Conclusions: The expression of miR-145 in rats with pulmonary hypertension is reduced than that of Normal group (P < 0.01). Expression of miR-145 in Control group was significantly lower than in those from the control rats. Moreover, PAMSCs from 6-month exposed rats proliferated more rapidly than those from 3-month exposed or control rats, and cells grew even more rapidly in the presence of DX600, an ACE2 inhibitor. Consistent with the in vivo study, in vitro losartan pretreatment also inhibited cigarette smoke extract (CSE)-induced cell proliferation and ACE2 reduction in rat PAMSCs.

Conclusions: The results suggest that angiotensin II receptor antagonist may be therapeutically useful in the chronic smoking-induced pulmonary vascular remodeling and ACE2 may be involved as part of its mechanism. Our study might provide insight into the development of new therapeutic interventions for pulmonary vascular remodeling smokers.

GW25-e0504
Effect of Valsartan on expression of miR-145 in rats with Pulmonary Hypertension
Xue Hongjie, Yue Yang
First Clinical Hospital of Harbin Medical University

Objectives: Experiments show that miR-145 is a must to keep the vascular smooth muscle contractile phenotype, in pathological conditions, the expression of miR-145 in synthetic-typed vascular smooth muscle is reduced, but change of expression in pulmonary hypertension condition and the regulatory mechanisms have been rarely reported. This experiment will observe expression changes of miR-145 in pulmonary artery, and apply RAS antagonists-Valsartan to intervene these rats, observing effects on expression of miR-145.

Methods: 36 SD rats were randomly assigned into three groups (Normal group, Control group and Valsartan group) with 12 rats in each group. Rats in Normal group and Valsartan group were respectively given disposable intraperitoneal injection with 36% SD rats were randomly assigned into three groups (Normal group, Control group and Valsartan group) with 12 rats in each group. Rats in Normal group and Valsartan group were given intragastric administration of 2% MCT (60 mg/kg). Rats in Valsartan group were given intragastric administration of 2% MCT (60 mg/kg).

Results: Thickened wall of pulmonary arteries with apparent medial hypertrophy (PASMCs). In cultured PASMCs from 3- and 6-month smoke-exposed rats, ACE2 levels were significantly lower than in those from the control rats. Moreover, PAMSCs from 6-month exposed rats proliferated more rapidly than those from 3-month exposed or control rats, and cells grew even more rapidly in the presence of DX600, an ACE2 inhibitor. Consistent with the in vivo study, in vitro losartan pretreatment also inhibited cigarette smoke extract (CSE)-induced cell proliferation and ACE2 reduction in rat PAMSCs.

Conclusions: The results suggest that angiotensin II receptor antagonist may be therapeutically useful in the chronic smoking-induced pulmonary vascular remodeling and ACE2 may be involved as part of its mechanism. Our study might provide insight into the development of new therapeutic interventions for pulmonary vascular remodeling smokers.

GW25-e3100
High glucose decreases podocin expression and induces podocyte foot process effacement by stimulating TRPC6
Liu Bingchen1, Zhai Yujia1, Lu Xiaoyu2, Chen Guangping2, Ma Heping1, Li Xueqi1
1Department of Cardiology, the 4th Hospital of Harbin Medical University, Harbin, CHINA, 2Department of Physiology, Emory University School of Medicine, Atlanta, USA

Objectives: We have previously shown that high glucose causes podocyte apoptosis by stimulating TRPC6 channels. The present study aims at determining how TRPC6 and its downstream signaling molecules mediate the early responses of podocytes to high glucose.

Methods: We used immortalized human podocyte cell line combined with a variety of experimental methods (Scanning ion conductance microscopy (SIM), Western blot and Confocal microscopy) to illuminate TRPC6 involved mechanism of podocyte foot process effacement induced by high glucose.

Results: Our scanning ion conductance microscopy data show that high glucose induced foot process effacement of cultured podocytes and that the induction was attenuated by a TRPC6 channel blocker. Western blot data show that high glucose increased TRPC6 expression, but decreased podocin expression, and that hyperforin, a TRPC6 activator, also decreased podocin expression in control podocytes, but not in podocytes treated with TRPC6 siRNA. Confocal microscopy data show that both high glucose and hyperforin elevated the availability of free cholesterol and caused the accumulation of Zonulaoccludens protein 1 (ZO-1), a tight junction protein, in the area of effaced podocyte foot process. Interestingly, exogenous cholesterol mimicked high glucose-induced effacement of podocyte foot processes. Since podocin is a cholesterol-binding protein, theoretically, a decrease in podocin should result in the release of cholesterol. Our previous studies have shown that cholesterol controls ZO-1 levels in tight junction area of cortical collecting duct principal cells.

Conclusions: Therefore, these data suggest that high glucose may activate a sequential signaling pathway, which stimulates TRPC6, decreases podocin, elevates cholesterol, and finally attract ZO-1 to podocyte foot processes to cause their effacement.

Peripheral Vascular Disease

GW25-e4379
Crossover chimney technique to preserve the internal iliac artery in a ruptured aortic dissection aneurysm with bilateral iliac entry tears 10 years after TEVAR
Wu Weitao, Ye Weight, Hua Shuang, Liu Chuangwei
Peking Union Medical College Hospital

Objectives: The natural history of the aortic growth after thoracic endovascular aortic repair (TEVAR) in Stanford B aortic dissection remains unclear. We reported a rare case developing a huge aortic dissection aneurysm 10 years after the primary TEVAR which ruptured before admission.

Methods: The aorta was dissected out and multiple distal internal entry tears locating above and at the origin of the celiac artery, the origin of the right internal iliac artery (IIA) and the end of the left common iliac artery (CIA). The maximum size of the ruptured dissection aneurysm was 137mm×97mm below the renal arteries. The true lumen was compressed and the size of which at the aortic bifurcation was only 8.15mm. Cerebrospinal fluid (CSF) drainage was placed before the procedure to prevent paraplegia. After the exposure of the bilateral common femoral arteries (CFAs), a thoracic stent-graft was deployed above the superior mesenteric artery. The origin of the left IIA was emboled with coils. A crossover sheath was inserted from the right CFA to the left IIA. A Viabahn stent-graft was positioned 2 cm inside the IIA. A unibody bifurcated abdominal stent-graft was deployed below the renal arteries.

Kidney Disease

GW25-e1643
Two-dimensional strain profiles in Continuous ambulatory peritoneal dialysis patients with normal LV ejection fraction
Yao Fengjuan, Liu Donghong
The First Affiliated Hospital of SUN YAT-SEN University

Objectives: The usefulness of global longitudinal peak systolic strain (GLS) measurement by automated function imaging (AFI) in the detection of abnormal Systolic function in Continuous ambulatory peritoneal dialysis Patients with normal LV ejection fraction(LVEF).

Methods: A total of 40 patients (mean age 43.5±8.2years) with normal eject fraction of left ventricular.

Results: LVEF had no significant statistical difference in both groups (60.5±3.7 vs 61.3±4.1, P>0.05). Patients with Continuous ambulatory peritoneal dialysis had significantly lower GLPS and average global peak longitudinal systolic strain (GLS-avg) compared with controls(-15.2±3.7 vs. -22.1±4.6%, P<0.001, -13.8±4.5% vs. -20.1±5.2%, P<0.001 respectively). There was a good linear correlation between the EF and GLPS in patients and controls, (r=0.719, P<0.001). By receiver operation curve analysis, the area under the curve to predict patients with Continuous ambulatory peritoneal dialysis was 0.850 in GLPS. The cut-off value for GLPS of -15.6% had 90.4% sensitivity and 84.2% specificity for detection of patients with normal LV ejection fraction. Strain dispersion index, a measure of regional contractile heterogeneity, was higher in patients compared with controls.

Conclusions: 2DS (AFI) allows rapid characterization of regional and global systolic function and may have the potential to detect early abnormal regional and global systolic function in patients with Continuous ambulatory peritoneal dialysis from the normal ejection fraction of left ventricular.

Peripheral Vascular Disease

GW25-e4379
Crossover chimney technique to preserve the internal iliac artery in a ruptured aortic dissection aneurysm with bilateral iliac entry tears 10 years after TEVAR
Wu Weitao, Ye Weight, Hua Shuang, Liu Chuangwei
Peking Union Medical College Hospital

Objectives: The natural history of the aortic growth after thoracic endovascular aortic repair (TEVAR) in Stanford B aortic dissection remains unclear. We reported a rare case developing a huge aortic dissection aneurysm 10 years after the primary TEVAR which ruptured before admission.

Methods: The aorta was dissected out and multiple distal internal entry tears locating above and at the origin of the celiac artery, the origin of the right internal iliac artery (IIA) and the end of the left common iliac artery (CIA). The maximum size of the ruptured dissection aneurysm was 137mm×97mm below the renal arteries. The true lumen was compressed and the size of which at the aortic bifurcation was only 8.15mm. Cerebrospinal fluid (CSF) drainage was placed before the procedure to prevent paraplegia. After the exposure of the bilateral common femoral arteries (CFAs), a thoracic stent-graft was deployed above the superior mesenteric artery. The origin of the left IIA was emboled with coils. A crossover sheath was inserted from the right CFA to the left IIA. A Viabahn stent-graft was positioned 2 cm inside the IIA. A unibody bifurcated abdominal stent-graft was deployed below the renal arteries.