accounted for by the following components: abdominal pressure, height difference between cuff and bladder, and the fact that the stepped cuff inflation will overshoot by an average of 5 cm H_2O. The increased gradient of the line is consistent with the expected greater difference between isovolumetric pressure ($p_{ves,iso}$) and $p_{ves,Qmax}$ for higher flow rates [4, 5]. We conclude that non-invasive voiding studies using the cuff inflation technique can provide useful information on obstruction.

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Title (type in CAPITAL LETTERS, leave one blank line before the text):

THE RECOMMENDED SCORING SYSTEM FOR THE SHORT-FORM ICS*male* QUESTIONNAIRE: SEPARATE VOIDING AND INCONTINENCE DOMAINS

Aims of study

The ICS*male* questionnaire was developed to assess symptom occurrence and bothersomeness among men with lower urinary tract symptoms (LUTS) related to benign prostatic enlargement (BPE). It has been shown to be valid, reliable and responsive to change,[1,2] but the requirement to analyse each question separately has made it an unwieldy measure. The aims of this work were (a) to produce a simple and concise scoring system that omitted duplicate or redundant items and took into account sensitivity to change and degree of problem caused by LUTS, and (b) to test the internal and external validity, reliability and responsiveness of the scoring system.

Methods

Two data sets were used:

1. Data from the *CLasP* randomised controlled trial comparing TURP, non-contact laser therapy and conservative management (CM - monitoring with no active intervention) in 340 men with uncomplicated BPE[3] were used to devise the scoring system. Parallel analyses were undertaken to identify redundant items and underlying dimensions. Sensitivity to degree of problem caused and sensitivity to change were examined for each item, and factor analysis and Cronbach's alpha coefficients were employed to investigate groupings of baseline symptoms that could be combined in a score. Redundant and insensitive items were omitted from the final factor analysis. The internal validity of the scoring system was investigated in terms of comparisons of the distributions of scores at baseline and follow-up in each of the treatment groups using regression models. Correlations between ICS*male* and I-PSS scores were computed.

2. Data from the 317 men followed up in Phase II of the ICS-'BPH' study of men with LUTS were used to examine the external validity of the scoring system. ICS*male* scores were investigated using regression models to compare patient groups according to treatment received – TURP, minimally invasive therapies, drug therapies and watchful waiting.

All patients completed the 23-item developmental version of the ICS*male* questionnaire at baseline and follow up (mean 8 months after randomisation in *CLasP*, 16 months in ICS-'BPH' study).

Results

Devising the score: Five items were found not to be sensitive to the degree of problem caused, not to change following active treatment, and not to load highly in the initial factor analysis: bladder pain, sitting

to urinate, always had a weak stream, repeated urination, dysuria and acute retention. These items were omitted from further analyses. Duplicate items were found for reduced stream, hesitancy and dribbling and were also dropped. 13 symptoms were entered into the final factor analysis, with 11 producing two clear factors with scores obtainable by simple addition:

(a) Voiding symptoms (ICS*male*VS): hesitancy, straining to continue, reduced stream, intermittency and incomplete emptying (loadings >0.49, alpha 0.76; minimum 0, maximum 20)

(b) Incontinence (ICS*male*IS): urge, stress, miscellaneous and nocturnal incontinence, urgency and post-micturition dribble (loadings >0.50, alpha 0.78; minimum 0, maximum 24)

The remaining items, frequency and nocturia, were highly problematic and sensitive to change, but did not load into either factor and have a weak correlation with each other (-0.21).

Internal validity of score: Missing data were minimal. ICS*male*VS and ICS*male*IS changed little in those randomised to CM. ICS*male*VS was able to detect significant improvements following laser therapy and TURP compared with CM ($p<0.0001$). ICS*male*IS was also able to detect these differences ($p<0.0001$), although to a slightly lesser degree. Correlations were highest between the ICS*male*VS and the I-PSS (0.68), and somewhat lower between ICS*male*IS and I-PSS (0.36) and ICS*male*VS and ICS*male*IS (0.24).

External validity of score: Again, ICS*male*VS was clearly able to distinguish between the treatment groups in the ICS-'BPH' study ($p<0.0001$). Those who received TURP exhibited greater improvements than those receiving miniminally invasive therapies, and these in turn showed greater improvements than those receiving drug therapies. Patients in the watchful waiting groups changed minimally. The pattern was similar for ICS*male*IS, but to a lesser degree ($p<0.0012$).

Frequency and nocturia: Individually and within a combined score, frequency and nocturia were able to indicate significant differences between the treatment groups. When included in the other scores, however, they reduced the sensitivity of the scores.

Conclusion

This work marks the completion of the development of the ICS*male* questionnaire. The final version (ICS*male*SF) is concise and consists of two simply scored sub-scales for voiding and incontinence (five and six items respectively), with the separate consideration of the symptoms frequency and nocturia. For completeness, the single item 'interference with life' may also be added from ICS*QoL* to allow the separate assessment of impact on everyday life. The final questionnaire is easy to complete, results in minimal missing data, produces valid and reliable data, and is responsive to change. In addition, it now provides a simple, flexible and clinically relevant tool for research and clinical practice. We hope that it will become the tool of choice for the comprehensive evaluation of men with LUTS.

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ANTAGONIST EFFECTS OF ALFUZOSIN ON CONCENTRATION-RESPONSE CURVES TO PHENYLEPHRINE AND NORADRENALINE IN HUMAN PROSTATIC ADENOMA.

The contractile response of human prostatic adenoma to α_1-adrenoceptor activation is mediated by the α_{1A} adrenoceptor subtype but possibly also by another subtype, named α_{1L} (1). Alfuzosin is widely used for the treatment of benign prostatic hyperplasia (BPH); however no *in vitro* studies on the antagonistic potency of Alfuzosin in human prostatic adenoma has been reported to date. Aim of Study: To determine the potency of alfuzosin on α_1-adrenoceptor mediating contractions of human isolated prostatic adenomas, using phenylephrine (PHE) and noradrenaline (Nad) as agonists. Methods: Human prostatic adenomas were obtained from patients affected by BPH undergoing transvesical adenomectomy at the Urological Surgery Department of the Institut