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COMBINATION OF HIGH-FREQUENCY ULTRASOUND AND ECHO-TRACKING TECHNIQUE FOR EVALUATING THE IMPACT OF BLOOD LIPID ON CAROTID OF RHEUMATOID ARTHRITIS PATIENTS

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[1]Wang Ping, [1]Zhang Er Hong, [1]Wang Xiao Li, [2]Li Guang-Xia, [1]Wang Ping. *[1]The Third Affiliated Hospital of Sun Yat-Sen University; [2]Da Qing Long Nan Hospital*

Objectives To explore value of high-frequency ultrasonography (US) and echo-tracking (E-T) technique for evaluating the impact of different levels of blood lipid on carotid intima-medial thickness (IMT) and stiffness of rheumatoid arthritis (RA) patients.

Methods 55 RA patients were divided into 2 groups (Group A and Group B) according to levels of blood lipid (Group A, high lipid level; Group B, normal lipid level). 50 healthy volunteers as controls in the Group C. Two-dimensional US examination was performed to evaluate the IMT and arterial plaque, and E-T technique was used to evaluate the stiffness parameters of bilateral carotid arteries.

Results Groups A had significantly thicker IMT and higher incidence of arterial plaque than Group B and Group C (all $p<0.05$), while there was no difference between the latter two groups (both $p>0.05$). The stiffness parameters were higher in Group A than in Group B and Group C (all $p<0.05$), and in Group B than in Group C (both $p<0.05$). The stiffness parameters were correlated positively with IMT, respectively (both $p<0.05$).

Conclusions High-frequency ultrasound and E-T technique can be effectively used to evaluate the IMT, arterial plaque and stiffness of carotid arteries of RA patients with different levels of blood lipid. Moreover, they also provide early change of artery elasticity because of carotid complication by RA.