ERECTILE DYSFUNCTION AND HEART DISEASE 1: OVERVIEW

AUTHOR Bev Cox, MSc, RGN, is nurse practitioner, Walsgrave Health Centre, Coventry, and clinical lecturer, Education for Health, Warwick.

ABSTRACT Cox, B. (2008) Erectile dysfunction and heart disease 1: overview. Nursing Times; 104: 46, 26–27. This two-part unit discusses the link between erectile dysfunction (ED) and cardiovascular disease (CVD) and examines how to reduce the incidence of both conditions in men at risk. This first part outlines the association between ED and risk of CVD, and offers advice on how nurses can broach the sensitive subject of ED with patients.

INTRODUCTION
Erectile dysfunction is the inability to maintain an erection that is adequate for penetration and successful sexual intercourse. It is a relatively common condition and many men will experience an episode of ED at some time in their lives.

Recent episodes of ED can have a significantly negative effect on relationships and quality of life, and treatment should therefore be considered for every man who seeks help for the condition. However, equally important as its effect on relationships and quality of life is the clear link between ED and subsequent increased risk of developing overt cardiovascular disease in the years to follow.

CARDIOVASCULAR HEALTH
The penis has been called the barometer of cardiovascular health, as its blood vessels can be affected by vascular damage in the same way as the heart (coronary heart disease), the brain (cerebrovascular disease) and the legs (peripheral arterial disease).

It is thought that vascular damage registers earlier in the penile vessels because they are smaller than the coronary, carotid or peripheral arteries. This means any history of ED may be an early warning sign of vascular damage and the potential for a life-threatening event such as a stroke or heart attack to occur in the future.

Erectile dysfunction is linked to another ‘ED’ – endothelial dysfunction, which occurs when the endothelial cells lining the blood vessels do not function normally. These cells are involved in clotting, platelet adhesion, immune function and fluid and electrolyte balance. Endothelial dysfunction can result from disease processes such as hypertension, dyslipidaemia and diabetes and from lifestyle factors such as smoking.

A key feature of endothelial dysfunction is the way in which it affects the ability of arteries to dilate and this is one way in which endothelial dysfunction can lead to erectile dysfunction.

Müller and Mulhall (2006) reported that risk factors such as obesity, hypertension, dyslipidaemia, glucose intolerance and insulin resistance are potential threats to the penile endothelium and smooth muscle tissue, leading to functional and structural changes. They argued that these important pathophysiological factors are ‘the foundation for the strong link’ between erectile dysfunction and CVD.

Endothelial dysfunction is thought to be a key event in the development of atherosclerosis and the condition appears to precede overt cardiovascular disease, such as stroke and myocardial infarction, by many years.

Müller and Mulhall (2006) said that recent literature supports the link between metabolic syndrome and erectile dysfunction, and highlights the former as a potential risk factor for developing the latter.

LEARNING OBJECTIVES
1. Understand the link between erectile dysfunction and cardiovascular disease.
2. Know possible ways of broaching the issue of ED with male patients.

RESEARCH EVIDENCE
Recent research by Hodges et al (2007) has identified that erectile dysfunction precedes cardiovascular events by five years on average.

This gives practitioners a five-year window of opportunity to reduce cardiovascular events, simply by identifying men who have a history of ED.

These findings echo those of a previous study by Thompson et al (2005), which showed men with a history of ED had a 40% greater risk of subsequently developing CVD over the seven-year course of the study than those with normal erectile function. Those who were able to achieve normal erections at the start of the study but went on to develop ED also had a 25% higher risk of cardiovascular events by the end of the seven years.

Vascular disease has been identified as a leading cause of ED (Billups, 2005) so treatment aimed at minimising known modifiable risk factors for vascular disease should reduce both the risk of ED and the risk of a subsequent cardiovascular event.

The risk factors themselves are well known from research such as the Framingham study (Wilson et al, 1998) and include:

- Smoking history;
- Hypertension;
- Dyslipidaemia;
- Obesity;
- Diabetes.

THE ‘ALLOW’ STEPS
These steps are as follows:

- Ask the patient about his sexual function;
- Legitimise any issues the patient raises and reassure him that sexual issues are a valid clinical concern;
- Recognise Limitations, including your own, such as personal discomfort or lack of resources;
- Open up the issue for discussion, with the option of referral to another healthcare professional;
- Work with the patient to develop a treatment plan.

Dyslipidaemia;
Abnormal glycaemic control;
Central obesity.

Advancing age is also a strong predictor of both ED and CVD.

In the recent study by Hodges et al (2007), 66% of men attending CVD rehabilitation groups reported an average of around five years of symptomatic ED before their cardiovascular event, whereas only 37% of the age-matched control group suffered ED. In both groups, about half had discussed their ED with a healthcare professional. In men who went on to suffer a cardiovascular event, the ED became worse.

While there is still some debate over how strong ED is as a predictor of cardiovascular events (Ströberg et al, 2005), some research has established a clear association. Schouten et al (2008) found that a single question on erectile rigidity proved to be a predictor for the combined outcome of acute MI, stroke and sudden death, independent of risk factors used in the Framingham risk profile.

Indeed, Hackett (2008) argued that the link between ED and risk of heart disease is being ignored by clinicians. In a letter in the British Medical Journal, he reiterated the link between the two conditions, and said that ED in type 2 diabetes has been shown to be a better predictor of risk of heart disease than high blood pressure or high cholesterol.

All this evidence indicates that healthcare professionals need to identify ED in otherwise asymptomatic men at risk of a future cardiovascular event, followed by uncompromising and aggressive treatment of risk factors, as suggested by the Joint British Societies’ (2005) publication to identify people at high risk.

BROACHING ED WITH PATIENTS

In view of the fact that many men with ED do not discuss their problem with healthcare professionals, practitioners should make a habit of routinely and proactively introducing the subject into a range of consultations.

One of the most common concerns for healthcare professionals dealing with ED is broaching the subject. Nurses often say they feel the issue is taboo. It can be especially difficult for some nurses to discuss the subject with older men as people still feel that sex in the elderly population is a sensitive subject.

Despite this, studies show that patients appreciate being asked about sexual health problems and feel it is appropriate for healthcare professionals to do so.

In a study by Perelman et al (2005), fewer than half – 43% – of all men said they did not feel comfortable talking to their doctors about ED, and as few as 9% said they thought their doctors were uncomfortable discussing the issue.

Read et al (1997) showed that 35% of men, when asked directly via a questionnaire, described having some form of sexual dysfunction; 17% had ED. Seventy per cent were happy to be asked about sexual problems but only 2% of notes contained information about sexual function.

Kirby (2003) reinforced the importance of nurses’ role in identifying and managing ED and CVD.

One option for facilitating discussion is to use the ALLOW algorithm (Hatzichristou et al, 2004), which may help clinicians open up discussions around sexual function (see box on opposite page).

It can be easier for nurses to initiate discussions around ED when they are already in the person’s ‘space’, for instance when taking observations such as blood pressure and pulse or when undertaking waist measurements.

Another method for introducing the subject is to say ‘Some men who smoke/ have high blood pressure/have raised cholesterol have problems with getting and keeping an erection; is that a problem for you?’ This will highlight those individuals who have ED and are at risk of CVD but who are unable or unwilling to mention this to members of the healthcare team.

There is also a calculator that can be used to assess a person’s risk of developing ED. It can be downloaded from www.allabouted.com/english/conversation/ED_Risk_Calculator.pdf

This may allow further assessment and discussion of both ED and CVD risk after explaining to patients how common ED is. ■

The full reference list for this unit is available in Portfolio Pages at nursingtimes.net