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Defining and Managing Overactive Bladder: Disagreement among the Experts

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Abstract

Objectives—To better understand experts’ perceptions of the definition of overactive bladder (OAB), the evaluation of OAB, and treatment of OAB. OAB is defined by the International Continence Society as “urinary urgency, with or without urge urinary incontinence, usually with frequency and nocturia.” Under the current definition, people with very different clinical conditions fall under the OAB umbrella. With the goal of improving the care for women with OAB, we sought to better understand experts’ perceptions of OAB as it is presently defined.

Methods—Twelve interviews with leading urologic, gynecologic, and geriatric practitioners in urinary incontinence and OAB were performed. Questions were asked about their perception and agreement with the current definition of OAB. Interviews were audiotaped and transcribed verbatim. Grounded theory methodology was used to analyze the data.

Results—Overall, there was a great deal of variability in defining and managing OAB. Four categories of definitions were derived from the qualitative analysis: current definition is adequate, OAB is a constellation of symptoms, should include the fear of leakage, and OAB is a marketing term. While there is some consensus on evaluation, several areas demonstrate disagreement over elements of the evaluation. Experts also felt that OAB is a chronic condition, with variability of symptoms, and it has no cure. Managing patient expectation is essential, as OAB is challenging to treat. A focus was placed on behavioral therapy.

Conclusions—There was disagreement among experts over the definition and work-up of OAB. However, experts agree that OAB is a chronic condition with a low likelihood of cure.

Keywords

overactive bladder; urgency; urge incontinence; diagnosis; evaluation; management; definition

Introduction

Definitions of disease and disease processes impact all aspects of patient care. How we define a disease entity frames the diagnosis, management, and outcomes measured. In 2002,

“The Standardisation of Terminology of Lower Urinary Tract Function: Report from the Standardisation Sub-committee of the International Continence Society” was published to present definitions of the symptoms, signs, urodynamic observations and conditions associated with lower urinary tract dysfunction and urodynamic studies, and to restate or update definitions presented in previous International Continence Society (ICS) Standardisation of Terminology reports.¹ Under the subheading “symptom syndromes suggestive of lower urinary tract dysfunction”, the ICS document states “Urgency, with or without urge incontinence, usually with frequency and nocturia, can be described as the overactive bladder syndrome, urge syndrome, or urgency-frequency syndrome. ... These terms can be used if there is no proven infection or other obvious pathology.” This report has been cited over 2700 times, highlighting the body of literature that has been collected over the past decade in which this definition has been in existence. The ICS definition is commonly referred to as the current definition of overactive bladder (OAB), and several papers discuss the historical development of this term.^{2,3,4,5}

OAB is a prevalent symptom complex, with an associated decrease in quality of life and a high economic cost to society. In a 2001 European population-based prevalence study that was conducted before the 2002 ICS definition was adopted⁶, 15.6% of men and 17.4% of women over 40 reported symptoms of frequency, urgency, urge incontinence, alone or any combination, and the prevalence of frequency, urgency, and urge incontinence increased with age. A 2011 prevalence study estimated that 10.7% of the 2008 worldwide adult population was affected by OAB and this is expected to rise to 20.1% by 2018.⁷ Increased severity of urgency and urge urinary incontinence is associated with a clinically important decrease in health related quality of life.⁸ In 2007, the economic burden of OAB in the United States was \$65.9 billion, five-fold higher than previous estimates.⁹

Qualitative methods are used in health services research to generate research questions, rather than test tightly formed hypotheses. The method fosters discovering and developing analytical and conceptual constructions of the topic in question, in this case, OAB. Categories are created from the data, and relationships between key categories are analyzed. Expert interviews are one method to gain primary data about a subject, in this case personal experiences and opinions about preferred diagnosis and treatment methods. Strengths of this type of qualitative research include open-ended questions leading to freely formed informative concepts. These concepts are reinforced by multiple interviews. An analysis of experts’ definitions of OAB and management decisions may uncover current perceptions and practices. The objective of this study was to better understand OAB from the physicians’ perspective, with the goal of improving the care for patients.

Methods

Twelve interviews with leading experts in urinary incontinence and OAB were performed. Interviews were conducted at the Society for Urodynamics and Female Urology annual meeting (Las Vegas, March of 2009) and the ICS meeting (San Francisco, October of 2009). Practitioners with expertise in urology, urogynecology, and geriatrics were interviewed. Experts were a sampling of different institutions and geographic locations across the world. Experts had international and/or national reputations in their field, and many relevant publications. Questions were asked about their perception and agreement with the current (ICS 2002) definition of OAB, as well as their management algorithms and practices in managing patients with OAB. Interviews were audiotaped and transcribed verbatim.

The principles of Grounded Theory were applied in our qualitative analysis, as described by Charmaz¹⁰. Transcripts were de-identified, and separately analyzed by three different researchers. Grounded Theory seeks not to test a hypothesis, but rather to generate

hypotheses from the data. Briefly, this includes initial line-by-line coding of transcripts utilizing key phrases, followed by a grouping together of similarly-coded phrases into preliminary themes. Preliminary themes were then grouped together to develop categories, from which core categories, or emergent concepts, were derived. We explored experts' perspectives on: (1) the current definition of OAB, (2) their own perceptions and definitions of OAB, (3) diagnosis and treatment strategies, and (4) the relationship between the definition and diagnosis and various management strategies. This study is not designed to be a consensus summary, but rather qualitative analysis of individual expert interviews.

Results

Overall, there was a great deal of variability in defining OAB. Several categories of definitions were derived from the qualitative analysis. In defining OAB, four categories of definitions emerged: (1) The ICS definition is acceptable, (2) OAB should include the fear of leakage, (3) OAB is a constellation of symptoms caused by different disease processes, and (4) OAB is a marketing term. The corresponding expert quotes are shown in Table 1. In those who felt that the ICS definition was acceptable, they described utility in allowing patients to refer to themselves with a defined term, while allowing generalists to have a better understanding of the entity. Some felt that the definition of OAB should include the fear of leakage, that is, "urgency because of fear of leaking with or without urge incontinence, usually with frequency and nocturia." Experts also reiterated that OAB is a "constellation" or "collection of symptoms," with varying degrees of symptom severity and bother. The range of symptoms also varies. Some also felt that the concept of OAB promotes the marketing of treatment, "a dummed down concept to enhance the industry of antimuscarinics." The most pronounced emergent theme was that there appeared to be a lack of consensus over the current definition of OAB, as defined by the ICS.

Experts were also interviewed on their OAB evaluation and treatment algorithms. Again there was a great deal of variability between providers. While all agreed that the history, physical exam, and urinalysis are important parts of the evaluation, several elements of the workup demonstrated opposing opinions, as shown in Table 2.

When queried more about experts' perceptions of the entity of OAB, several additional themes emerged. Five emergent themes are summarized in Table 3: (1) OAB as a chronic condition, (2) the variability of symptoms, (3) the lack of a cure, (4) the importance of managing patient expectations, and (5) the challenge in treating OAB.

Another emergent theme from the expert interviews was the need for a chronic care approach to OAB, as shown in Table 4. Behavioral therapy was taught and reinforced. Specific tools were discussed and given, such as timed voiding, urge suppression, and fluid management. Pelvic floor therapy, biofeedback, and combination therapy with medications was also discussed as part of the treatment algorithm. Botulinum toxin and neuromodulation were also discussed as therapy for refractory cases.

Discussion

The term "overactive bladder" was introduced in 1997 by Drs Paul Abrams and Alan Wein.¹¹ As chairs of a 1997 consensus conference entitled, "The Overactive Bladder: From Basic Science to Clinical Management," they and others acknowledged the difficulty with using a urodynamically-based definition, and agreed that many patients could be diagnosed with OAB based on symptoms alone and appropriately initiated on management.¹² Following this and other discussions,¹³ OAB became acknowledged as a recognized symptom complex. The construct of OAB became a clinical entity, separate from urinary

incontinence, which encompassed urge incontinence, as well as bothersome urinary frequency, urgency, and nocturia. The medical community subsequently formalized this definition in 1999, as a “symptom syndrome suggestive of lower urinary tract dysfunction,” specifically defined as, “urgency, with or without urge incontinence, usually with frequency and nocturia in the absence of an underlying metabolic or pathologic condition.”¹⁴ In 2002, the Standardization Subcommittee of the ICS formally adopted this definition.¹ Prior to this, the discussion of the OAB symptom complex was hindered by various definitions used, including overactive detrusor function, detrusor overactivity, detrusor instability, and detrusor hyperreflexia. These urodynamically-based terms¹⁵ described abnormalities of detrusor function during filling cystometry. However, clinical studies of detrusor function using urodynamic testing did not reveal uniform results in women with complaints of OAB. There was a need for a symptom-based definition of OAB, to describe this symptom complex in a manner that was useful for patients, primary care practitioners and specialists¹⁶.

Lacking a reliable biological marker or clinical test to define OAB, clinicians, researchers, pharmaceutical companies, and others came to conceptualize the symptoms of OAB as a syndrome.¹⁷ Syndromes are medical conditions defined by the symptoms experienced by the patient. The pathophysiology of OAB is incompletely characterized; in part because OAB patients are a heterogeneous group. This was identified by the experts as part of the challenge in defining OAB. OAB is not necessarily the same disease process in every patient; but rather a collection of symptoms that create bother caused by one of many possible disease processes.

That experts have varying definitions and treatment strategies for OAB emphasize the fact that many disease entities are encompassed by the current OAB definition, thereby limiting its clinical utility. If a patient has no history of leakage and no fear of leakage, one questions whether this patient has a truly “overactive” detrusor. In fact, according to Abrams and Drake, the 2004 ICS workshop expressed remorse that “for fear of leakage” was not included in the new definition of “a sudden compelling desire to void which is difficult to defer.”¹⁸

In addition, a review by Wein¹⁶ emphasized another shortcoming of the current definition of OAB. As presently defined, OAB does not include patients with unaware urge leakage, and these patients have documented detrusor overactivity, albeit without sensation. The word “urgency” is defined by the ICS as the, “sudden, compelling desire to pass urine that is difficult to defer.”¹ By inclusion of the word urgency, certain conditions may be eliminated, such as detrusor overactivity causing incontinence, but without sensation. This condition can be treated in the same way as OAB, but under the current definition may not formally qualify. Additionally, the ICS definition includes the clause, “in the absence of an underlying metabolic or pathologic condition,” such as urinary tract infection, cancer, stone, surgery, inflammation, and benign prostatic obstruction. These etiologies are eliminated, even though the symptomatic treatment of the patient with an underlying disorder may be warranted. Urgency is a symptom that is subjective and therefore difficult to assess objectively. The ICS definition of urgency and OAB can potentially be unclear when used in clinical trials.

Overall, the ICS definition is a comprehensive one that is well accepted by patients and generalists. When given the diagnosis of OAB, patients often breathe a sigh of relief as they are reassured that they do not have a malignancy, but rather a tangible benign entity. However, a substratification system might make the term more clinically meaningful to the urologic and gynecologic communities. In fact, leading researchers in the field of female pelvic medicine and reconstructive surgery have determined that strict phenotyping is critically needed for understanding the pathophysiologic mechanisms involved.”¹⁹

Given the broad symptom-based definition of OAB and the experts' disagreement over the definition, it is not surprising that there was also disagreement over several elements of the evaluation of an OAB patient. The variability and disagreement in the evaluation of OAB likely in part reflects the heterogeneous nature of this patient population. There was a great deal of variation between providers in the number of tests ordered for a given patient. Some of this variation may be due to individual provider preferences and beliefs, as well as a fear of missing a possible malignancy. Such fears, however, result in additional costly testing. The present economic climate warrants a reduction in costs while maintaining quality, and the reduction of excess testing for patients with OAB represents a large potential cost savings.

The experts did share a rather grim outlook on OAB. The experts agreed that OAB is a chronic condition with variable symptoms and lacks a cure. Our current therapies can help control symptoms, but will unlikely cure the problem completely. Therefore, providing the patient with realistic expectations from the outset was emphasized. The challenge of treating OAB patients also emerged as a common theme. In the face of severe symptoms, our current treatments are not fully addressing the problem. These findings from expert interviews confirm similar themes we previously identified through patient focus groups.²⁰ The experts proposed that a cure for OAB may be unrealistic, and that OAB would benefit from a chronic care model in which the focus is shifted from curing the disease to optimizing symptom management. One of the emergent themes from patient focus groups was that patients developed personalized management strategies to alleviate their symptoms. The provider can play an active role in these coping strategies, providing structured education, tools, and reinforcement for urge suppression techniques, timed voiding, and fluid management. Managing patient expectations is also another important role of the provider.

Limitations of qualitative research include that the results may or may not be generalizable to the general population. In this case in which expert interviews were utilized, the results are subject to the biases of both the interviewer and interviewees. Although the interviewee is trained to use open-ended questions and follow a predetermined script, one's biases may influence the line of questioning and the feedback to responses. It is also possible that these experts see a tertiary referral population of OAB patients, and thus treat refractory patients, contributing to the conclusions that OAB is extremely challenging to effectively treat.

Conclusions

Our qualitative analysis of expert interviews revealed disagreement among experts over the definition and the workup for OAB. However, experts agreed that OAB is a chronic condition necessitating a chronic care approach to management to better address each patient's symptoms and improve quality of life. As physicians, we need to be leaders in better defining the OAB symptom complex, critically evaluating the OAB patient, and partnering with patients in managing the symptom complex of OAB.

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Table 1

Categories of Definitions Emerging from Expert Interviews

Category of Definition	Illustrative Quotes
ICS definition acceptable	<p>“Now if we don’t call it OAB, what are we going to call it?”</p> <p>“I do use the term OAB just because it’s used so much.”</p> <p>“It is patient friendly and PCP friendly, and better than urgency or urgency-frequency syndrome.”</p> <p>“I guess that’s the definition and I never thought of a different one.”</p>
OAB includes fear of leakage	<p>“The previous definition of OAB included fear of leakage. I would have kept that in the definition.”</p> <p>“A patient who has frequency and urgency but never leaks is different from the one who is fearful of not making it to the bathroom on time- Then I’m thinking of dry OAB.”</p>
OAB a constellation of symptoms	<p>“I think we are treating a constellation of syndromes that is really non-specific.”</p> <p>“It is not a physical entity, but a collection of symptoms that creates a degree of bother”</p> <p>“It is a description of symptoms. It has nothing to do with what the underlying etiology is. Its not the same disease in everyone.”</p>
OAB a marketing term	<p>“I am very sensitive to OAB being a dummed-down concept to enhance the industry of anti-muscarinics.”</p>

Table 2

Disagreement among the experts over workup of overactive bladder

Elements of OAB Evaluation	Illustrative quotes	
	PRO	CON
Urinalysis	"A UA is like our stethoscope. Everyone gets one"	"More dialogue on the front end. And doing a UA and all these tests isn't going to help with that."
Urine cytology	"If they have urgency, I always get cytology because I worry about bladder cancer. I never want to be the dummy if it's bladder cancer."	"Only get cytology with hematuria or exposure to tobacco." "Low yield without hematuria"
Post Void Residual	"PVR on everyone-safe and cheap."	"May do PVR based on symptoms- do you feel like you're not emptying your bladder?" "Will only get PVR if have comorbidities- elderly, diabetic, neurologic, on a lot of meds, or if symptoms don't make sense."
Voiding diaries	"Always include voiding diaries. Absolutely for OAB. A mainstay for nocturia." "Only record volumes in voiding diary if want to rule out nocturnal polyuria." "We use a 3 day consecutive bladder diary"	"I don't usually use voiding diaries"
Pad test	"Big proponent of pad usage, pad weights, bladder diary, and incontinent episodes a day" "I use pad testing but it doesn't work out so well. Logistically very difficult"	"Don't routinely do pad test"
Questionnaires	"We do a lot of urologic questionnaires. We send out questionnaires and bladder diary prior to being seen." "In research studies, we use questionnaires"	"In routine patients, no questionnaires."
Cystoscopy	"Cystoscopy in OAB patients who failed first line and are considering more invasive treatments like botox or neuromodulation."	"No cystoscopy in primary patients"
Urodynamics	"Urodynamics only if idiopathic and fail primary therapy. Or if neurogenic or a young woman and I'm concerned about multiple sclerosis" "Would definitely do urodynamics if surgery, neuromodulation, or botox"	"Urodynamics is much overused." "Not a lot of evidence that urodynamics is predictive of anything"

Table 3

Poor prognosis and the challenge of treating Overactive Bladder

Emergent theme	Illustrative Quotes
OAB as a chronic condition	<p>"I don't think there's a chance to cure OAB unless there is an underlying medical condition that is curable like cancer or obstruction."</p> <p>"By definition OAB is a chronic condition that requires periodic monitoring."</p>
Variability in symptoms	<p>"There is clearly variability in the symptoms that we don't really understand in terms of triggers, causation, and natural history."</p>
Lack of a cure	<p>"Expecting a cure for OAB is unrealistic"</p> <p>"There is no cure for OAB. It waxes and wanes. Drug therapy is satisfactory to good, but not great."</p>
Managing patient expectations	<p>"We need to concentrate more on bothersome symptoms. We need to find out what the patient really wants and what they expect from treatment. And then give them realistic expectations."</p> <p>"We need more dialogue on the front end. And doing a UA and all these tests isn't going to help with that."</p> <p>"This is a chronic condition that requires patient buy-in."</p>
Challenge of treating OAB	<p>"OAB is so prevalent. Ineffective treatments still remain."</p> <p>"Older patients have more comorbidities and their condition is more severe"</p> <p>"I don't know how much of a difference we have made."</p>

Table 4

Focus on Chronic Care approach and Behavioral Therapy

Topic	Illustrative Quotes
Behavioral therapy	"I go over lifestyle changes, diet, bowels, bladder retraining, as far as managing urgency" "Fluid management, preventative toileting, constipation"
Timed voiding	"If sensory urgency, then timed voiding every 15 minutes, then gradually increase to every 60 minutes so they never get urgency."
Urge suppression	"Patients do really great with teaching them how to suppress the urge. It is a structured program that needs to be incorporated into life."
Structured teaching and reinforcement	"You need an initial teaching session. And a prescription to do it x number of times a day with an audio CD."
Voiding diary	"You have to have them keep doing diaries and figure out eventually what it is that works."
Pelvic muscle exercise program	"If younger patient and doesn't want meds, then pelvic floor physical therapy"
Biofeedback	"I use biofeedback quite a bit. It's a motivator. To show you some kind of physiological thing that you're doing. I set patients up to not expect improvement right away. Will take 2-3 months."
Combination therapy	"Stepwise combination therapy like in hypertension" "There is a need for multimodal therapy" "Behavioral modification +/- pelvic floor therapy +/- medications. Depends on what the patient is willing to do"