In recent years, there has been an increased awareness of the importance of considering lower urinary tract symptoms (LUTS) as a global term. Under this umbrella term, disorders of bladder function can be most effectively considered as failure to store or failure to empty. We now clearly recognise the misconceptions inherent in the assumptions that all LUTS in men are caused by benign prostatic obstruction (BPO) and that overactive bladder (OAB) is a female disease [1]. In this context, it is important to recognise that it has been known for at least 4 decades that symptoms do not relate to the underlying pathophysiology in many patients; indeed, the phrase “the bladder is an unreliable witness” was coined to acknowledge this [2]. We also recognise that it is essential to take into account patients’ expectations and goals to achieve the most successful outcome for therapy.

To adequately manage LUTS, it is important not only to consider the integrated functional unit of the lower urinary tract but, at the same time, to reflect on the influence of pathophysiology arising in other organ systems. In addition to age, a number of studies have reported associations between LUTS and body mass index; waist–hip ratio; alcohol consumption; smoking; and cardiovascular, metabolic, and endocrine factors. By moving beyond a local organocentric view and by taking a more holistic approach, we will clearly be able to manage clinical scenarios more effectively.

The term LUTS as suggestive of bladder outflow obstruction due to benign prostatic enlargement secondary to benign prostatic hyperplasia (BPH) was introduced in 1994 to dissociate urinary symptoms in the male from any implied specific site of origin of symptoms, such as the prostate, as previously implied by the term prostatism [3]. This change acknowledged the poor correlation between the voiding symptoms: hesitancy; poor urinary flow and straining to void; prolonged voiding time and postmicturition symptoms; feeling of incomplete bladder emptying; and terminal or postmicturition dribbling, with an underlying demonstrable urodynamic abnormality. Using the criterion of an International Prostate Symptom Score >7, 42% of men aged ≥50 yr visiting their primary care physicians for routine care had LUTS suggestive of BPO. Prevalence of these symptoms in a slightly older population of 33 077 men in France between the ages of 55–70 yr consulting their general practitioners was 57.5%. LUTS prevalence studies conducted in Tunisia, Iran, Turkey, and Italy have reported prevalence rates of LUTS attributed to BPH of 16.1%, 22.4%, 24.9%, and 19% of patients, respectively [4].

OAB was first used in the International Continence Society (ICS) standardisation of terminology report in 1988 to describe a chronic condition defined urodynamically as detrusor overactivity and characterised by involuntary bladder contractions during the filling phase of the micturition cycle [5]. The definition of OAB as a symptom syndrome was later refined by the ICS to serve as a symptomatic diagnosis that included urinary urgency, with or without urge (or urgency) incontinence, usually accompanied by urinary frequency (more than eight micturitions per 24 h) and nocturia [6]. Inherent to the diagnosis is the absence of pathologic (eg, urinary tract infection, urinary stones or interstitial cystitis) or metabolic (eg, diabetes mellitus) factors that would explain these symptoms. The introduction of a standardised definition by the ICS has facilitated rigorous examination of the prevalence, burden, and clinical management of the disorder. OAB is, therefore, clearly distinct from urodynamically proven detrusor overactivity, although the majority of people with OAB are thought to have this underlying diagnosis.

The prevalence of OAB in Europe and the United States was estimated in two studies that first estimated the

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potential prevalence of OAB in the population and reported a prevalence of up to 17% [7,8]. It was concluded from these studies that approximately one-third of patients with OAB are troubled by incontinence (OAB wet) and two-thirds are not (OAB dry). An urban-based study from Austria assessed a total of 1199 men and 1219 women aged 20–91 yr. The prevalence of OAB was 10.2% (OAB dry: 8.4%; OAB wet: 1.8%) in men (48.5 ± 13.1 yr) and 16.8% (OAB dry: 10.3%; OAB wet: 6.5%) in women (49.5 ± 13.5 yr). In women, the prevalence of OAB dry remained fairly stable over six life decades, while OAB wet increased substantially after the age of 40 yr. In men, OAB wet and OAB dry increased after the third life decade. In men with OAB, 48% did not report a negative impact on quality of life, 36% had minimal impairment, 9.8% had moderate impairment, and 2.5% had severe impairment; the respective percentages for women were 53%, 33%, 7.3%, and 6.3%. OAB wet had a more profound impact on quality of life. A negative impact of OAB on sexuality was reported by 24% of men and 31% of women. [9]. More recent data from the EPIC study suggest that the prevalence of OAB symptoms (using the 2002 ICS definition) is closer to 12% in the community, and of these sufferers, approximately 50% experience significant bother from their symptoms [10,11].

Clearly, it is now recognised in both men and women that LUTS comprise a non–sex-specific, non–organ-specific group of symptoms which are sometimes age-related and progressive, with the storage symptoms (OAB) being the most bothersome component—more so than the voiding symptoms [2]. A paper which further assesses the prevalence, severity, and symptom bother associated with LUTS in men based on the EPIC study is published in this edition of the journal [12]. That study is important because it represents a large contemporary in-depth analysis of men using current ICS definitions and thereby provides a useful addition to the existing evidence base on this subject.

An interesting new dimension to the epidemiology in this important clinical area has been introduced by the use of cluster analysis. The first such analysis was conducted by Norman et al in 1994 by telephone survey of 508 Canadian men aged ≥50 yr with severe to moderate LUTS [13]. Although urgency and hesitancy were the primary distinguishing symptoms for storage and obstructive clusters, respectively, both storage and obstructive symptoms coexisted in men with more severe symptoms. Analysis of the EPIC study data set has been conducted in men and women reporting at least one symptom [14]. Six distinct symptom cluster groups were identified, with the largest cluster (56% of men and 57% of women) reporting minimal symptoms. The remaining five clusters differed somewhat for men and for women. For men, the clusters were defined by a predominant symptom and were nocturia at least two times per night (12%), terminal dribble (11%), urgency (10%), multiple symptoms (9%), and postvoid incontinence (5%). For women, clusters were defined as nocturia at least two times per night (12%), terminal dribble (10%), urgency (8%), stress incontinence (8%), and multiple symptoms (5%). The multiple-symptom clusters for both men and women included subjects who had numerous and varied LUTS, were older, and had more comorbid conditions.

Separate cluster analyses were performed on the male and female data from the Boston Area Community Health (BACH) survey. Five clusters were identified among symptomatic men. The largest cluster (50% of symptomatic men) had a low prevalence and frequency of urologic symptoms and a low level of interference with activities of daily living [15]. Men in the second, third, and fourth clusters had mixed patterns of voiding, storage, and postmicturition symptoms with intermediate levels of symptom frequency and prevalence. The remaining cluster included predominantly older men (mean age: 58.9 yr) with a high prevalence and frequency of urologic symptoms (mean number of symptoms plus or minus standard deviation: 9.9 ± 2.1) and higher frequency of comorbid conditions (eg, cardiovascular disease, kidney and bladder infections, prior urologic surgery). Men with more sedentary lifestyles and larger waist circumference were overrepresented in the more symptomatic clusters.

Although the symptoms of urinary urgency and frequency alone have a significant negative impact on patients’ quality of life, urgency incontinence is most disruptive. OAB symptoms often have a profound negative influence on quality of life. It is now clearly recognised that there is a strong association between LUTS and sexual dysfunction. Independent of age and comorbidities, urologic symptoms are associated with a significant decrease in sexual activity and function in both men and women. It has been shown that two-thirds of both men and women with OAB reported that their symptoms had a deleterious effect on daily living. Social events, shopping, and other everyday activities are restricted, and for many, life outside the home revolves around finding the next toilet. Consequently, some people with bladder problems become housebound.

Despite the negative impact of these symptoms on quality of life, we patients frequently fail to seek medical help and often endure the inconvenience and unpleasantness of symptoms for many years, relying on coping strategies. This behaviour might be due to embarrassment or, possibly, to the mistaken opinion that effective treatment is not available. Furthermore, the Leicestershire MRC study [16] showed that when patients do mention the condition to their general practitioners, 27% were prescribed antibiotics, 20% were reassured that it was alright to be incontinent, and 30% were told to return only if the condition developed. It seems that there is currently a problem with general practitioners not feeling confident about managing urinary incontinence and storage disorders of the bladder (ie, OAB).

In conclusion, LUTS comprise a progressive, age-related, non–sex-specific, non–organ-specific group of symptoms affecting both men and women and encompassing a combination of storage, voiding, and postmicturition symptoms. We need to take a broader view of LUTS, recognising that this global approach to LUTS reflects our contemporary recognition of the lower urinary tract as an integrated functional unit, and to acknowledge the limitations of symptoms as a sole diagnostic modality. Nevertheless, it is important to recognise that patients often
exhibit groupings of symptoms which reflect underlying pathophysiological mechanisms. Clearly, by acquiring a deeper understanding of LUTS, we would hope to develop better tools for the assessment of symptoms and relevant patient-related outcomes. We also need to increase education and awareness regarding LUTS and associated comorbidities to improve the current management of LUTS in both male and female patients.

Conflicts of interest: The author is a scientific consultant and researcher with Pfizer, Astellas, Recordati, Novartis and Allergan.

References