VASCULAR ENDOTHELIAL FUNCTION MEASUREMENT AND INSULIN RESISTANCE INDEX CONTRIBUTE TO THE PREDICTION OF ERECTILE DYSFUNCTION IN YOUNG MAN

do:10.1136/heartjnl-2012-302920ad.9

Yao Fengjuan, Zhang Yan, Huang Yanping, Liu Donghong, Chen Yili, Lin Hong, Lu Kun, Fan Rui, Liu Yanqiu, Deng Chunhua, Zhang Yan. The First Affiliated Hospital of SUN YAT-SEN University

Objectives
Investigate the relationship between glycometabolic disorders and erectile dysfunction (ED) without organic aetiology in young man under the age of 40 years.

Methods
192 patients and 33 normal controls were enrolled. ED was evaluated by using the International Index of Erectile Function-5 (IIEF-5) questionnaire. We measured traditional cardiovascular risk factors, hormone levels and vascular parameters. The HOMA index was calculated as the product of the fasting plasma insulin level (μU/ml) and the fasting plasma glucose level (mmol/l), divided by 22.5. Insulin Resistance (IR) was measured by homeostasis model assessment (HOMA).

Results
Patients with ED had significantly higher systolic blood pressure (SBP), High-sensitivity C-reactive protein (hsCRP), high Insulin resistance index (HOMA-IR) and carotid intima-media thickness (IMT), compared with controls. Brachial artery endothelium-dependent flow-mediated vasodilation (FMD) was significantly reduced in ED patients. By multivariate logistic regression analysis, FMD, SBP, hsCRP and HOMA-IR were significantly associated with ED. In receiver-operating characteristic (ROC) analysis, FMD was a significant predictor of ED (area under the curve (AUC) 0.928, p <0.001). The cut-off value of FMD <9.6% had sensitivity of 80.9% and specificity of 100%. HOMA-IR were also predictor of ED (AUC of HOMA-IR 0.762, p <0.001).

Conclusions
ED may be the first clinical sign of endothelial dysfunction and a clinical marker of cardiovascular and metabolic diseases. Endothelial dysfunction, underlying insulin resistance in young ED patients without well-known related risk factors may be the underlying pathogenesis of ED in young patients as in elderly one. Measurement of FMD, HOMA-IR can improve our ability to predict ED in young man.
VAScular ENDothelial FUNCTION MEASUREMENT and INSULIN RESISTANCE INDEX CONTRIBUTE TO THE PREDICTION OF ERECTILE DYSFUNCTION IN YOUNG MAN

Yao Fengjuan, Zhang Yan, Huang Yanping, Liu Donghong, Chen Yili, Lin Hong, Lu Kun, Fan Rui, Liu Yanqiu, Deng Chunhua and Zhang Yan

Heart 2012 98: E292
doi: 10.1136/heartjnl-2012-302920ad.9

Updated information and services can be found at:
http://heart.bmj.com/content/98/Suppl_2/E292.4

Email alerting service
These include:
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Topic Collections
Articles on similar topics can be found in the following collections
Hypertension (3006)
Metabolic disorders (1030)

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/