Urethral Stricture

Original article

Patient knowledge of urethral stricture disease in a state sector South African Academic Hospital

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Abstract

Introduction: The knowledge urethral stricture patients in a developing country Specialist Clinic have regarding their own disease, remains uncertain.

Objectives: To measure patient’s knowledge of own disease attending Tygerberg Urethral Stricture clinic.

Patients and methods: A total of 81 patients were assessed from May to August 2015, presented with a questionnaire containing questions on demographics, ten knowledge questions and qualitative comments. Subgroups were created for patient less and more than 50 years of age, and education level up to Grade 10 and more than Grade 10. Means were compared using the Student t-test, correlations were assessed using Pearson’s correlation coefficient and the significance was assumed at an alpha level of 0.05.

Results: Average age of patients attending the clinic was 55, the average level of education Grade 7 (completed Primary School). The average level of knowledge for all patients was 46%, with the highest score for Question 2 (80%) relating to the definition of a urethral stricture. The lowest score was achieved for Question 8 (28%) relating to self-catheterization frequency. There was no linear correlation between knowledge and age, and a very weak correlation between patient knowledge and level of education.

Conclusion: This study demonstrates that the level of knowledge of own disease is unacceptably poor across the whole patient profile. Interventions to improve patient knowledge regarding urethral stricture disease is indicated.

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Introduction

Male urethral strictures confine its victims to a lifetime of chronic disease burden. Studies have shown male urethral stricture rates as high as 0.6% of the exposed population, and resulting in 5000 inpatient visits annually, mostly due to complications [1]. Regard-
ing these men diagnosed with a urethral stricture, up to 42% suffer from a sequelae such as a urinary tract infection, and 11% are incontinent [2]. Some studies have captured a complication rate as high as 90%, with the majority of men typically burdened with lower urinary tract symptoms, and a minority affected by the more serious chronic urinary retention, renal failure, erectile dysfunction, urethral carcinoma and bladder failure [3]. This is a disease worth addressing due to the number of patients affected.

Despite the condition altering a patient’s life, the knowledge affected men in a developing country have regarding their diagnosis, remains uncertain. Patient recall after informed consent [3] concludes that a mere 29% of information could be extracted following a consultation, and another study showing only 25% of possible complications could be recalled [4]. In South Africa, patient autonomy and communication are valued as priority areas to improve patient satisfaction [5,6], yet for urethral strictures, there appears to be no instrument to measure patient’s knowledge of their own particular disease.

From a demographical viewpoint regarding urethral strictures in South Africa, a study done at Tygerberg Academic Hospital, South Africa, has shown that the prevalence of urethral strictures is highest among 40–50 year old coloured men who had little schooling. The study also concludes that the incidence can be reduced by uplifting moral and educational standards and emphasizing the potential dangers of catheterisation and instrumentation [7]. Taking into consideration abovementioned study with the 2012 South African national consensus, a developing country like South Africa already struggles with a lack of education. South Africa has a primary school completion rate of 94.7% in 2011, but for an older generation it might be too late. The percentage functionally illiterate men by 2012 aged 15–59 years was 11.9% but for males >60 years of age illiteracy was 40.1%. Indicating that an older generation, already proved the majority in Urethral stricture disease patients in Tygerberg Hospital Stricture Clinic, are more likely to be illiterate or have a low level of schooling [8].

A systematic review done by DeWalt et al. confirms that low literacy is associated with a range of adverse health outcomes. People who read at lower levels are 1.5–3 times more likely to have an adverse health outcome compared to those on higher levels [9].

Urethral stricture patients are presented with a large amount of new information; thus it would be natural to remember selective information better. A prostate oncology study showed information content and patient-healthcare provider relationship affect patient satisfaction [10]. We are increasingly expected to transfer information with the goal to increase patient knowledge. Patients were also more likely to recall potential benefits compared to potential problems following transurethral resection of the prostate, despite emphasizing both equally [11]. Education input from informative booklets and the multidisciplinary health team also ensures high knowledge scores [12].

It appears that the level of knowledge of urethral stricture disease is unknown. Due to the palliative manner in which most cases are treated with repeated dilation many opportunities and patient contact exist to gain knowledge and sufficient knowledge might exist. Measuring the knowledge based on important clinical questions will give insight into the need for education programs per specialist clinic visits.

**Objectives**

1. Primary objective: To assess the level of knowledge male Urethral Stricture Disease patients attending Tygerberg Hospital urethral stricture clinic has regarding their own disease

2. Secondary objective: To assess what possible factors could influence this level of knowledge.

**Definitions**

Grade—South African school system has 12 Grades with Grades 1–7 Primary School, Grades 8–12 High School and thereafter Tertiary education.

**Subjects and methods**

A cross-sectional study was performed asking patients attending the urethral stricture clinic to fill in a questionnaire based on 10 carefully selected questions composed of expert opinion (Appendix 1 in Supplementary material). An informed consent form was signed prior to attempting the questionnaire and patients were voluntary enrolled (Appendix 2 in Supplementary material). Inclusion criteria were all adult male patients attending the urethral stricture clinic at Tygerberg Hospital with the diagnosis of a urethral stricture. Patients excluded from participating in this study were acutely ill patients, those refusing to sign a consent form, patients not diagnosed with a urethral stricture, females, children and patients who wrongfully ended up at the urethral stricture clinic.

Guessing was controlled by adding a third and fourth answer option “do not know” and “I don’t understand the question” in addition to “true” and “false”. In addition, we added a comment section where the patient could share their experience of their disease qualitatively. Patients were encouraged to answer truthfully and were rewarded with a pen for their efforts. Only patients older than 18 years of age with a diagnosed urethral stricture were selected to participate in this study. The questionnaire was translated into Afrikaans and Xhosa by medical staff native to each language. The questionnaire was limited to one A4 page with wording spaced in such a manner to make the reading and filling in acceptable to patients. Patients needing help could ask. Limited demographic detail was collected in the available space. To control for duplicates hospital numbers were collected, and patient identities were kept confidential at all times.

Correct answers were analyzed in terms of the whole group and a comparison formulated between the over 50 year olds to the less than 50 year olds. Education level until Grade 10 were also compared with education levels over Grade 10. Individual questions between groups were compared using a 2 × 2 table and Chi-square test were done. Comparing means was done by a two tailed t-test (Student t-test). A P-value of less than 0.05 were elected as statistically significant. Confidence intervals (95%) and odds ratios comparing the group’s correct answers are reported.

**Results**

The total number of patients included in our study was 81, with the average age of patients was 55 years old, the average level of education Grade 7 (completed Primary School) (Table 1). The average level of knowledge for all patients was 46%, with the highest score for Question 2 (80%) relating to the definition of a urethral stric-
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