

Erectile dysfunction

Vascular vigilance required for people presenting with ED



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Given the observation that the penis is a vascular organ, it is not surprising that abnormalities in the vascular tree commonly manifest themselves in erectile dysfunction (ED) alongside heart disease.

Thus, vascular risk factors such as diabetes, hypertension and dyslipidaemia are commonly wrapped within this deadly intricate web and the most visible outcomes are those of the clinical correlates of atherosclerosis. Indeed, both clinical and angiographic links between ED and vascular disease through this vasculo-occlusive mechanism are well documented in men with and without diabetes. It is heartening to see that healthcare professionals are now becoming more versed with the notion of screening for established vascular disease and vascular risk factors in patients presenting with ED.

Cross-sectional studies and real life also tell us that at the time of presentation with ED, many patients may *not* have

clinical vascular disease elsewhere. We shouldn't however, breathe a sigh of relief and the paper by Bocchio et al (see right) supports this notion. We now have a wealth of evidence that shows before angiographic or clinical vasculopathy is present, it is possible to detect very early signs of those patients most destined to develop it. For instance, biochemical or biophysical markers of endothelial dysfunction appear to precede the development of atherosclerosis. In addition, increases in intimal medial thickness (IMT) of the carotid arteries are also associated with development of atherosclerosis.

In Bocchio et al's study, the authors elegantly demonstrate that increased IMT of the carotid arteries is an independent risk factor for severe ED in the absence of clinical atherosclerotic disease elsewhere. This should serve as a reminder that we should be continuously vigilant in patients with ED for the *future* development of vascular disease given their greater susceptibility as evidenced by increased carotid artery IMT.

THE JOURNAL OF UROLOGY



Carotid artery IMT and ED in men with VRFs

Readability	✓✓✓✓
Applicability to practice	✓✓✓✓✓
WOW! factor	✓✓✓✓

1 No studies have been carried out to determine any links between vascular damage and erectile dysfunction (ED) in men with no clinical atherosclerosis. This study aimed to determine such a link in men with or without vascular risk factors (VRFs).

2 Due to the manner in which nitric oxide acts to induce penile erections, an association between atherosclerosis and ED is expected.

3 A total of 270 men with ED were chosen to participate in the study based on medical history and levels of alcohol and recreational drug intake. Participants were split into one of three groups depending on varying levels of health.

4 This study demonstrated that men with ED but no clinical arteriosclerosis had carotid artery intimal medial thickening (IMT) that correlated with severity of ED.

5 The effect was still evident after controlling for smoking, drug regimens for ED, and treatment with statins; the full effect of statins on ED is still not known.

6 The investigators conclude that healthcare professionals may find it useful questioning men about ED who have VRFs, in order to select those who should undergo ultrasound evaluation of carotid arteries.

7 They also concluded that carotid artery IMT may allow recognition of men with ED who should correct VRFs to better their future risk of acute cardiovascular events.

Bocchio M, Scarpelli P, Necozione S et al (2005) Intimal medial thickening of common carotid arteries is a risk factor for severe erectile dysfunction in men with vascular risk factors but no clinical evidence of atherosclerosis. *The Journal of Urology* **173**: 526–9

THE JOURNAL OF UROLOGY



T-gel/sildenafil combination better for ED in hypogonadal patients

Readability	✓✓✓✓
Applicability to practice	✓✓✓✓✓
WOW! factor	✓✓✓

1 This study demonstrates that for erectile dysfunction (ED) in hypogonadal men in whom testosterone gel (T-gel) alone did not work, a T-gel and sildenafil combination proved to have a more beneficial effect.

2 The study group was made up of 49 men (mean age 60.7 years) with ED who participated for an

average of 20.2 months. Total and bioavailable testosterone and prostate-specific antigen was tested for, and sexual health was measured using the international index for ED and a global assessment questionnaire (GAQ).

3 Significant improvements in the erectile function (EF) and sexual desire domains were reported by 31 patients following testosterone treatment alone.

4 Seventeen men reported an EF of less than 26 or answered 'no' to the GAQ; this group received the T-gel/sildenafil combination, after which all graded their EF greater than 26 and gave a positive response to the GAQ.

Greenstein A, Mabeesh NJ, Sofer M (2005) Does sildenafil combined with testosterone gel improve erectile dysfunction in hypogonadal men in whom testosterone supplement therapy alone failed? *The Journal of Urology* **173**: 530–2

‘Extended-release and standard doxazosin significantly increased sexual function in men with concomitant BPH and ED at baseline.’

BRITISH JOURNAL OF UROLOGY

Extended-release and standard doxazosin in patients with BPH and sexual dysfunction

Readability	✓✓✓✓
Applicability to practice	✓✓✓✓
WOW! factor	✓✓✓

1 This is a retrospective study of the sexual health of patients with erectile dysfunction (ED) and comorbid benign prostatic hyperplasia (BPH) which looked at the beneficial effects of extended-release and standard doxazosin.

2 Changes from baseline sexual function (including ED) after doxazosin treatment were determined from responses to the international index for erectile dysfunction (IIEF) questionnaire.

3 The investigators found that extended-release doxazosin and standard doxazosin significantly increased sexual function in men with concomitant BPH and ED at baseline.

Kirby RS, O’Leary MP, Carson C (2005) Efficacy of extended-release doxazosin and doxazosin standard in patients with concomitant benign prostatic hyperplasia and sexual dysfunction. *British Journal of Urology* **95**: 103–9

BRITISH JOURNAL OF UROLOGY

Does smoking cessation benefit ED?

Readability	✓✓✓✓
Applicability to practice	✓✓✓✓
WOW! factor	✓✓✓✓

1 Pourmand et al assessed if smoking cessation improved erectile dysfunction (ED).

2 The study comprised smokers who requested nicotine replacement therapy (NRT) and complained of ED. This group was evaluated for hypertension, dyslipidaemia, diabetes, psychiatric disorders and drug history.

‘Age, anaemia and presence of diabetes/PN are major factors associated with ED in renal transplantation.’

INTERNATIONAL JOURNAL OF IMPOTENCY RESEARCH

Peyronie’s disease diagnosis with ED

Readability	✓✓✓✓
Applicability to practice	✓✓✓✓
WOW! factor	✓✓✓

1 This study aimed to ascertain the frequency of Peyronie’s disease (PD) diagnosed during erectile dysfunction (ED) evaluation and to note similarities with patients with classic symptoms of PD.

2 A total of 448 patients were evaluated during a 10-year period. These were split into two groups: group one presented with ED only and did not know of their penile deformity; group 2 consisted of those with typical features of the disease.

3 The presence of comorbidities was determined in both groups. Diabetes was the main comorbidity in group 1 (40 %).

4 The investigators analysed the frequency and characteristics of incidentally diagnosed PD inpatients who presented with only ED. The data imply that the presence of PD should always be considered in older patients with diabetes.

Kadioglu A, Oktar T, Kendirci M et al (2004) Incidentally diagnosed Peyronie’s disease in men presenting with erectile dysfunction. *International Journal of Impotence Research* **16**: 540–3

Those with none of these risk factors had their ED graded using the five-item version of the international index for erectile dysfunction; this was repeated at a 1-year follow-up.

3 Those that stopped smoking after NRT had their ED compared to those who did not before and after the follow-up.

4 The investigators found a strong relationship between intensity of smoking and degree of ED. Stopping smoking improved ED considerably in most participants.

Pourmand G, Alidaee MR, Rasuli S et al (2004) Do cigarette smokers with erectile dysfunction benefit from stopping?: a prospective study. *British Journal of Urology* **94**: 1310–3

INTERNATIONAL JOURNAL OF IMPOTENCY RESEARCH

ED after renal transplantation

Readability	✓✓✓✓
Applicability to practice	✓✓✓
WOW! factor	✓✓✓

1 The incidence of erectile dysfunction (ED) in men who have undergone renal transplantation varies between 20 and 60 %. Some studies have shown that approximately 85 % of stable renal transplantees regained their sexual activity post-transplantation. Others have shown that 48–56 % of renal transplant recipients (RTRs) continue to present with ED.

2 This study surveyed male RTRs to ascertain the impact that renal transplantation had on erectile function and to detail the causes of ED post-transplant.

3 Four-hundred male RTRs were investigated, of whom 35.8 % presented with ED. Post-transplant erectile function compared to pre-transplant ED was improved, worsened or remained the same in 44, 12.5 and 43.5 %, respectively.

4 This study also showed that there is a significant deleterious effect of diabetes on erectile function, the probability of ED being 3 times higher in patients with diabetes compared to those without.

5 Peripheral neuropathy (PN) that occurs in RTRs could be due to diabetes or a residual effect of uraemia. Fourteen RTRs in this study presented with PN, of whom 78 % showed varying degrees of ED. Regression analysis showed that PN has a strong relationship with ED.

6 The pathogenesis of ED in RTRs is multifactorial. This study shows that age, anaemia and presence of diabetes/PN are major factors associated with ED in renal transplantation.

El-Bahnasawy MS, El-Assmy A, El-Sawy E et al (2004) Critical evaluation of the factors influencing erectile function after renal transplantation. *International Journal of Impotence Research* **16**: 521–6