RESEARCH HIGHLIGHTS

SEXUAL DYSFUNCTION

Young at heart? ED linked to CVD



Young men with erectile dysfunction (ED) and insulin resistance but no obvious cardiovascular disease (CVD) are at increased risk of having early changes in markers associated with atherosclerosis. Thus, the presence of ED could provide an opportunity for early intervention to prevent future CVD.

Chen and colleagues enrolled 261 men with ED and 40 age-matched healthy men aged 19–40 years to their study. Participants completed questionnaires assessing cardiovascular risk factors and erectile function, underwent ultrasonographic examination of brachial artery flow-mediated dilation (FMD) and carotid intima-media thickness (c-IMT), and gave a fasting blood sample for laboratory analysis.

Men with ED had significantly higher fasting glucose and fasting insulin levels, significantly lower testosterone and prolactin concentrations, and a greater insulin resistance values as measured by the homeostasis model than their healthy counterparts.

The presence of ED was significantly associated with reduced FMD% and 148 patients in the ED group had abnormal FMD% compared with 4 controls according to the standard cut-off point of FMD% <10. FMD% was significantly positively correlated with International Index of Erectile Function-5 (IIEF-5) questionnaire score and prolactin level and significantly negatively correlated with age, fasting insulin level, and total cholesterol.

A significantly higher mean c-IMT was observed in men with ED than in men without, and 122 men with ED and 10 controls had abnormal mean c-IMT measurements. Mean c-IMT had significant positive correlations with age, BMI, fasting insulin, fasting glucose, and total cholesterol and significant negative correlations with IIEF-5 score, total testosterone, and prolactin level.

Using a stepwise multiple linear regression model, the variables that predicted FMD% were age, IIEF-5 score, and insulin resistance measured using the homeostasis model, the variables predicting c-IMT were the same, with the addition of BMI. The inclusion of IIEF-5 score in the predictive model improved its predictive ability and the score was a significant independent predictor of both FMD% and c-IMT.

These results suggest that ED is a sign of subclinical atherosclerosis in young men who do not have obvious CVD, and so the presence of ED could provide an opportunity to intervene before CVD arises in these patients.

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ORIGINAL ARTICLE Chen, S.-F. et al. Brachial artery flow-mediated dilatation and carotid intima-media thickness in young ED patients with insulin resistance. Int. J. Impot. Res. <u>http://dx.doi.org/</u> 10.1038/ijir.2016.30 (2016)