was detectable mainly in the microvilli under resting conditions. In parallel, a phosphatidylinositol-4-phosphate 5-kinase (PI(4)P5K) was also detected almost exclusively in microvilli, indicating that PI(4,5)P$_2$ is synthesized and stored in microvilli. Interestingly, after cholesterol synthesis was inhibited by lovastatin, PI(4,5)P$_2$ diffused into planar regions with a consequent activation of ROMK1 channels. Activation of ROMK1 channels by MβCD was reversed by addition of exogenous cholesterol, but the activation did not occur when PI(4,5)P$_2$ was sequestered with a PI(4,5)P$_2$ antibody.

CONCLUSIONS These results suggest that cholesterol inhibits ROMK1 channels, at least in part, by limiting PI(4,5)P$_2$ diffusion from microvilli to planar regions of the renal CCD cell apical membrane, and statins could attenuate hyperkalemia induced by CsA and lipid metabolism disorders. In addition, this research will firstly establish the dynamic model for lipid-protein distribution, transfer and interaction among the microstructures of cell membrane.

GW26-e4543

Hyperhomocysteinemia and contrast-induced nephropathy in diabetic patients with renal dysfunction who underwent percutaneous coronary intervention

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OBJECTIVES The relationship between homocysteinemia and contrast-induced nephropathy (CIN) is not well evaluated. The present study aimed to determine the effects of hyperhomocysteinemia on CIN in diabetic patients with renal dysfunction who underwent percutaneous coronary intervention (PCI).

METHODS We conducted a prospective study involving 247 patients with type 2 diabetes and renal dysfunction (eGFR <60 mL/min per 1.73 m^2). PCI was preformed with standard procedure. Plasma levels of homocysteine were measured before PCI. Based on the plasma homocysteine levels, patients were divided into three groups: the first tertile (n=82, homocysteine <12.4 μmol/L), the second tertile (n=82, 1.24-16.9 μmol/L), and the third Tertile (n=83, >16.9μmol/L). CIN was defined as an elevation of serum creatinine by ≥25% or ≥0.5 mg/dL from baseline within 48 h after PCI. Multivariate logistic regression analysis was performed to determine the predictors of CIN.

RESULTS The incidence of CIN was significantly higher in patients with the third homocysteine tertile, when compared to those with the second and first tertile (28.04% vs. 10.97% vs. 8.43% respectively, P<0.001). At the same time, the levels of plasma homocysteine significantly increased in CIN patients than those without CIN (18.1±4.6 vs. 14.4±3.7 μmol/L, P <0.001). After adjustment for the other risk factors such as age, anemia, eGFR, myocardial infarction, IABP, LVEF, HbA1c and contrast volume, multivariate logistic regression analysis considered that hyperhomocysteinemia was an independent predictor for CIN [Odds ratio 1.574 (1.127, 2.365), p <0.001].

CONCLUSIONS Hyperhomocysteinemia is independently associated with a greater risk of CIN in diabetic patients with renal dysfunction who underwent PCI.

GW26-e4532

Relationship between Carotid atherosclerosis, Aortic valve calcification and Atherosclerotic renal artery stenosis

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OBJECTIVES To study the relationship between carotid atherosclerosis, aortic valve calcification (AVC) and atherosclerotic renal artery stenosis (ARAS).

METHODS 162 cases of patients with chest pain, who were underwent renoarteriography were selected and divided into ARAS group (29) and control group (133) according to the angiographic results. The age, gender, history of smoking, hypertension, diabetes, hyperlipidemia and coronary heart disease were recorded and compared between two groups. The total cholesterol (TC), triglyceride (TG), low-density lipoprotein (LDL-C), high-density lipoprotein (HDL-C) levels of patients were measured, and the carotid artery intima-media thickness (CIMT), carotid atherosclerosis and aortic valve calcification (AVC) were investigated by carotid ultrasonography and echocardiogram.

RESULTS The constituent ratio of hypertension history, TC, CIMT, incidence of carotid atherosclerosis and AVC were significantly higher in the patients of ARAS group than those of the control group. The sensitivity, specialty of carotid atherosclerosis for predicting the ARAS were 72.24 %, 56.39 %, and the sensitivity, specialty of AVC were 44.83 %, 74.45 %. The sensitivity, specialty of combination of carotid atherosclerosis and AVC were 41.38 %, 76.69 %.

CONCLUSIONS Carotid atherosclerosis and AVC were useful for the diagnosis of ARAS, which could be used to exclude the ARAS.

GW26-e2427

Remote Home Management for Chronic Kidney Disease: A Systematic Review

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OBJECTIVES Remote home management, the use of information technology to provide a tool for self-management of disease in a home setting. This study is designed to identify the effects of remote home management to CKD patients.

METHODS A comprehensive search of Medline, Embase, and the Cochrane Central Register of Controlled Trials was performed in January 2015. The reference listings of the included articles in this review were also manually examined. Concurrent controlled or crossover trials (including randomized and non-randomized experimental trials) designed to evaluate the effects of remote home management on clinical outcomes in CKD patients were included. All statistical analyses were performed using the RevMan software, which is available free from the Cochrane Collaboration.

RESULTS Eight trials involving 648 patients were identified, and all of these are randomized controlled trials (RCTs). The magnitude and significance of the remote home management effects on blood pressure and quality of life still remain inconclusive. However, the results of this study suggest that regardless of their nationality, socioeconomic status, or age, patients comply with remote home management programs and the use of technologies. Importantly, the studies that assessed the health services utilization demonstrated a significant decrease in emergency visits, readmission, average hospital length of stay. Lastly, economic viability of remote home management was observed in very few studies and, in most cases, no in-depth cost-effectiveness analyses were performed.

CONCLUSIONS The evidence base for remote home management in chronic kidney disease is currently quite limited. Based on the available data, remote home management may be an effective strategy for disease management in CKD patients. Adequately powered RCTs should be performed to assess its benefits with regard to blood pressure, quality of life and cost-effectiveness.

PERIPHERAL VASCULAR DISEASE

GW26-e2279

Superficial femoral artery chronic subtotal occlusions treated by percutaneous multiple overlapped, long self-expanding stent placement

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OBJECTIVES Peripheral arterial diseases (PAD) are common. Surgery is the traditional preferred treatment for femoro-popliteal Type C&D lesions. However, The number of percutaneous revascularization procedures performed for symptomatic PAD has significantly increased.

METHODS An old woman with hypertension severe ischemic cardiopathy (previous percutaneous coronary intervention with stent implantation), and Type II diabetes mellitus, who presented with two chronic ischemic ulcers in leftleg and foot due to Superficial Femoral Artery(SFA) chronic subtotal occlusion. We treated her with multiple overlapped, long self-expanding stent and have got a favorable clinical result at 1-year follow-up.