectional study was performed in the Obesity Department from Campina Grande – Paraiba, Brazil. It was randomly enrolled 23 postoperative patients (7 bypass and 16 sleeve), with at least two years of follow-up, from the outpatient Department and 29 (18 bypass and 11 sleeve) in the preoperative period for bariatric surgery. They were homogeneously from both genders with ages ranging from 25 to 57 years. Serum levels of creatinine and cystatin C were measured, and the glomerular filtration rate (GFR) was estimated using the CKD Epi (chronic kidney disease epidemiology collaboration) cystatin-creatinine equation. The investigation was approved by the Ethics Committee.

Results: The mean body mass index (BMI) of the preoperative group was significantly greater than the postoperative group ($p < 0.0001$). The mean serum levels of C cystatin was significantly greater in the postoperative group as compared to preoperative ($p = 0.0197$). However, there was no mean difference between creatinine serum concentrations comparing the two groups ($p = 0.3252$). The mean glomerular renal function rates of the groups were similar ($p = 0.1240$).

Conclusion: There is no definitive evidence for supporting the hypothesis that there is improvement in the kidney renal function after bariatric surgery in obese patients. Prospective cohorts are necessary to enlighten the answer for this important question.

Research Article

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[High water intake in preventing the risk of Uric Acid Nephrolithiasis: A systematic review and meta-analysis](#)

Background: Hyperuricosuria, persistently low urinary pH, and low urinary volume are the main risk factors of uric acid nephrolithiasis. Epidemiologic studies suggest that high water intake is protective against the occurrence of symptomatic kidney stone events of all types. The objective of this systematic review and meta-analysis were to evaluate the effectiveness of increased water intake to prevent symptomatic uric acid kidney stone events.

Methods: Seventeen studies were identified for the meta-analysis. Analysis of Q and I² statistics revealed that a high heterogeneity in 16 studies, thus, random effects model was used. Protective associations were identified for high water intake individuals (SMD=0.52 L; 95% CI: 0.19, 0.84; $p=0.002$); a significantly decreased relative super saturation of uric acid versus controls (SMD=-1.15; 95% CI: -2.00, -0.30; $p=0.008$). Risk factors including urinary uric acid excretion and pH were not significantly related to high water intake (SMD=7.32mg/d, 95% CI: -52.27, 66.91; $p=0.81$), (SMD=0.14; 95% CI: -0.02, 0.31; $p=0.09$), respectively. Further subgroup analyses revealed that urinary uric acid excretion was significantly decreased in healthy individuals (SMD=-36.23 mg/d, 95% CI: -65.14, -7.31; $p=0.001$) compared to stone formers (SMD=27.41 mg/d, 95% CI: -33.18, 88.01; $p=0.38$); urinary uric acid excretion was significantly decreased in routine water intake groups (SMD=-61.49 mg/d, 95% CI: -120.74, 12.24; $p=0.04$) compared to mineral water intake groups (SMD=44.50 mg/d, 95% CI: -18.30, 107.29; $p=0.16$); urinary pH was significantly higher in mineral water groups (SMD=0.13, 95% CI: 0.01, 0.46; $p=0.04$) compared to regular water groups (SMD=-0.00, 95% CI: -0.13, 0.13; $p=0.98$).

Results: A total of 129 patients had 150 internal jugular catheter insertions. The mean age was 51.4 ± 15.2 years with male to female ratio of 1.5:1. All the patients had chronic kidney disease; about 80% had tunneled IJC and 96.9% of the catheters were inserted in the right internal jugular vein. Immediate complications were recorded in 10% and late complications in 34.9% of the procedures. The immediate complications were kinking of guide wire (2%), arterial puncture (1.3%) and difficulty in locating the internal jugular vein (1.3%) or tunneling (1.3%). The late complications were infection (12.8%), poor blood flow (9.2%), bleeding (5.5%) and spontaneous removal of the catheter (5.5%). There was no statistical significant difference in both immediate and late complication with age and sex.

Conclusion: This meta-analysis identified evidence that urinary uric acid excretion, volume, pH and relative supersaturation of uric acid can be altered with high water intake intervention, reducing the risk of uric acid kidney stones.

Research Article

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Internal jugular vein catheters (IJC) is recommended as the central venous access of choice in haemodialysis patients. However it is associated with complications of variable severity.

Objectives: To study the complications associated with internal jugular vein catheters in haemodialysis patients in southern part of Nigeria.

Methodology: The clinical details of patients who had IJC insertion at the kidney house, Hilton clinics Port Harcourt from 1st October 2011 to 30th September 2016 were documented. Complications from the IJC developed by the patients during the study period were also documented. The data obtained was analyzed using SPSS version 22. P value less than 0.05 was considered significant.

Results: A total of 129 patients had 150 internal jugular catheter insertions. The mean age was 51.4 ± 15.2 years with male to female ratio of 1.5:1. All the patients had chronic kidney disease; about 80% had tunneled IJC and 96.9% of the catheters were inserted in the right internal jugular vein. Immediate complications were recorded in 10% and late complications in 34.9% of the procedures. The immediate complications were kinking of guide wire (2%), arterial puncture (1.3%) and difficulty in locating the internal jugular vein (1.3%) or tunneling (1.3%). The late complications were infection (12.8%), poor blood flow (9.2%), bleeding (5.5%) and spontaneous removal of the catheter (5.5%). There was no statistical significant difference in both immediate and late complication with age and sex.

The ultrasound examination at discharge had a sensitivity of 31% and specificity of 87% to detect future symptomatic lymphoceles. The positive predictive value was only 10%. The second ultrasound test had the best test variables to detect symptomatic lymphoceles with a sensitivity of 93% and a specificity of 87% and a predictive value of 28%.

Conclusion: Internal jugular catheter is froth with immediate and late complications in haemodialysis patients.

Research Article **Published Date:-2019-07-09 00:00:00**

[Effectiveness of dexamethasone and hyaluronidase + valerate of bethasone associated with prepuical massage in the treatment of child phimosis](#)

Introduction: The phimosis condition is characterized by the inability to retract the foreskin on the glans, making it impossible to expose them. Surgical treatment, although effective, has been questioned by the risk to which the patient is exposed. Therefore, we have opted for the use of topical corticosteroids to resolve this pathology.

Goals: To compare the effectiveness of Dexamethasone and Hyaluronidase + Betamethasone Valerate associated with preputial massage in the treatment of infantile phimosis, the degree of regression of phimosis, the time needed to achieve complete efficacy, possible adverse reactions, long-term outcome and parental adherence to treatment in children attending a specialized service in Blumenau, Santa Catarina.

Materials and methods: Controlled clinical trial, quantitative, non-blind, prospective and randomized sample analysis through the analysis of 523 patients.

Results: After 1 month of treatment, 435 patients presented some degree of regression and 63 children were referred to surgery. The success rate in this period was 45.8% in boys who were taking Hyaluronidase + Betamethasone Valerate and 49.8% in those who used Dexamethasone. In the late evaluation, 398 children reached grade 0, and 213 used Hyaluronidase + Betamethasone Valerate and 185, Dexamethasone; 39 patients were referred to the postectomy. Adherence to treatment was similar in both groups. The average time for degree 0 to be reached similar in both.

Conclusion: Both topical corticosteroids were effective in the resolution of phimosis. However, in the evaluation after the first month and in the regression, Dexamethasone proved to be more effective. The time to resolution of the condition was similar for both. The surgical procedure was taken when there was no clinical improvement. No adverse effects were reported in both groups.

[The value of routine ultrasound at discharge to identify patients at risk of developing symptomatic lymphoceles after kidney transplantation: A case-cohort study](#)

Introduction: Ultrasound examination is frequently used to evaluate the graft after renal transplantation and to detect possible lymphoceles. The first ultrasound scan in our hospital is normally performed on the day of discharge. We questioned whether perirenal fluid collections detected by ultrasound examination at discharge are predictive for future symptomatic lymphoceles.

Methods: All ultrasound reports of all renal transplant recipients treated in our hospital between January 2010 and December 2017 were collected and screened for abnormalities such as fluid collections. Patients that developed a symptomatic lymphocele were compared with a control group from the same cohort. Sensitivity and specificity of ultrasound examination to detect symptomatic lymphoceles were calculated for the primary and consecutive ultrasounds tests.

Results: There were no significant differences at baseline characteristics between the Symptomatic lymphocele group and control group, with the exception of mean age at kidney transplantation (47 ± 17 years in the control group vs. 56 ± 13 years in the symptomatic lymphocele group, $p=0.02$).

The ultrasound examination at discharge had a sensitivity of 31% and specificity of 87% to detect future symptomatic lymphoceles. The positive predictive value was only 10%. The second ultrasound test had the best test variables to detect symptomatic lymphoceles with a sensitivity of 93% and a specificity of 87% and a predictive value of 28%.

Conclusion: Routinely use of ultrasound testing on the day of discharge does detect perirenal fluid collections, but is not predictive for development of symptomatic lymphoceles in the future.

[Alternate day outpatient hemodialysis schedule is the appropriate practical alternative schedule to improve patients' outcomes](#)

The rise in all-cause and cardiovascular mortality and hospitalization rates among the hemodialysis (HD) patients after the long weekly inter-dialysis interval is very impressive. In fact, there is an additional long-term morbidity risk besides this acute rise in mortality and hospitalizations that can be expected from the weakly exaggerated pre-dialysis peaks of the less risky hemodynamic and biochemical parameters. An approach for eliminating these long weekend inter-dialysis intervals is through the provision of the hemodialysis sessions on every other day (EOD) basis, regardless of the week days. This is likely to be both practical and cost-effective. Such EOD schedule can be introduced easily beside the ongoing thrice weekly HD schedule without disturbance of the HD unit work. The availability of EOD schedule would provide a healthier and cost-effective alternative schedule for those patients who can't tolerate the weekend intervals and for those looking for maintaining their long-term health on the option of hemodialysis. In fact, with available data, medical staff is expected to encourage all patients to shift their HD to the EOD schedule.

[Causes of hospital admission of chronic kidney disease patient in a tertiary kidney care hospital](#)

Background: Patients with chronic kidney disease (CKD) are at the risk of increase hospital admission as compared to the general population, due to various reasons. They have increased vulnerability to cardiovascular diseases (CVD) as well as infections, therefore they usually got admit in health care units due to various reasons. The causes of hospitalization in CKD patients in this part of the world are not studied well.

Methods: This cross sectional study was conducted in The Kidney Centre Post Graduate Training Institute (TKC-PGTI) of Karachi. Variables included in the study were age, gender, are of residence, ethnicity, smoking status and level of education. Comorbid conditions like causes of CKD and causes of hospitalization. Data analysis performed by using software IBM SPSS 21.

Results: Total of 269 patients were enrolled in our study. The male 148(55%), mean age was 55 years. The most common cause of hospitalization in our population was infection148 (55%) and urinary tract infection (UTI) was the most common site of infection 55 (20%) followed by sepsis of unknown origin 29(10.8%). Cardiovascular events like volume overload 32 (11.4%) and acute coronary syndrome 20(7.4%) were the second most important cause of hospitalization.

Conclusion: Hospitalization of CKD patients is high, and in our population infection is found to be the leading cause of hospital admission. Infection originating from urinary tract is more common in all stages of CKD patients, while blood born infection originating from double lumen (DL) dialysis catheter or arteriovenous fistula (AVF) cannulation is more common in dialysis population. Cardiovascular events, both acute coronary syndrome and pulmonary edema due to volume overload followed the infections.

Research Article

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[Urinary NGAL incorporation into Renal Angina Index for early detection of acute kidney injury in critically ill children](#)

Background and objectives: New AKI biomarkers (on the top of it NGAL biomarker) have demonstrated better performance for prediction of AKI in critically ill patients with heterogeneous illness. Renal angina index was recently reported to enhance prediction of severe AKI at the time of intensive care unit admission. This study tested the hypothesis that incorporation of uNGAL in patients with renal angina improves the prediction of severe AKI.

Design, setting, participants & measurements: In our study 53critically ill children admitted to the pediatric intensive care unit in Zagazig university hospital, Measurement of urine neutrophil gelatinase– associated lipocalin (uNGAL) was determined individually by ELISA kit and in combination with the RAI which is calculated in each critically ill child for severe AKI. Statistical analysis was done for these data.

Results: Individual uNGAL demonstrated marginal discrimination for severe AKI (area under curve [AUC]: NGAL, 0.877), little higher than prediction by RAI (AUC=0.847). Incorporation of uNGAL significantly added to the renal angina index AKI prediction (AUC=0.847, increased to 0.893).

Conclusion: This study shows that incorporation of uNGAL into the RAI improves detection ability of severe AKI in critically ill children.
