

# Treatment of erectile dysfunction: a case study approach

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## Introduction

It is well documented that there is a high incidence of erectile dysfunction in men with diabetes. At least 50% of men with diabetes of 40–70 years develop erectile dysfunction at some stage (Kelleher, 1993). This article will look at the aetiology of erectile dysfunction and give examples of three case studies, demonstrating how differently erectile dysfunction can present and be treated, both from the healthcare professional and patient perspective.

**E**rectile dysfunction means the inability to obtain or maintain an erection long enough to have penetrative sexual activity. Men with diabetes have an increased risk of developing erectile dysfunction compared with men without diabetes. The prevalence of erectile dysfunction combined with diabetes is up to 70%. Nerve damage can occur as a result of the high concentration of blood glucose associated with diabetes. Diabetes is the single most common systemic disorder associated with erectile dysfunction because it has both vascular and neurological components (Kelleher, 1993). Erectile dysfunction may be associated with poor glycaemic control, and therefore the chance of spontaneous improvement of erectile function in men with diabetes is small (Eardley and Sethia, 2003).

### Erectile dysfunction in diabetes

Erectile dysfunction in diabetes has many potential causes, including the specific diabetes complications of neuropathy and vascular disease, as well as conditions commonly associated with diabetes, such as hypertension, use of various medications or psychogenic factors (Table 1; Mills, 2003).

There is abundant evidence that sexual function declines with increasing age even though interest in sexual activity may remain. The Massachusetts Male Aging Study is probably one of the best population based survey of the frequency

of erectile function. Significant erectile failure in men with diabetes was reported as high as 59% of all men with diabetes over 18 years (Feldman et al, 1994).

Previous data from studies have recently been criticised for being obtained from a very select population. Although the data were derived from interview, the patients were all volunteers; many were either in prison or had spent a long time away from their partners and, indeed, they included relatively few men over the age of 55 years (Eardley, 2003).

It is well established that erectile dysfunction is a serious condition that becomes more common as men age. Many older men, however, report that they are never questioned regarding their sexual function even though older men can still have satisfactory erectile capacity and enjoy satisfying sexual relationships. Professionals have been shown not to discuss erectile dysfunction with patients even in the presence of multiple risk factors (Sadovsky, 2003).

The presence of erectile dysfunction can reveal as yet undiscovered neurovascular and psychological disorders including, hypertension, hyperlipidaemia, depression and anxiety (Sadovsky, 2003).

Erectile dysfunction is one complication of diabetes for which treatment is rationed. Despite considerable public debate there has been no formal assessment of the views of patients on the priority of treating erectile dysfunction.

## ARTICLE POINTS

**1** There is a high incidence of erectile dysfunction in men with diabetes.

**2** Erectile dysfunction in diabetes has many potential causes.

**3** Sex is an important part of an intimate relationship.

**4** Treatment options should be discussed and considered on an individual basis.

**5** Doctors and nurses have a professional responsibility to patients in providing up to date information, advice and support.

## KEY WORDS

- Erectile dysfunction
- Aetiology
- Sexual function
- Case studies
- Treatment

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**PAGE POINTS**

**1** Not enough men and their partners understand that one of the most common causes of erectile dysfunction is diabetes and, more importantly, that something can be done about it.

**2** Vacuum therapy devices may also be useful for those who have tried drug therapy and it did not work.

**3** The most important feature of this form of treatment for erectile dysfunction is that vacuum therapy devices are particularly suitable for long-term relationships in which both partners can be counselled on their proper use and encouraged to use the device as part of foreplay.

**Table 1. Organic causes of erectile dysfunction**

Vascular	Cardiovascular disease Hypertension Arterio-occlusive disease Pelvic trauma
Neurological	Peripheral neuropathy Autonomic neuropathy Spinal and pelvic trauma Multiple sclerosis
Endocrinological	Hypogonadism Cushing's disease Hypopituitarism Hyperprolactinaemia Thyroid dysfunction
Abnormal anatomy	Penile curvature Hypospadias Micropenis Peyronie's disease Penile fibrosis Phimosis
Iatrogenic	Pelvic surgery Aorto-iliac surgery Renal transplantation Prostatectomy Drugs
Miscellaneous	Smoking Renal disease Hepatic disease

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Sex is an important part of an intimate and happy relationship for most couples whether in younger or later life. A disappointing or unfulfilling sex life can often damage a relationship, leaving either partner feeling alone, insecure and often embarrassed to seek help and/or to start a new relationship.

Not enough men and their partners understand that one of the most common causes of erectile dysfunction is diabetes and, more importantly, that something can be done about it.

This article will look at three different patient case studies, concentrating on the aetiology, treatment options and the views of the patient.

**Case study one**

Philip is a 64-year-old man who has had type 2 diabetes for 14 years. He has had erectile dysfunction for 8 years.

He has various complications: neuropathy, a previous myocardial infarction and peripheral vascular disease. He could have tried a number of treatment options, but already takes a total of 20 tablets a day and feels that he really does not want any further chemical interventions.

**Vacuum therapy devices**

The recent addition to family practitioner form number 10 (FP10), which means that vacuum therapy devices can be prescribed on the NHS to treat men with erectile dysfunction, brings new hope to some men who, for whatever reason, either do not want, or cannot have other forms of treatment. Vacuum therapy devices may also be useful for those who have tried drug therapy and it did not work.

The most important feature of this form of treatment for erectile dysfunction is that vacuum therapy devices are particularly



Figure 1. Discussing the treatment options with a couple who have decided to try an oral preparation, such as vardenafil or tadalafil



Figure 2. Explaining the use of intracavernosal injections to a patient with type 2 diabetes during a patient consultation

suitable for long-term relationships in which both partners can be counselled on their proper use and encouraged to use the device as part of foreplay.

For those patients who could benefit from the use of vacuum devices, it should be welcoming encouragement that these are now available on prescription.

Philip tried the vacuum pump and found that, because he had a good insight into his diabetes and a very close relationship with his partner, the pump was the right treatment choice for him.

### Case study two

Troy is 42-years-old and has had type 1 diabetes for 20 years. About 2 years ago he began to develop difficulties keeping his erections. It was a gradual loss of sensitivity and difficulty getting an erection. He kept making excuses for the problem, such as stress and tiredness. It took him several months to finally ask for advice.

#### Oral treatments

He was completely unaware that his condition was related to his diabetes. Troy's main complication was neuropathy. After discussions regarding treatment options, it

was appropriate to try an oral preparation. There are several oral drug treatments available at present; sildenafil, taken approximately 1h prior to anticipated sexual activity; tadalafil, a slightly longer lasting, longer duration preparation that can allow for greater spontaneity and less anxiety. Although, similar to sildenafil it cannot be taken by patients taking nitrates, patients with a recent myocardial infarction or stroke. The third drug in this category is vardenafil, again the same caution should be applied as with the others, although there is some evidence that this preparation may have slightly less side-effects, although the onset and duration of action might be expected to be similar to sildenafil. *Figure 1* shows a consultation with a patient considering oral treatment options.

Troy had many relationships with a number of women, and did not want to disclose any details of his condition with any of his partners. Using an oral preparation meant that he did not feel that he had to explain anything and therefore took unnecessary pressure off him, which in most situations causes further psychological problems, which can contribute to the erectile dysfunction.

### Case study three

Christian is a 58-year-old man who has had diabetes for 10 years and developed erectile dysfunction over 6 years ago. Over the years he has seen a number of professionals regarding his problem and had come to the decision that there was 'nothing left to try'. It was only because his wife read an article in a woman's magazine and asked him to see some a healthcare professional again regarding his erections.

#### Intracavernosal injections

Christian had already tried a number of treatments, such as oral medications that had not been successful, due to the extent of the organic problems. Therefore, he decided to try intracavernosal injections. Prostaglandin E1 is the most commonly used single agent for intracorporal injection. It has achieved this dominance because of its efficacy and safety, which are superior to those of all other single agents (Eardley, 2003).

For intracorporal injection therapy to be effective in treating erectile dysfunction,

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1 There are several oral drug treatments available at present; sildenafil, taken approximately 1h prior to anticipated sexual activity; tadalafil, a slightly longer lasting, longer duration preparation that can allow for greater spontaneity and less anxiety.

2 Tadalafil cannot be taken by patients taking nitrates, patients with a recent myocardial infarction or stroke.

3 There is evidence that vardenafil may have slightly less side-effects, although the onset and duration of action might be expected to be similar to sildenafil.

4 For intracorporal injection therapy to be effective in treating erectile dysfunction patients must be taught to inject themselves safely and effectively at home, and for the appropriate dose to be injected.

there are two practical requirements. Firstly, patients must be taught to inject themselves safely and effectively at home, and second, it is necessary to determine the appropriate dose to be injected. Figure 2 shows a patient consultation in which these issues were discussed.

Once Christian was well established with the injections and his technique was satisfactory he could try them out at home. Unfortunately for Christian, he actually did not want a successful outcome, but felt under pressure from his wife to do so. This is a common situation with couples where one wants something done and the other does not.

Where possible, couples should be welcomed to each consultation and should, if possible be offered psychosexual counselling along with any other intervention which is prescribed. This can be useful in helping couples to re-establish a sexual relationship when there has been a lengthy period without sexual activity because of the erectile dysfunction.

Success rates from alprostadil are good in men with diabetes, although the long-term discontinuation rate is high, which appears to stem from loss of interest (Weiss, 1994).

### Patient perceptions of erectile dysfunction

A study by Rance et al (2003) looked at patients' perceptions of the relative importance of treating erectile dysfunction in men with diabetes in comparison with treatments for other diabetes complication and common medical conditions.

Rance found that men with diabetes and erectile dysfunction were prepared to pay more for treatment of their condition than all other complications except blindness and renal failure. He went on to conclude that these men believed that erectile dysfunction had a major impact on quality of life and is as important to treat as many other complications associated with diabetes.

The successful management of erectile dysfunction has been made easier by the development of oral therapy, and additional potential benefits including improvement of quality of life of both the patient and his partner and a decrease in the symptoms of depression. A survey by the Impotence Association (1997) found symptoms of

lowered self-esteem and depression in 62% of men, 40% expressed concern with either new or established relationships and 21% blamed it for the break up of a relationship (Craig, 1997).

### Quality of life issues

Erectile dysfunction affects many men, and can lead to a loss of confidence and sense of inadequacy in some people. The overall impact of erectile dysfunction on the quality of life of a patient and his partner should not be underestimated. It is not necessarily a normal consequence of the ageing process, but may be a manifestation of diabetes or the result of the treatment for a complication of diabetes.

It should not be forgotten that erectile dysfunction affects not only men, but also their partners. The partner may believe that erectile dysfunction indicates either a lack of affection or the transfer of sexual relations elsewhere. Unwillingness to discuss the problem openly or to seek help serves to compound the problem.

Men with erectile dysfunction should be encouraged to seek professional help, and clinicians must be sensitive to the embarrassment and previous discouragement that often underlies some patients' apparent resistance to seek appropriate and often effective treatment. For many patients and their partners, an accurate diagnosis and a sympathetic explanation of the cause are sufficient to help them face up to the problem and begin to overcome it.

### Professional issues

Doctors and nurses have a professional responsibility to patients in providing the appropriate information, advice and support on all aspects of diabetes. This includes erectile dysfunction, and where the professional does not feel able to approach this subject her or himself he should refer the patient onto a more appropriate person. In an ideal world, men with erectile dysfunction and diabetes would receive integrated care from a diabetologist, a specialist in psychosexual disorders and in some cases an urologist. It is imperative to ensure that patients do not get neglected as they often have been in the past. ■

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