left carotid artery endothelium. Another 6 rabbits were fed common diet, no injury. At the beginning and feeding for 12 weeks, TG, TC, HDL, LDL, FBG, fasting insulin and insulin sensitivity index were tested, analysis the correlation between HOMA-IR and lipid. After 12 weeks, OCT images of the left carotid artery were performed. After OCT, specimens were taken. Histology embedded in paraffin and HE stained was performed on arterial regions that was showed plaques in the OCT scan. OCT results were compared with pathological results.

Results 4 rabbits died, no death in normal. Feeding high fat diet for 12 weeks, their weight, TC, TG, LDL-C, HDL-C were significantly higher than normal ($p<0.01$). Though the difference of FBG was not statistically significant compared with normal ($p=0.423$), FSI, ISI and HOMA-IR was statistically significantly different ($p=0.001$, 0.000, 0.000 respectively). HOMA-IR and TG were positively correlated ($r=0.52$, $p=0.039$), and TC, HDL, LDL no significant correlation ($p>0.05$). OCT images of the left carotid artery in 22 rabbits were performed. 60 OCT images analysis after two experts' discussions were held. There were 50 lipid-rich plaques, seven fibrous plaques and three suspected as calcified plaques. In addition, four thrombosis and intima tear in two sites were found. The pathological section was made in corresponding sites to OCT, HE staining. Comparing with the pathology results, OCT had high sensitivity and specificity for atherosclerotic plaque, respectively 96%, 89%. Plaque burden, external elastic membrane area and lumens area between the two methods were not statistically different ($p>0.05$).

Conclusion OCT imaging can clearly visualise different types of atherosclerotic plaques and provide detailed information on plaque characteristics. Comparing with histopathology, OCT had high sensitivity and specificity for characterising atherosclerotic plaque.

e0196 TRB3'-SILENCE REMARKABLY ATTENUATES RENAL FIBROSIS IN DIABETIC RAT

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Background Renal fibrosis is thought to be the common pathway in most cases of end-stage renal diseases. Recently, it is reported that tribble3 plays an important role in the progress of cardiac fibrosis in diabetes mellitus (DM). Therefore, TRB3 might participate in the pathogenesis of renal fibrosis of diabetes mellitus rat.

Methods 84 male Wistar rats were randomly divided into three groups: control group (n=12), high-fat diet group (HF group, n=36), DM group (n=36). The rats in DM group were injected with streptozotocin (STZ) after feeding with a high-fat diet for 4 weeks. The last two groups were re-divided into three subgroups according to injection with TRB3 siRNA adenovirus at week 17 whether or not (HF+Ad group; HF+Vector group; HF group; DM+Ad group; DM+Vector group; DM group; n=12 per group). After rats sacrificed, renal tissue was removed and stained with H&E and masson's trichrosome staining.

Results Renal fibrosis was significantly increased in DM group compared to HF group and Control group (4.1 ± 0.87 vs 0.9 ± 0.13 vs 0.53 ± 0.08; $p<0.05$, $p=0.017$, respectively). The severity of fibrosis was also significantly different between three subgroups in DM group, the same to HF group. In DM group, renal fibrosis obviously ameliorate in DM+Ad group compared to DM+Vector group and DM group (1.4 ± 0.24 vs 7.1 ± 0.8 vs 3.7 ± 0.8; $p<0.0001$, $p<0.01$, respectively). In HF group, renal fibrosis also noticeably improvement in HF+Ad group compared to HF+Vector group and HF group (1.3 ± 0.24 vs 3.0 ± 0.8 vs 0.9 ± 0.13; $p<0.05$, $p<0.05$, respectively).

Conclusion TRB3'silence remarkably attenuates renal fibrosis and gene interference shows beneficial effect in the development of diabetic nephropathy in diabetes mellitus.

e0197 EFFECTS OF PRIOR DIFFERENT INTENSITIES EXERCISE ON INFARCT REGION FUNCTION AND ANGIOGENESIS OF LEFT VENTRICLE IN MYOCARDIAL INFARCTION RATS

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Objective Lifestyle interventions including exercise training have been shown to be a feasible option for the prevention and treatment of cardiovascular diseases. In this study, we investigated the effects of prior different intensities of exercise on infarct region and function and angiogenesis of the left ventricle (LV) in post-myocardial infarction (MI) rats, and further examined the expression of VEGF proteins in the left ventricle.

Methods Male Sprague—Dawley rats were randomly assigned to six groups. The exercised rats underwent a daily 60-min treadmill exercise, 5 d/wk, for 6 wk. Different treadmill speeds were carried out in the high intensity exercise group (HIE-MI group, 30 m/min), moderate intensity exercise groups (MIE-Sh and MIE-MI groups, 21 m/min), low intensity exercise group (LIE-MI group, 12 m/min), respectively, whereas the untrained rats (Sed-Sh and Sed-MI groups) remained sedentary. At 6 wk, 24 h after the last treadmill exercise or the corresponding sedentary protocol, all rats underwent either acute MI (LIE-MI, MIE-MI, HIE-MI and Sed-MI groups) or sham MI operation (MIE-Sh and Sed-Sh groups). Then, all rats were sacrificed at 7d after recovery. Echocardiographic and haemodynamic measurements were performed at the end of the experimental protocol, and hearts were sampled for histological and molecular analysis. The infarct regions were analysed by using Masson's trichrome staining; intramyocardial microvessels were detected by using Factor VIII-related antigen staining; and cardiac VEGF protein levels were determined by Western blotting analysis.

Results Compared with Sed-Sh group, MIE-Sh group ameliorated left ventricular function and increased microvessels intensity, though the difference was not significant. Compared with Sed-MI group, MIE-MI and HIE-MI groups significantly reduced left ventricular infarct size, improved haemodynamic parameters, increased fractional shortening, scar thickness and microvessel density, but LIE-MI rats only had slight, and non-significant effect on these parameters. In addition, the differences between MIE-MI and HIE-MI rats were significant in haemodynamic parameters and microvessel density. Interestingly, compared with Sed-MI group, the exercised hearts displayed higher levels of VEGF protein in MIE-MI and HIE-MI groups. However, there was no significant difference between MIE-MI and HIE-MI groups.

Conclusion Moderate intensity running exercise before acute MI improved LV function, reduced scar size, increased scar thickness and microvessel density in the post-MI rat. Additional higher intensity exercise could have little further effect. Low intensity exercise may be beneficial, but not sufficient to improve MI. Moderate and high intensity running upregulated the expression of VEGF protein, and contributed to the increased microvessels, which may partly benefit cardiac function after MI.

e0198 ACTIVITY OF CALCINEURIN NFAT SIGNALLING PATHWAY INVOLVING IN REMODELLING IN CTNI R146W MICE

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Objective To construct a transgenic model of HCM overexpressing $cTnI^{R146W}$, observe the pathological change of this animal, and