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A Survey of Patient Experience in a Joint Urology-Diabetes Clinic

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Abstract

Aim: Erectile Dysfunction (ED) and Lower Urinary Tract Symptoms (LUTS) are common in men with diabetes. A joint clinic was developed with urology and diabetes teams to comprehensively address the complex needs of this population and a survey was conducted to evaluate patient feedback, using Patient Reported Outcome Measures (PROM).

Methods: Twenty-two patients attending this monthly clinic over 6 months prospectively completed a 7-question survey on their experience. Data describing patient characteristics and their diabetes management was additionally collected.

Results: Patients mean age was 59 years (SD (Standard Deviation) =10 years) and mean duration of diabetes was 14.5 years (SD=7 years). 77% (17/22) of patients had type 2 diabetes; 65% of them (11/ 17) were treated with combination therapy including insulin and oral agents. Mean HbA1c was 81 mmol/mol (SD=24mmo/mol) or units 9.5 % (SD=2.2%). 50% (11/22) suffered from albuminuria or proteinuria and 55% (12/22) had retinopathy. 10% (2/22) attended the clinic with LUTS and 90% (20/22) of patients presented with both ED and LUTS.

Patients graded satisfaction regarding management of their ED/LUTS in the joint clinic at 9.8/10. Active involvement in making treatment decisions and being informed about treatment options were both graded as 9.6/10. Adequacy of time to discuss concerns was graded at 9.2/10. Overall, 88% (19/22) of patients were extremely likely to recommend this service to friends.

Conclusions: Our patients gave high treatment satisfaction rates and positively embraced the joint Urology-Diabetes clinic. This highlights the importance of clear communication and coordinated care. Patients attending this clinic have complex diabetes of long duration, with high incidence of microvascular complications. Clinicians also benefit immensely from this joint, shared care approach.

Introduction

Diabetes is a multisystem disease and often leads to complications with significant impact on the quality of life. Impaired sexuality due to Erectile Dysfunction (ED) is common among men with diabetes and 50% to 75% of men suffering from diabetes will experience ED over the course of their lifetime [1]. It is important to address ED in this population as sexual dysfunction is often overlooked by healthcare professionals. ED can cause low self-esteem, relationship difficulties and depression [2]. It is also evident from recent studies that irrespective of diabetes, LUTS and ED co-exist in a significant majority of middle-aged men [3,4] along with other significant co-morbidities such as hypertension, hyperlipidemia and cardiovascular disease [5]. Furthermore, worsening LUTS have been shown to correlate with severe ED and a joint specialist clinic would be essential to comprehensively address these conditions [6,7].

Four leading theories have been developed to explain the link between ED and LUTS [3,8] and in the context of diabetes these links become clearer. Firstly, Nitric Oxide (NO) synthesis by the prostate is reduced in men with diabetes due to impaired metabolic profile. As a result, prostatic tone increases, and voiding becomes dysfunctional. The second theory involves the upregulation of the Rho-kinase pathway due to declining levels of NO. Consequently, penile smooth muscle fails to relax and causes ED

and bladder outflow obstruction. Thirdly autonomic dysfunction is closely associated with diabetes and the metabolic syndrome. Hyperactivity of the autonomic system and increased sympathetic tone stimulates prostatic growth and results in ED. Finally, diabetes and its metabolic complications such as hypertension and dyslipidaemia are common risk factors for pelvic ischemia. Diffuse atherosclerosis of the prostate, penis and bladder can lead to ED as well as LUTS. The strong association between LUTS and ED [9,10] may explain why inhibition of Phosphodiesterase Iso-Enzyme type 5 (PDE5) has a critical role in management of both these symptoms [10,11].

LUTS are best addressed in tandem with management of ED, as they represent an independent risk factor for ED. We therefore set up a joint Urology- Diabetes clinic in North London to meet the clinical needs of a diverse population with diabetes, ED and LUTS. A prospective survey was conducted with the aim to measure patient experience in our clinic against NICE quality standards [12] and potentially improve therapeutic outcomes in this cohort of men.

Methods

Patients participating in our survey were referred from primary care and secondary care. They were triaged into the joint clinic, which is run once a month by a Consultant Urologist and a Consultant Diabetologist.

The Diabetologist led the consultation with emphasis on diabetes management and complications, including macrovascular (diabetic foot or cardiovascular disease) and microvascular disease (peripheral neuropathy, retinopathy, albuminuria or proteinuria). Advice was given on titration of medications to improve blood glucose, lipids and blood pressure control. Diabetes self-management, optimal glycemic control according to personal targets and lifestyle modifications were encouraged. The discussion also focused on motivating patients to lose weight, exercise and stop smoking when appropriate.

The Urologist performed a comprehensive andrological, urological and psychosexual assessment, concentrating on relationship history, performance anxiety and other contributing physical or psychological factors. Clinical examination included genital examination and Digital Rectal Examination (DRE). The Urologist and Diabetologist discussed openly with each patient the link between diabetes, ED and LUTS. Patients had tests to assess their metabolic profile and overall diabetes control (HbA1c, lipid profile, renal function, urine albumin or protein to creatinine ratio). Additional tests were requested to exclude endocrine causes of ED (testosterone, LH, FSH, prolactin) or assess any pathology of the lower urinary tract system (PSA measurements, ultrasound of the urinary tract, flexible cystoscopy). Finally, personalized treatment options were offered and joint decisions were made suitable to the individual.

Patients prospectively completed a 7-item satisfaction survey questionnaire at the end of their consultation (Appendix 1). They were asked to grade their overall experience and satisfaction with consultation time, shared decision making, and information provided, on a scale of 1 to 10. A final free text box contained within the questionnaire, was available for comments and patients could provide feedback for their overall care. The information collected was blinded to the assessing clinicians and study coordinator.

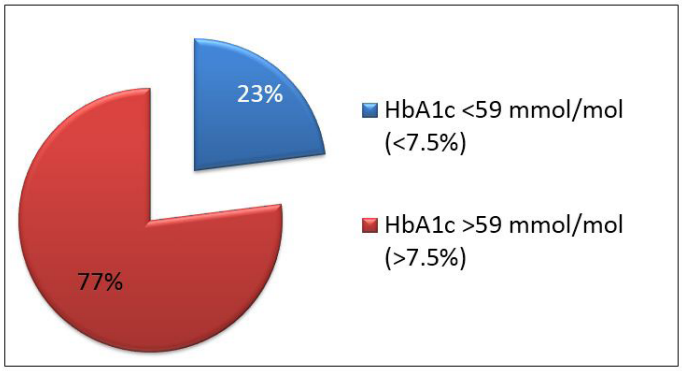
Results

Over a 6-month period, 22 patients attended this clinic. Their mean age was 59 years (SD=10 years) and mean Body Mass Index (BMI) 31 kg/m^2 (SD=7.5 kg/m^2). Ethnic background was mixed with 72% (16/22) being White, 14% (3/22) Asian and 14% (3/22) Black. In our study group mean duration of diabetes was long at 14.5 years (SD=7 years) and mean duration of ED was 6.7 years (SD=5 years) (Table 1).

Number of patients	22
Mean HbA1c	81 mmol/l (SD=24 mmol/l) or 95% (SD=2.2%)
Mean age	59 years (SD=10 years)
Mean BMI	31 kg/m^2 (SD=7.5 kg/m^2)
Type 2 diabetes	77%
Type 1 diabetes	23%
Diabetes duration	14.5 years (SD=7 years)
Sexual dysfunction duration	6.7 years (SD=5 years)

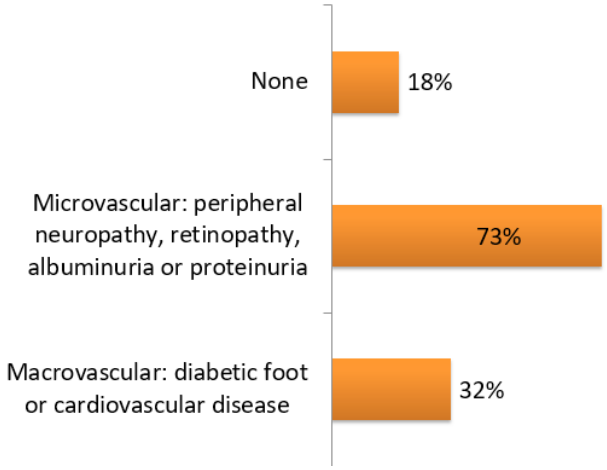
Table 1: Baseline patient characteristics.

77% (17/22) of patients had type 2 diabetes and 23% (5/22) of patients had type 1 diabetes (Graph 1). 65% (11/17) of patients with type 2 diabetes were treated with combination of insulin and oral medication. Only 23% (5/22) had satisfactory glycaemic control with HbA1c≤59mmol/mol (DCCT units≤7.5%) [13,14].



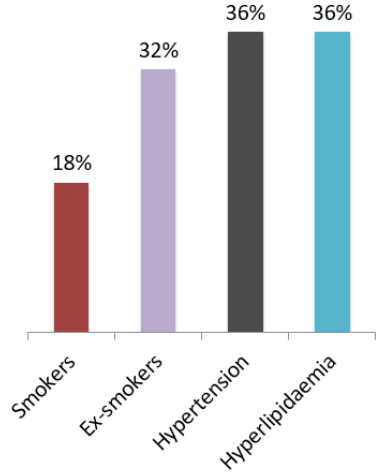
Graph 1: Percentage of patients with HbA1c above or below the target of 59 mmol/mol set up in the joint Urology- Diabetes clinic.

Prevalence of cardiovascular disease was 23% (5/22) with microvascular complications being more frequent, as 50% (11/22) of patients had albuminuria or proteinuria and 55% (12/22) were diagnosed with retinopathy. Peripheral neuropathy was preset at 10% (2/22) of patients. Overall 73% of men were diagnosed with microvascular complications and 32% with macro vascular complications (Graph 2).



Graph 2: Percentage of patients with Diabetes Complications.

Most patients had complex co-morbidities and multiple cardiovascular risk factors (Graph 3).



Graph 3: Percentage of patients with Cardiovascular Risk Factors.

90% (20/22) presented with ED and 45% (9/20) reported LUTS as well. 10% (2/22) presented exclusively concerned with LUTS.

Potentially reversible causes of ED were identified and treated appropriately [15]. Patients were offered education and counseling regarding lifestyle changes and risk factor modification. Active smokers were encouraged to self-refer to smoking cessation services. One patient was taking nitrates for angina and in view of high cardiovascular risk, a referral to cardiology services was recommended.

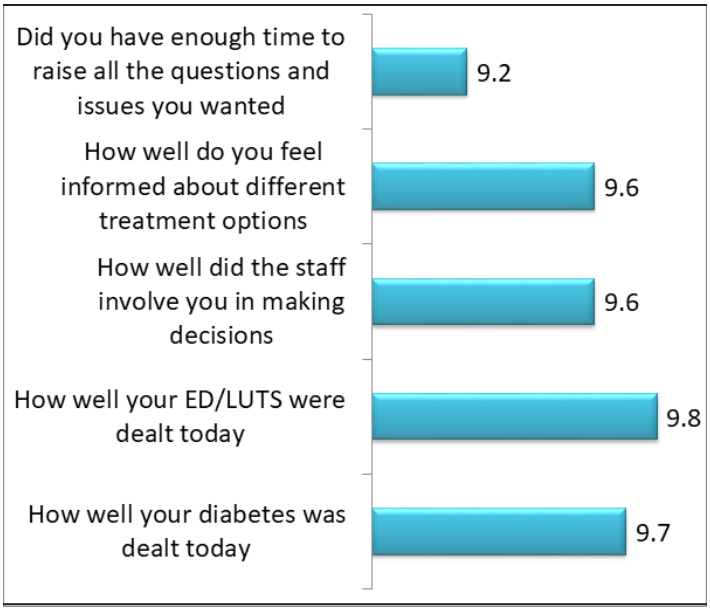
PSA was measured in 12 patients and 3 of them (25%) were found to have high Prostate Specific Antigen (PSA). Further investigations included prostatic biopsies with trans-rectal ultrasound scan, ultrasound scan of the urinary tract and flexible cystoscopy for those with significant LUTS. One patient received testosterone replacement in view of two consecutive persistently low testosterone readings.

60% (13/22) of patients were advised to use selective PDE5 inhibitors (PDE5-I: sildenafil, vardenafil, tadalafil) mainly on-demand basis to address ED [10]. 10% (2/22) patients were referred to our Urology clinical nurse specialist for a trial of Vacuum Erection Devices (VED) and another 5% (1/22) for Intracavernous Injections (ICI) [15].

The proportion of patients with excellent satisfaction from the joint Urology-Diabetes Clinic was high, with 88% (19/22) of patients extremely likely to recommend this service to friends and family. High satisfaction (grading 9.6 out of 10) was associated with professional interaction, including provision of information for treatment options and personalized approach to services. Every patient was supported to make his choice of treatment after he was given all relevant information. Patients reported that "The professional and knowledgeable manner of both specialists set them at ease" and they were "Most impressed". They felt very pleased and informed and not just part of a "Tick box" exercise. Informed decision making, and patient autonomy were fully respected in the joint clinic setting.

High satisfaction (grading 9.2 out of 10) was associated with consultation time, which was sufficient to discuss all raised concerns and relevant issues. Communication with both professionals was open. Questions were answered in a timely manner and patients enjoyed the fact that two specialists were sitting together, addressing diabetes, LUTS and ED at the same time. It was reported: "Illness concerns, advice and treatment were given by both consultants and their politeness was appreciated". Patients should consider options, understand risks and benefits of specific choices and quality time was made available in clinic to allow informed and shared decision-making.

Management of ED and LUTS scored 9.8 on a scale of 10 and management of diabetes scored 9.7/10. Consistent information was provided to improve erections as well as glycemic control and patients thought this was "Very helpful". The joint holistic approach to issues, that many healthcare professionals or patients would be reluctant to discuss openly, was effective and patients felt considerable progress was made to their disease management (Graph 4).



Graph 4: Grade of Patient Experience in five aspects of care on a scale from 1 to 10.

Discussion

The establishment of clinics for the treatment of men with diabetes and ED has previously been reported in the literature (16). This is the first time both LUTS and ED were comprehensively covered in the diabetic patient population and men were additionally asked to rank their experience and interactions with health care professionals. Patient involvement was significant, and experience was overall positive.

Nearly all patients (88%) were satisfied with the joint service and were extremely likely to recommend the service to family and friends. Patients felt looked after and happy with the holistic care received. Expectations were met, as experienced clinicians simultaneously addressed diabetes, ED and LUTS.

A single patient felt his diabetes was not discussed in detail. He reported that was because he had an appointment with his diabetes consultant in one week's time. Duplicate appointments for further patients were subsequently reduced after they were seen in the joint clinic.

Interestingly, a patient with multiple co-morbidities and cardiovascular disease felt there was not enough time to raise his concerns. A possible explanation is that expectations of patients with multiple conditions can be difficult to meet during a single appointment [17]. Nonetheless, the patient was diagnosed with significant LUTS secondary to Benign Prostatic Enlargement (BPE) and was offered treatment with an alpha-blocker with beneficial effect. Important Urological conditions, such as BPE and LUTS were diagnosed and managed effectively in our joint clinic along with diabetes. Structured timelines and efficiency of clinicians contributed significantly to patient satisfaction and overall positive experience [18].

An aspect of communication that the patients valued was the ability to receive helpful information about their condition and progress [18]. The time dedicated to each patient was felt to be adequate and the decision-making process was constructive. Patients attending the joint Urology- Diabetes clinic felt well informed and clinicians had additional opportunities to update their knowledge base within specialties different to their own. Education and communication of knowledge was constructive for both patients and healthcare professionals conducting the clinic.

It is anticipated that our local commissioners will continue to support this cost-effective service, which requires a single referral to secondary care for both an expert urology and diabetes opinion. The cost savings result from having a single tariff for a joint clinic, rather than two tariffs for two separate clinics and two specialist reviews. This service could in principle be successfully rolled-out to our diabetic female population who may have coexistent Female Sexual Dysfunction (FSD) and LUTS, including recurrent urinary tract infections.

Conclusion

This preliminary survey has revealed that patient and clinician satisfaction within the joint Urology - Diabetes clinic was high. The cohort of patients was relatively small, but the results were highly positive. We therefore continue to distribute questionnaires to men attending our clinic and plan to conduct a larger study. Current results provide valuable information to clinicians and service providers in optimizing quality of care and management of ED and LUTS in the context of diabetes.

Appendix 1

Survey Questionnaire

Joint Diabetes/erectile dysfunction clinic

Patient questionnaire

Your appointment today is part of a new service that combines diabetes and urology care. We would like to know what you think of the service. By completing this questionnaire you will help to improve services for you and for others. Please answer the following questions adding your own comments in the boxes shown. All responses are anonymous and will not be kept as part of your records.

1 How do you feel your diabetes was dealt with at this appointment?

Please tick one box on the scale below

Very well ☐☐☐☐☐☐☐☐☐☐ Not at all well

2 How do you feel your erectile dysfunction and/or urinary symptoms were dealt with at this appointment?

Please tick one box on the scale below

Very well ☐☐☐☐☐☐☐☐☐☐ Not at all well

3 How well did the staff involve you in making decisions about your treatment?

Please tick one box on each of the scales below

Very well ☐☐☐☐☐☐☐☐☐☐ Not at all well

4 How informed do you feel about different treatment options including their benefits and risks?

Please tick one box on each of the scales below

Very well informed ☐☐☐☐☐☐☐☐☐☐ Not at all well informed

5 Did you have enough time to raise all the questions and issues that you wanted?

Please tick one box on each of the scales below

More time than I needed ☐☐☐☐☐☐☐☐☐☐ Much less time than I needed

6 How likely are you to recommend our service to friends and family if they needed similar care or treatment?

Please tick one only

- Extremely likely ☐
- Likely ☐
- Neither likely nor unlikely ☐
- Unlikely ☐
- Extremely unlikely ☐
- Don't know ☐

7 Please tell us anything else about your appointment that you liked or disliked.

If you have any questions about this form please ask one of the staff

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