Abstract


Asymmetric dimethyl arginine levels correlate with cardiovascular risk factors in patients with erectile dysfunction.


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BACKGROUND: Erectile dysfunction is related to penile arterial endothelial nitric oxide production. Asymmetric dimethylarginine (ADMA) and E-selectin are often considered plasma markers of endothelial function.

OBJECTIVE: This study investigated the relationship between these plasma markers and cardiovascular risk factors in patients with erectile dysfunction.

METHODS AND RESULTS: Cardiovascular risk factors, ADMA and E-selectin were assessed in 45 patients with erectile dysfunction. Plasma markers showed associations with baseline risk factors. E-selectin levels showed an inverse relationship with age (p = 0.005) and statin therapy (p = 0.03) and a weak association with concomitant beta-blocker therapy (p = 0.05). Compared to these relatively weak associations with cardiovascular risk factors, ADMA levels showed strong associations with pulse pressure (p < 0.001), lack of smoking (p = 0.002) and lipoprotein (a) (p = 0.004) concentrations and weak associations with LDL-cholesterol (p = 0.02), and C-reactive protein levels (p = 0.04). ADMA levels correlated with E-selectin (partial r = 0.76; p < 0.001) after adjustment for lipoprotein (a), pulse pressure and smoking. No change in E-selectin or ADMA levels was seen after 70 days therapy with sildenafil and no relationship was found between either plasma marker and the acute pulse wave response to a single challenge dose of sildenafil.

CONCLUSION: ADMA levels correlate at baseline with some cardiovascular risk factors including inflammatory markers and lipoprotein (a) in patients with erectile dysfunction.

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