106

Najjari L[1], Hennemann J[1], Papathemelis T[1], Maass N[1]
1. *University of Aachen*

PERINEAL ULTRASOUND AS A COMPLEMENT TO POP-Q IN THE ASSESSMENT OF CYSTOCELES

Hypothesis / aims of study

Perineal ultrasound (PUS) has already been introduced in the quantification of cystoceles. In the present study, we will propose a new approach to support this purpose, suggest a classification system and show that it is a highly reproducible diagnostic tool.

Study design, materials and methods

PUS data of 120 women were analyzed measuring the distance between the lowest point of the bladder and the mid pubic line (MPL) as a reference line during rest and Valsalva. Results were classified into 3 groups according to the bladder position during Valsalva and compared to POP-Q stages using the κ-coefficient. Results for exact bladder position were checked for interrater reliability using ICC and Pearson's coefficient, results for classification ("group I, II, III") using the κ-coefficient. Bladder positions at rest and Valsalva were correlated with the distance between these points.

Fig 1:
Classification system used for the present study based on the midpubic line (MPL) crossing the symphysis pubis (S) in its longitudinal axis. Bladders are assigned to groups I (> 1cm above MPL), II (< 1cm above MPL) or III (below MPL).
Fig 2: Group III bladder at maximal Valsalva with PV = 0,55 cm. "1" indicates the MPL

Results

Means and standard deviations for groups I, II and III

	Group I	*p* (I versus II)	Group II	*p* (II versus III)	Group III
P_R	3.08 ± 0.50	0.0012	2.60 ± 0.82	0.86	2.56 ± 0.56
P_V	2.26 ± 0.55	<0,00001	0.61 ± 0.26	<0,00001	-0.90 ± 0.48
D_{RV}	0.82 ± 0.49	<0,00001	2.00 ± 0.89	<0,00001	3.47 ± 0.70
Total	2.92 ± 0.61		1.51 ± 1.2		1.41 ± 1.14

P_R = bladder position at rest; P_V = bladder position at maximal Valsalva; D_{RV} = distance from P_R to P_V; *p* indicates the significance level of the established differences between groups I and II as well as between groups II and III.

Table 1: Means and standard deviations for bladder positions of groups I, II and III during rest and Valsalva and for the distance between rest and Valsalva position.

Interpretation of results

Highly significant differences concerning the position at rest and the distance between rest and Valsalva were found between the groups. For the interrater agreement, the Pearson correlation coefficient was ρ = 0.98, the ICC (A-1) = 0.98 and κ = 1.00. Comparing the classification results for POP-Q and PUS, the kappa-coefficient was κ = 0.65.

Concluding message

PUS using the MPL and the introduced classification system is a highly reliable tool for the evaluation of cystoceles. PUS shows good correlation with POP-Q, as needed for the clinical routine. Furthermore, PUS has many advantages in addition to the POP-Q system, first of all the doubtless identification of the descending organ. Further studies are needed to evaluate the clinical use of the classification system proposed here.

Disclosures

Funding: none **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** EK University of Aachen **Helsinki:** Yes **Informed Consent:** Yes