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PERINEAL ULTRASOUND AS AN ALTERNATIVE 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 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. The MPL was chosen as a reference line because of a 2-point-fixation in the symphysis pubis, so the measure is not influenced by the viewing angle. This is not given in the horizontal line touching the inferior margin of the symphysis proposed by [1]. Results were classified into 3 groups according to the bladder position during Valsalva, compared to POP-Q stages and checked for interrater reliability using the kappa-coefficient, ICC and Pearson's coefficient. Bladder positions at rest and Valsalva were correlated with the distance between these points.
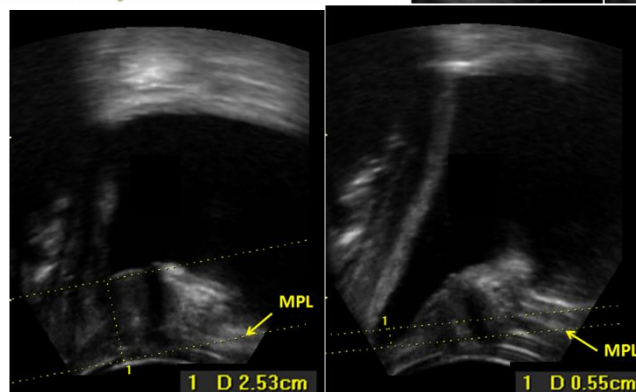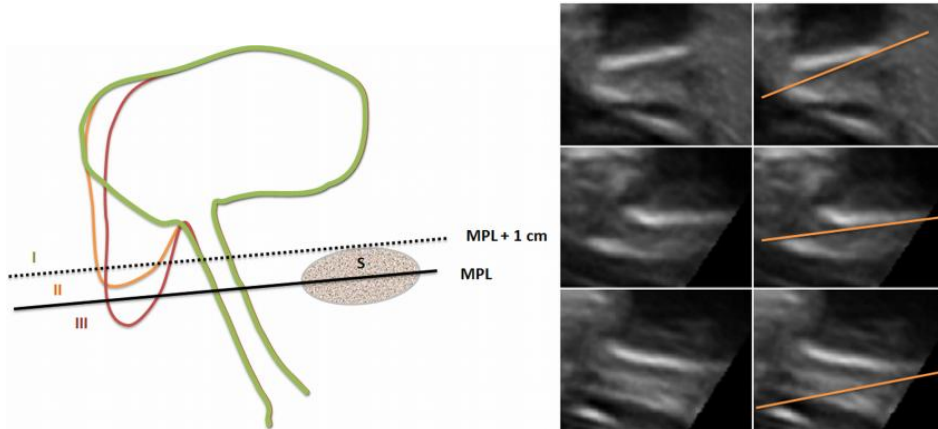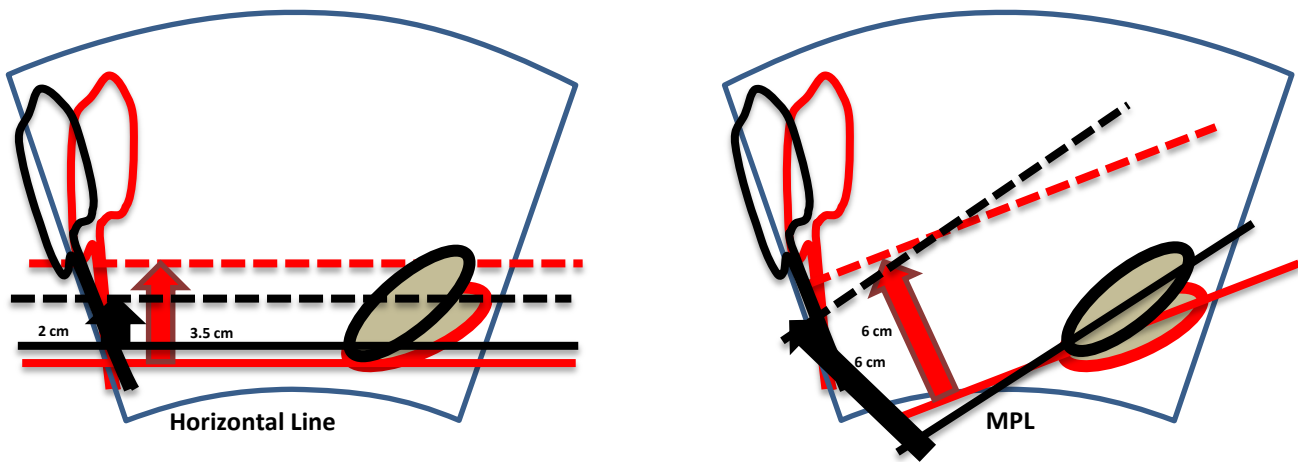
Results

Highly significant differences concerning the position at rest and the distance between rest and Valsalva were established between the groups. For the interrater agreement of the exact bladder position, the Pearson correlation coefficient was $\rho = 0.98$ and the ICC (A-1) = 0.98. For the results of the classification "group I, II, III," we found $\kappa = 1.00$. Comparing the classification results for POP-Q and PUS, the kappa-coefficient was $\kappa = 0.65$.

From group I to group II and from group II to group III the distance (DRV) from resting position (PR) to Valsalva position (PV) increased significantly.
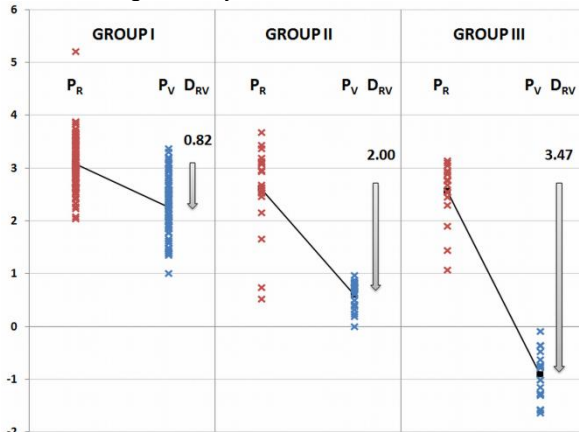
Interpretation of results

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 compared to the POP-Q system, first of all the doubtless identification of the bladder as the cause of the prolapse.

Following our classification, group III bladders descend significantly further during Valsalva than group II bladders, which descend significantly more than group I bladders. A correlation with the severity of symptoms and the need for surgical intervention is therefore possible and should be confirmed in future studies.

Concluding message

PUS using the mid pubic line (MPL) is a highly reliable tool for the evaluation and classification of cystoceles.

References

1. H. P. Dietz (2001) Ultrasound in the quantification of female pelvic organ prolapse. Ultrasound Obstet Gynecol (18):511-514

Disclosures