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Reminder of important clinical lesson

Erectile dysfunction as an initial presentation of diabetes discovered by taking sexual history

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Summary

This case, as an important clinical reminder, will illustrate improvement of a patient's quality of life and care in chronic diseases through sexual history taking in the primary care setting. The case report also includes recommended investigation for erectile dysfunction (ED). Family physicians need to maintain awareness of sexual dysfunction as part of the history taking during a general medical investigation to avoid leaving sexual issues untreated including ED. If left untreated, ED can lead to psychological trauma, frustration and lower self-esteem. Additionally, ED is associated with major comorbidities such as cardiovascular disease, hypertension, dyslipidaemia, psychological conditions and diabetes mellitus. Thus, appropriately identifying this medical condition may lead prompt diagnoses and treatment of other major diseases.

BACKGROUND

Proper sexual function is an important component of peoples' quality of life. However, hesitance both by physicians to address and by patients to report sexual issues hinders appropriate diagnosis and treatment.[1 2] One of the most common sexual issues is erectile dysfunction (ED) and its negative influence on quality of life is well documented.[3] It has also been studied that ED in patients with diabetes mellitus (DM) is more prevalent than in patients without DM.[4] Since ED is associated with multiple common conditions, for example, cardiovascular disease, hypertension, dyslipidaemia, metabolic syndrome and smoking, taking a sexual history which includes asking about ED is important during patient encounters.[5] We will describe a case where taking a sexual history at a general medical checkup enabled a family physician to detect ED which led to the prompt detection and treatment of DM and dyslipidaemia. The case report also discusses a recommended investigation for ED.

CASE PRESENTATION

A 41-year-old previously healthy African–American man presented to our family health centre (FHC) for a general medical checkup. The patient had not seen any physicians for a few years. He did not report any symptoms or complaints in the present illness including symptoms of diabetes (eg, polydipsia, polyuria, weight change or lethargy). He was not on any medications. He denied psychiatric history or recent stress. His medical, surgical and family histories were unremarkable. The patient did not smoke, consume alcohol or use recreational drugs. He lived by himself and had a female sexual partner. While being asked about his social history, he admitted having an issue with ED lasting for the last 3 months. Then, we discussed more sexual history. He reported relatively early ejaculation for many years without any recent changes. He denied loss of libido. Physical exam was unremarkable. Lab work was ordered at the initial visit. The lab result showed serum fasting glucose of 21.8 mmol/l and was high enough to warrant the diagnosis of DM. He did not have hypothyroidism or low serum testosterone. After diagnosing DM, I ordered additional labs (HbA1c, lipid panel and urine) and referred him for an ophthalmological exam as well as to a diabetic education service. Additional labs showed a high serum low-density lipoprotein cholesterol (LDL; 5.69 mmol/l), total cholesterol (7.99 mmol/l) and HbA1c (15.4%). However, there was no indication of end organ damage in the kidney. The patient has since been followed for the sexual and medical issues with treatment at our FHC. (All the lab results are shown in table 1.)

TREATMENT

The patient started to take metformin 500 mg twice daily and simvastatin 10 mg daily after the diagnosis. He was also provided flu and pneumococcal vaccination.

OUTCOME AND FOLLOW-UP

Three months after the treatment with metformin and simvastatin, the patient perceived significant improvement in ED. At that visit, his HbA1c and low-density lipoprotein cholesterol were 8.9% and 2.74 mmol/l, respectively. He was also seen by an ophthalmologist for screening diabetic retinopathy and by a diabetic education team. He regularly saw his family physician for the continuity of diabetic care at the FHC.

DISCUSSION

Many primary care physicians hesitate to address patients' sexual issue and patients tend not to report them to their physicians. Thus, many sexual issues remain undiagnosed and untreated. ED, for example, is often underdiagnosed and remains untreated[6] due to patients' social, cultural, psychological barriers and their unwillingness to report, and physicians' lack of awareness of sexual issues. Nicolosi *et al* reported that only 4% to 35% of patients with ED discussed the issue with their physicians.[1] When the issue is not well managed, it can lead to psychological trauma, frustration

Table 1 Laboratory data at the initial visit*

Serum	
Glucose	21.8 (3.9–5.5) mmol/l
Urea nitrogen	3.6 (2.9–9.3) mmol/l
Creatinine	79.6 (35.4–123.8) mmol/l
Sodium	134.0 (136.0–146.0) mmol/l
Potassium	4.1 (3.5–5.0) mmol/l
Chloride	98.0 (98.0–107.0) mmol/l
Carbon dioxide	27.0 (21–31) mmol/l
Total testosterone	14.0 (8.7–38.1) nmol/l
Free testosterone	323.5 (121.3–537.4) pmol/l
TSH	2.01 (0.30–5.00) mIU/l
Hb A1c	15.4 (4.3–6.1)%
Total cholesterol	7.99 (<5.17) mmol/l
Triglyceride	1.01 (<1.69) mmol/l
LDL-C	5.69 (<3.34) mmol/l
HDL-C	1.84 (>1.53) mmol/l
Urine	
Colour	Yellow
Character	Clear
Gravity	1.041 (1.005–1.030)
pH	6.5 (5.0–8.0)
Leucocyte esterase	Negative
Protein	Negative
Glucose	3+
Ketone	1+
Urobilinogen	Normal
Blood	Negative
WBCs	1 to 5 (0–5)
RBCs	None (0–3)
Epithelial cells	1 to 5 (none)
Bacteria	None (none)
Microalbumin	3 (0–20) mg/dl

*Values in parentheses show normal laboratory range for both serum and urinalysis.
HbA1c, haemoglobin A1c; HDL-C, high-density lipoprotein cholesterol; LDL-C, low-density lipoprotein cholesterol; RBC, red blood cells; TSH, thyroid stimulating hormone; WBCs, white blood cells.

and may exacerbate the underlying problem to lower self-esteem.[7] Therefore, we need to maintain awareness of sexual dysfunction as part of our history taking during general medical investigation. Plantano *et al* suggested relevant continuing education for physicians to routinely inquire about sexual issues.[8]

ED is common and one of the significant issues in primary care. Prevalence rate of ED was reported 15%, 23%, 39% and 71% for age 40 to 49, 50 to 59, 60 to 69 and 70 to 79 years, respectively.[9] ED is more common among patients with diabetis as exemplified in this case. In epidemiological studies, ED has been reported to occur in more than 50% of men with DM worldwide.[10] The OR of having ED for men with DM is found 1.9 to 4 times higher than men without DM.[4] Despite the strong evidence of association between ED and DM, there is little data on ED being the presenting symptom. Only one study has reported ED as an initial presentation in 12% of patients subsequently diagnosed with DM.[11]

In this case, taking a comprehensive history including a sexual history during the encounter led to two important outcomes. The first was to discover ED which potentially affected his quality of life. The second was to help discover comorbidities associated with ED. For the investigation of ED the European Association of Urology Guidelines recommend reviewing current medications and psychogenic disorders causing ED, risk factors for ED (diabetes, prostatic disease, hypothyroidism, metabolic syndrome or neurological disorders) and lifestyle issues (inactivity, obesity, smoking, alcohol and recreational drug use).[12] In the present case, DM and dyslipidaemia were found. With the thorough investigation as outlined above including history, physical exam and labs we ruled out other aetiologies of this patient's ED. Without taking a sexual history in this apparently asymptomatic patient the diagnosis of DM and dyslipidaemia would have been delayed. Evidence-based and cost-effective guidelines such as the United States Preventive Services Task Force recommend screening for detecting dyslipidaemia for male in this patient's age, but not for DM unless blood pressure is 135/80 mm Hg or higher. DM in this non-obese male without hypertension would remain undetected if sexual history was not performed. While screening with blood work is important, value of appropriate history taking should be emphasised.

The newly diagnosed DM and hyperlipidaemia has been treated in this case. Three months later, with medications and lifestyle modification the patient's total cholesterol, LDL and HbA1c were 4.73 mmol/l, 2.74 mmol/l and 8.9%, respectively. The patient also reported significant improvement in his ability to have erections. The patient continues to have care for further control of diabetes and follow-up with his target HbA1c and LDL less than 7.0% and 2.59 mmol/L, respectively.

In conclusion, the case sheds important light on our role as primary care providers. We are responsible for patients' whole care so that we can offer appropriate options that may improve their quality of life. This includes addressing sexual dysfunction. It is important for primary care providers to keep in mind that reporting ED by patient may be hindered by various barriers. We need to maintain awareness of sexual dysfunction as part of our history taking during a general medical checkup. If a sexual history is not included, we may miss identifying sexual dysfunction and thus an opportunity to improve a patient's quality of life. Additionally, the case provides a few clinically important messages. First, ED is associated with major comorbidities (eg, cardiovascular disease, hypertension, dyslipidaemia, psychological conditions and DM (as seen in this case)). These comorbidities should be identified and treated appropriately in the primary care setting. Second, ED is not considered a common presenting symptom for DM, but this case is a reminder that it does occur.

Learning points

- Family physicians need to maintain awareness of sexual dysfunction as part of the history taking during general medical checkup because reporting the symptom by patient may be hindered by various barriers.
- ED is associated with major comorbidities (eg, cardiovascular disease, hypertension, dyslipidaemia, psychological conditions and diabetes).
- Erectile dysfunction may not be considered a common presenting symptom for diabetes, but it does occur.

Competing interests None.

Patient consent Obtained.

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