

**CONCLUSIONS** The patients with high risk for pulmonary hypertension can be measured minimally invasively with a catheter in the femoral vein. At baseline, the pressure in the femoral vein was very low. Upon strong cough, the femoral pressure raised and matched the pulmonary artery pressure. Larger scale of clinical trial or registries of this new technique to confirm its reproducibility and validity are needed.

## KIDNEY DISEASE

### GW27-e0025

#### Combining Serum Cystatin C with Creatinine, a New Definition of Contrast-induced Acute Kidney Injury and Its Clinical Implications

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**OBJECTIVES** Contrast-induced acute kidney injury (CI-AKI), a powerful predictor of unfavorable long-term prognosis, was traditionally defined as an increase of serum creatinine (sCr) after contrast media (CM) exposure. Recently, serum cystatin C (sCyC) had been proposed as an alternative to sCr to detect acute changes in renal function. However, the increment cut-off point of sCyC to detect CI-AKI and the clinical implication of combining sCyC and sCr as new definition of CI-AKI remains to be further elucidated.

**METHODS** 1071 consecutive patients undergoing coronary angiography/intervention from July 1, 2013 to August 31, 2014 were prospectively included. Patients requiring dialysis were excluded. sCyC and sCr were assessed at baseline and 24-48 hours after CM exposure. CI-AKI traditional was defined as a sCr increase  $\geq 0.3$ mg/dL or 50% from baseline. Major adverse events (MAEs, including death, myocardial infarction, stroke, revascularization and dialysis) at 12 months were assessed.

**RESULTS** CI-AKI traditional developed in 25 patients (2.3%). 12 month follow-up was available in 1063 patients (99.2%) and MAEs occurred in 61 patients (5.7%). By receiver operating characteristic curve analysis, a sCyC increase  $\geq 15\%$  was the optimal increment cut-off value for CI-AKI detection with a 80% sensitivity and 83% specificity and occurred in 187 patients (17.4%). Patients with a sCyC increase  $\geq 15\%$  had a higher Mehran score ( $5.2 \pm 3.9$  vs  $4.4 \pm 3.4$ ,  $p=0.004$ ) and incidence of MAEs (12.4% vs 4.3%,  $p<0.001$ ). By multivariate logistic regression analysis, a sCyC increase  $\geq 15\%$  was a significant predictor of MAEs at 12 month (adjusted odds ratio [OR] =3.04; 95% confidence interval [CI], 1.75 to 5.29;  $p<0.001$ ). Using the composite of sCyC (increase  $\geq 15\%$  as positive, +) and sCr (increase  $\geq 0.3$ mg/dL or 50% as positive, +) as CI-AKI new, compared with patients without any positive, patients with single-positive (sCyC+/sCr- or sCyC-/sCr+) and dual-positive (sCyC+/sCr+) were significantly associated with MAEs at 12 month (adjusted OR: 2.06 [1.14, 3.71],  $p=0.017$ ; 13.36 [3.65, 48.94],  $p<0.001$ , respectively).

**CONCLUSIONS** sCyC is a reliable biomarker for CI-AKI detection and using the new definition of CI-AKI by the composite of sCyC and sCr would be helpful to identify patients in danger of CI-AKI and risk stratification.

### GW27-e0147

#### High Serum Phosphorus Level is Associated with Left Ventricular Diastolic Dysfunction in Peritoneal Dialysis Patients

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**OBJECTIVES** we initiated this study to explore the relationships of serum phosphorus level with left ventricular ultrasound features and function in PD patients.

**METHODS** 174 patients with ESRD receiving PD were enrolled. Conventional echocardiography examination and TDI were performed in each patient. Clinical information and laboratory parameters were also collected. Analyses of echocardiographic features were performed according to phosphorus quartiles groups. And multivariate regression models were used to determine the association between serum phosphorus and LVDD.

**RESULTS** With the increase of serum phosphorus levels, patients on PD showed an increased E/A ratio ( $P = 0.018$ ) and a higher tissue Doppler-derived E/e' ratio of lateral wall ( $P < 0.001$ ), indicating a deterioration of LV diastolic function. Steady growths of left atrium (LA) and left ventricular (LV) diameters as well as increase of left ventricular muscle mass (LVM) were also observed along with the increase of phosphorus, while LV ejection fraction (LVEF) remained normal. In a multivariate analysis, serum phosphorus level was independently associated with E/e' ratio of lateral wall ( $\beta$ : 2.84,  $P < 0.001$ ).

**CONCLUSIONS** Our study showed an early impairment of LV diastolic function in peritoneal dialysis patients. High serum phosphorus level was independently associated with greater risk of LVDD in these patients. Whether serum phosphorus will be a useful target for prevention or reduction of LVDD remains to be proved by more studies.

### GW27-e0188

#### Primary hyperaldosteronism complicated by renal cancer: report of a case and literature review

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**OBJECTIVES** To investigate the clinical features, diagnosis and treatment of primary aldosteronism with renal cancer and improve the awareness of the disease, the adjudication of diagnosis and therapy.

**METHODS** The clinical features, imaging results, laboratory results were observed and the literatures reporting primary aldosteronism with kidney cancer at home and abroad was reviewed.

**RESULTS** A male patient, 59-years old, admission to our hospital with complaint of blood pressure increasing for more than 10 years and with chest tightness and shortness of breath for 3 days. Combined with imaging results and lab test, the diagnosis is adjudicated with primary aldosteronism with left renal neoplasm. The patient was then transferred to the surgery department to undergo radical nephrectomy. The pathology result of resected renal neoplasm revealed renal clear cell carcinoma with 3 cm in diameter. Furthermore, from 4 published articles reporting primary aldosteronism with kidney cancer, there are 6 cases in total. After checking aldosterone/renin ratio, potassium, other laboratory tests and the imaging involving computer tomography and ultrasound examination, the diagnosis was determined with 4 cases of left renal cancer and 2 cases of right renal cancer.

**CONCLUSIONS** Primary aldosteronism with kidney cancer is less common and by using imaging and laboratory results, differential diagnosis is performed and confirmed; the disease can be cured by using radical nephrectomy and adrenalectomy. However, the pathological relationship between the resected renal and adrenal is unclear; more researches are needed to be done in the future for better understanding.

### GW27-e0422

#### Antihypertensive Drug Recommendations for CKD Patients by data mining

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**OBJECTIVES** Chronic kidney disease (CKD) is a key challenge for public health worldwide, and hypertension is one of the most prevalent cardiovascular risk factors for CKD. The majority of studies have been published as literature in the MEDLINE system to provide support for medical decisions. Due to the rapid increase in the amount of electronic information in the past decade, it is difficult for doctors to manually maintain current knowledge with the rapid growth of literature. The aim of our study is to recommend influential antihypertensive drugs for patients with CKD by mining the MEDLINE literature database using MedRank, a graph-based ranking algorithm. The ultimate goal is to support doctors to make more informed decision in prescribing antihypertensive drugs to CKD patients.

**METHODS** We used MedRank algorithm to calculate the most influential antihypertensive drugs for CKD based on MEDLINE literature database and compared the ranking differences with