

Dysfunctions of the Lower Urinary Tract and Affective Symptoms

Citation for published version (APA):

Vrijens, D. M. J. (2017). *Dysfunctions of the Lower Urinary Tract and Affective Symptoms*. Datawyse / Universitaire Pers Maastricht. <https://doi.org/10.26481/dis.20170706dv>

Document status and date:

Published: 01/01/2017

DOI:

[10.26481/dis.20170706dv](https://doi.org/10.26481/dis.20170706dv)

Document Version:

Publisher's PDF, also known as Version of record

Please check the document version of this publication:

- A submitted manuscript is the version of the article upon submission and before peer-review. There can be important differences between the submitted version and the official published version of record. People interested in the research are advised to contact the author for the final version of the publication, or visit the DOI to the publisher's website.
- The final author version and the galley proof are versions of the publication after peer review.
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Valorisation

INTRODUCTION

Lower Urinary Tract Dysfunction (LUTD) is a very common disorder and has a considerable impact on quality of life. Two main categories of dysfunction of the lower urinary tract exist: storage and voiding dysfunction. The storage dysfunction, the overactive bladder syndrome (OAB), is the focus of this thesis. The International Continence Society (ICS) defines OAB as a symptom complex of urgency, usually with frequency and nocturia (awakening at night to void), with (OAB wet) or without (OAB dry) urgency urinary incontinence (UUI). Urgency is the complaint of a sudden compelling desire to pass urine, which is difficult to defer¹. Urgency is the paramount symptom of OAB.

TARGET POPULATION

The results of this manuscript are relevant to physicians who care for patients with symptoms of LUTD such as (increased) urinary frequency, UUI, OAB, pelvic floor dysfunctions, as well as physicians who care for patients with affective complaints.

EPIDEMIOLOGY OF LOWER URINARY TRACT DYSFUNCTIONS

Approximately 17% of the adult population of the United States are estimated to be affected by OAB². In Europe the prevalence is comparable, 16% of adults over 40 years are affected, as reported in a cross-sectional community-based study in 6 countries³. In addition, the incidence of both OAB wet and dry increases with age⁴⁻⁶. Therefore, due to ageing worldwide, the estimated number of adults affected with UUI is expected to increase from 55 million in 2013 to 60 million in 2018. Furthermore, it is suggested that 500 million people will have OAB in 2013 and this number would increase to 546 million people in 2018⁷.

SOCIO-ECONOMIC RELEVANCE

The health care costs of OAB are high, as total costs are estimated to be around 12 billion USD per year and 267 USD per person with OAB in one year⁸. On top of that, work productivity, in terms of work interruptions, changes in work and location can be significantly impacted by OAB as well⁹. OAB wet has greater impact on work productivity than OAB dry, and more so in men than in women¹⁰.

Furthermore, OAB can be associated with significant comorbidity. Urgency urinary incontinence has been associated with increased risk of falls and fractures in two large longitudinal studies^{11,12}. It has even been mentioned, in a Finish longitudinal study, that

urgency and UUI are independent risk factors for increased mortality, especially in older men¹³.

Sexual health is affected by OAB dry as well as OAB wet. There is diminished sexual activity and enjoyment of sex in patients with OAB, compared to people without urinary symptoms¹⁴. The diminished sexual function has not only been presented in women, but also in men, as OAB wet and dry are significant predictors of erectile dysfunction and ejaculatory disorders¹⁵.

As a result of this burden, OAB with and without incontinence has been associated with significantly lower quality of life scores compared to matched controls without voiding complaints^{4,16}. The degree of bother is increased with the frequency of both urgency and UUI in both men and women of all ages complaints¹⁷. As much as 32 incontinence related quality of life items have been identified in a focus group investigation. Patients tend to focus on coping with embarrassment and interference from incontinence and emotional wellbeing.¹⁸ But not only patients are affected themselves, dysfunctions of the lower urinary tract also have an impact on family members¹⁹.

Patients with OAB use different coping strategies, such as timed voiding, locating toilets or avoidance of drinking, rather than consulting health care providers²⁰. In addition, the self-management of OAB leads almost inevitably to social withdrawal, sometimes relational problems and fear in daily life, potentially leading to social and psychological problems²¹. Therefore, OAB can seriously affect daily life and has been compared to other chronic illnesses. Moreover, the physician tends to underestimate the patients bother of urinary symptoms²².

Although OAB affects daily life and social relationships, and has an adverse impact on quality of life, many individuals with OAB complaints do not bring their problems to the attention of health care providers²³. This is mainly because of embarrassment²⁰ or unawareness of medical treatment for OAB³. A very large study with 162.906 respondents in the United States reported that, of the individuals with overactive bladder symptoms, only less than half of them had discussed their symptoms with a healthcare provider. Only 22.5% had previously used medication for overactive bladder, and only 8.1% were currently on treatment²⁴. The results of a large European interview study were similar. Only 60% of respondents with symptoms had consulted a doctor and merely 27% were currently receiving treatment³. In addition, an inventory in a managed care organization revealed that 3 out of 4 patients with OAB did not receive pharmacotherapy for symptoms²⁵. The adherence to antimuscarinic drugs is low²⁶. There is need for a more adequate therapy for OAB. At this moment, the assessment and treatment mainly focuses on the bladder, but it is necessary to consider a treatment focus on other possible causes of dysfunctions of the lower urinary tract.

Depression and anxiety are symptom based constructs, and classified as affective disorders according to the DSM-V psychiatric diagnostic criteria²⁷. According to a survey of the World Health Organisation, anxiety is globally the most common psychiatric disorder²⁸. The 12-month prevalence of anxiety disorders in the US adult population is

around 18%²⁸, and almost 10% for depression²⁹. Additionally, the US-life time prevalence is approximately 30% for anxiety disorders, and 20% for depressive disorders³⁰. However, according to the World Mental Health survey almost half of the individuals with serious complaints received no treatment in the twelve months prior to the diagnostic interview³¹. In general, the association of somatic diseases with a depressive disorder is not uncommon and affects 25% of the people in hospital in-patient populations³².

For instance, in irritable bowel syndrome (IBS), a functional disorder of intestinal hypersensitivity and altered motility, the association with affective disorders is relatively clear, and IBS patients have been shown to have an approximately 60% higher odds to suffer from depression³³. In addition, half of the population reporting a lifetime IBS diagnosis also had a lifetime mood or anxiety disorder³⁴. Nevertheless psychiatric comorbidity regarding IBS is often unrecognized³⁵. Moreover, at least in complex patients with medically unexplained functional complaints, psychiatric comorbidity is frequently under-detected³⁶. This thesis states that there is an association between LUTD and affective symptoms. In turn, anxiety and depressive symptoms can intensify UI and decrease the benefit of treatment³⁷.

FUTURE

The consideration that psychological factors, as discussed in this manuscript, can be a possible cause or lead to deterioration of lower urinary tract dysfunction can enable physicians to improve diagnosis and to identify patients who will benefit from a multi-modal treatment. Therefore, it will be very important to distinguish the physical and psychological causes of the dysfunction and their relative contribution and interaction. The data in this manuscript are currently used for the development of a new diagnostic tool that overcomes the limitations of currently available methods. This tool, which consists of randomly, repeated momentary assessments in everyday life, may provide a better overview of the aetiology of the symptoms. Hence, it can indicate potential triggers that may influence symptom development. Hopefully, in the future we can select patients with LUTD who may benefit from (additional) psychological or psychiatric treatment.

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