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Objectives Scavenger receptor class B type I (SR-BI) had been already proved in molecular level as the sole HDL receptor on cellular membrane. SR-BI plays an important role in reverse cholesterol transport (RCT). This study was designed to investigate the effects of atorvastatin on SR-BI expression in the liver of golden hamsters with diabetes mellitus.

Methods Thirty-three golden hamsters were included in this study. Six of them were randomly assigned to control group (n=6) and the others (n=27) were fed with high calorie and high fat diet and injected with streptozotocin (STZ, 30 mg/kg) to induce diabetic model. Twenty-three golden hamsters induced successfully were randomly divided into 3 groups: (1) diabetes and hyperlipidaemia control group (DHC group, n=7), (2) diabetes and hyperlipidaemia plus high dose atorvastatin group (atorvastatin 5 mg/kg/day for 7 days, DHH group, n=8), (3) diabetes and hyperlipidaemia plus low dose atorvastatin group (atorvastatin 2.5 mg/kg/day for 7 days, DHL group, n=8). Pathological and immunohistochemical change in the liver of golden hamsters were observed. RT-PCR and western blot were used to analyse SR-BI mRNA expression and SR-BI protein expression in the liver respectively.

Results In DHC group the liver was swelling with adipose degeneration. Adipose degeneration of the liver in DHL group and DHH group was improved. SR-BI mRNA and SR-BI protein expression in the liver were similar between DHC group and control group ($p>0.05$). SR-BI mRNA and SR-BI protein expression in the liver were significantly more in DHH group and DHL group than those in control group and DHC group (all $p<0.05$). SR-BI mRNA and SR-BI protein expression increased more in DHH group than those in DHL group ($p<0.05$).

Conclusions Atorvastatin could dose-dependently up-regulate SR-BI mRNA and SR-BI protein expression in the liver of golden hamsters with diabetes and hyperlipidaemia.

GW23-e1479 **EFFECT OF ATORVASTATIN ON SCAVENGER RECEPTOR CLASS B TYPE I EXPRESSION IN THE LIVER OF GOLDEN HAMSTER WITH DIABETES**