

López-Fando Lavalle L¹, Jiménez Cidre M A¹, Esteban Fuertes M², Prieto Chaparro L³, Arlandis Guzmán S⁴, Franco de Castro A⁵, Salinas Casado J⁶, Castro-Díaz D⁷, Gutierrez Ruiz C⁸, Irujo G⁹

1. Department of Urology. Hospital Ramón y Cajal, Madrid, 2. Department of Urology. Hospital de Paraplégicos, Toledo, 3. Department of Urology. Hospital de Elche, Alicante, 4. Department of Urology. Hospital La Fe, Valencia, 5. Department of Urology. Hospital Clinic i Provincial, Barcelona, 6. Department of Urology. Hospital Clínico San Carlos, Madrid, 7. Department of Urology. Hospital Universitario de Canarias, Tenerife, 8. Department of Urology. Fundación Puigvert, Barcelona, 9. Group of Investigation in Functional Urology and Urodynamics

COST-EFFECTIVENESS STUDY OF DIAGNOSTIC TOOLS FOR THE EVALUATION OF FEMALE WITH OVERACTIVE BLADDER SYMPTOMS

Hypothesis / aims of study

In our clinical practice we have several available tools for the assessment of Overactive Bladder (OAB) symptoms. Results from a previous analysis[1,2] in OAB women concluded that the performance of the diagnostic instruments is different, the most effective tool combination for the evaluation of urgency was 3-day Bladder Diary (3dBD) and BSAQ, and that only BSAQ and 3dBD provide information from all OAB symptoms. Once clinical effectiveness has been assessed, our aim is to address the cost-effectiveness of the use of diagnostic tools in OAB.

Study design, materials and methods

A cost-effectiveness analysis was implemented from the healthcare provider perspective. For that purpose, mean cost effectiveness (€ per case detected) and the incremental cost-effectiveness ratios (ICERs) for each instrument and tool combination were computed. Data were captured from a cross-sectional, multicentre study carried out in Spain in which 247 women ≥18 years old with clinical diagnosis of OAB were eligible.

Effectiveness was determined by the capability to detect a positive case of each symptom (when possible) and considering the completion rate of each instrument (sensitivity parameter). Resource consumption attached to each alternative was estimated by an expert panel (6 experts) from Functional Urology and Urodynamic Units. Unitary costs were obtained from the hospitals account systems and total costs per diagnosis (€ year 2010) were calculated.

Diagnosis criteria for each symptom were defined for each tool: PPIUS = 3 for urgency and PPIUS = 4 for Urge Urinary Incontinence (UUI) (regarding 4 weeks before); BSAQ symptom item ≥2; OABqSF symptom item ≥4 (for urgency, nocturia and UUI); from 3dBD: urgency if PPIUS ≥3, increased daytime frequency if >7 voids/24hours, nocturia if >1 episode and UUI when ≥1episode/24hours; Filling Cystometry: presence of urgency and/or UUI.

Results

When considering instruments individually: BSAQ is the most effective for the detection of urgency and UUI, but PPIUS offers the best cost-effectiveness (ICER=27.32€ per additional diagnosed case for urgency; 6.38€ in the case of UUI). Compared to BSAQ, 3dBD is more cost-effective for frequency and nocturia. Table 1 shows the costs and the effectiveness rates of each tool.

		Urgency	Frequency	Nocturia	UUI
Patient Perception of Intensity of Urgency Scale PPIUS	% completion	96,8	ND	ND	96,8
	Effectiveness (%)	72,1	ND	ND	34,4
	C/E by patient	2,29	ND	ND	4,79
Bladder control Self-Assessment Questionnaire BSAQ	% completion	95,9	95,9	95,9	95,9
	Effectiveness (%)	78,5	83	59,9	61,8
	C/E by patient	4,33	4,09	5,67	5,5
Overactive Bladder questionnaire Short Form OABqSF	% completion	95,9	ND	95,9	96,4
	Effectiveness (%)	69,6	ND	67,6	53
	C/E by patient	13,26	ND	13,65	17,41
3dBD	% completion	90,7	93,9	93,5	89,9
	Effectiveness (%)	78,1	91,3	78,5	54,3
	C/E by patient	26,41	22,56	26,24	37,98

Filling Cystometry	% completion	86,23	ND	ND	85,43
	Effectiveness (%)	44,9	ND	ND	31,2
	C/E by patient	561,12	ND	ND	785,57

ND: not determinable by this tool

C/E: Cost Effectiveness

When assessing combination of instruments: BSAQ-3dBD is more effective than the other combinations for urgency, but PPIUS, BSAQ and OABqSF are more cost-effective if considered individually (ICER of 115.32€ per additional diagnosed case for urgency, 158.64€ and 67.55€ respectively) and also in combination PPIUS-BSAQ, PPIUS-OABqSF and BSAQ-OABqSF (ICER of 334.67€, 162.29€ and 148.20€ respectively). BSAQ-3dBD is also the most effective combination for frequency and nocturia and the combination OABqSF-3dBD for UUI.

Interpretation of results

Individually, BSAQ and 3dBD are the only tools providing information of all OAB symptoms being BSAQ the most cost-effective. The combination of BSAQ-3dBD is cost-effective compared to the other combinations when frequency and nocturia are of clinical relevance.

Concluding message

From the cost-effectiveness perspective, BSAQ -3dBD provides information regarding all OAB symptoms at a reasonable cost.

References

1. Jimenez Cidre M.A, López-Fando L, et al. Overactive bladder syndrome: Seeking the effectiveness in the assessment of urgency. EAU Congress 2012, Abstract 631
2. Jimenez Cidre M.A, López-Fando L, et al. OAB symptoms in women: Do all instruments measure the same? EAU Congress 2012, Abstract 632

Disclosures

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