CONCLUSIONS The RSS facilitated AF inducibility by up-regulating cardiac autonomic nervous activity.

GW26-e5343 MicroRNA-17-5p, a novel vascular endothelial cell modulator, controls vascular re-endothelialization and neointimal lesion formation after vascular injury

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OBJECTIVES Endothelial injury plays a critical role in the initiation of a variety of proliferative vascular diseases. Several studies indicated that miR-17-5p provides a cell-intrinsic antiangiogenic activity in tumorigenesis. However, the functions of miR-17-5p in endothelial growth and vascular remodeling are completely unknown.

METHODS In this study, we generated adenovirus expressing mir-17-5p (Ad-mir-17-5p) or mir-17-5p inhibitor (antagomiR-17-5p). Vascular endothelial cells (ECs) were isolated from thoracic aorta of SD rats. In vivo, the left common carotid artery of rats was isolated and 200 μl of adenovirus containing pluronic gel applied to the perivascular surface of the left common carotid artery. Four days later, the carotid arteries were isolated again and injured by balloon catheter to induced neointimal hyperplasia.

RESULTS Time-course changes of mir-17-5p were detected in the rat carotid balloon injury model at 7 days, 14 days, and 28 days. To determine endothelial behavior, neutrophils adhesion induced by thrombin was increased after miR-17-5p overexpression, but markedly attenuated when miR-17-5p knockdown. Consistent with the inflammatory changes, miR-17-5p inhibited ECs proliferation and migration; however, antagomiR-17-5p strengthened its proliferative and migratory roles.

Next, we found that expression levels of VEGFA and VEGFR2 were significantly upregulated in the P-RSS. Overexpression of miR-17-5p resulted in a marked reduction of VEGFA and VEGFR2 signaling pathway in balloon-injured rat carotid arteries. Meanwhile, antagomiR-17-5p was capable of reducing NF-kB activation, which was imitated by rapamycin. The activity and expression of PLD were enhanced by high glucose, which were mitigated by ALDH2 and the inhibitor of PLD. The phosphorylation levels of ULK1 were regulated by ALDH2 or PLD inhibition. Moreover, knock-down of ULK1 using siRNA in H9C2 cells abolished the ALDH2-up-regulated autophagosome accumulation and LC3 expression. And autophagy damped under high glucose condition was also demonstrated by GFP-LC3 puncta, immunofluorescence and transmission electron microscopy.

CONCLUSIONS Taken together, this data suggested that PLD-ULK1 signaling played an crucial role in ALDH2-offered protective effect against high glucose exposure-induced cardiomyocytes injury through regulation of autophagy.

GW26-e0712 Comparative Effects of Clopidogrel, Ticagrelor and Cilostazol on Aspirin-Induced Gastric Bleeding and Damage in Stomach of Rats

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OBJECTIVES To evaluate the effects of frequently used clopidogrel, ticagrelor and cilostazol on the gastric bleeding and ulcerogenic responses induced by acidified acetylsalicylic acid (ASA) in rats.

METHODS 24 Sprague-Dawley rats were randomly assigned to give clopidogrel (10-100mg/kg) groups, ticagrelor (3-10 mg/kg) groups, cilostazol (3-30mg/kg) groups and a placebo (vehicle) groups. Rats were given drugs 90 min before the perfusion of 25 mM asparin acidified with 25 mM HCl (acidified ASA) at a rate of 0.4 mL/min for 60 min. The concentration of hemoglobin in the luminal perfusate was measured every 15 min; we calculated hemorrhagic lesion score and observed the gross appearances of gastric lesions in different groups rats in the perfusate for 60 min.

RESULTS Stomach of rats was being slight bleeding and lesions. Cilostazol and ticagrelor dose-dependently increased the gastric bleeding and ulcerogenic responses, compared to vehicle rats, but both of them (clopidogrel 100mg/kg and ticagrelor 10mg/kg) were no difference. In contrast, cilostazol dose-dependently decreased gastric bleeding and ulcerogenic responses in stomach of rats, compared to vehicle.

CONCLUSIONS P2Y12 receptor inhibitors: clopidogrel and ticagrelor increased gastric bleeding and damage induced by acidified ASA, a phosphodiesterase III inhibitor: cilostazol protected these damages. Therefore, cilostazol decreased the risk of gastric bleeding for dual or triple anti-platelet therapy combined with ASA.

GW26-e1434 Ginsenoside Rb1 prolongs the lifespan and protect against brain aging in C57BL/6J mice

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OBJECTIVES Object To testify whether ginsenoside Rb1 could prolong the lifespan and protect against aging. In addition, we explore the potential mechanisms using in vivo studies through animal, and molecular levels.

METHODS We initiated supplementation of female C57BL/6J mice with a low dose (10mg/kg/day) ginsenoside Rb1 or solvent at 12 months of age, and randomly divided into longevity and sacrifice groups. In longevity group, mice in the longevity group (n = 8 in each subgroup) were allowed to die of natural causes and analyzed the survivals. In sacrifice groups, the supplementation ended at 24 months. Solvent-control mice, young (2-months-old) and middle-aged