

[gw22-e0539]

VACCINATION AGAINST AGE-LDL SIGNIFICANT ATTENUATES ATHEROSCLEROSIS IN DIABETIC APOE MICE

Zhu Lin, Chun Liang, He Zhiqing, Wu Feng, Li Mei, Ding Ru, Zhen Yi, Fan Min, Wu Zonggui *Shanghai Changzhen Hospital, Shanghai, China*

10.1136/heartjnl-2011-300867.51

Objective To investigate the effects of vaccination against AGE-LDL in atherosclerosis and involved mechanism.

Methods Male apoE deficient mice were fed with high fat and induced to diabetes by injection of streptozotocin intraperitoneal 8-week-old diabetic apo-E^{-/-} mice were randomised to receive PBS, Al(OH)₃, or Al(OH)₃+AGE-LDL injection subcutaneous every 2 weeks. After 11 weeks, all mice were sacrificed. The concentration of serum total cholesterol, LDL, HDL, and triglyceride concentrations were measured. Atherosclerotic lesions were analysed by oil red O, MOMA-2 antibody, Masson's trichrome, and -SMC antibody, and DAB detection kit were used. FACS was used to assess the percentages of Th1, Th2, Treg and T17 cells. Total IgG, IgM, specific IgG and IgM against AGE-LDL, and relative cytokines in serum or splenocytes supernatant were also analysed.

Results Compared with Al(OH)₃ or PBS alone, combined immunisation could significantly decrease atherosclerosis, without effects on body weight, serum cholesterol, triglycerides, and composition of plaque, which could induce specific IgG and IgM against AGE-LDL, upregulate Treg percentage of and IL-10 level in splenocytes supernatant, without altering Th1, Th2 or Th17 percentages.

Conclusion: Immunisation with AGE-LDL+Al(OH)₃ subcutaneous could inhibit atherosclerosis in diabetic apo-E^{-/-} mice, involving humoral and cellular reaction against AGE-LDL, which would be a novel therapy strategy against atherosclerosis.