

Differential diagnosis of middle compartment pelvic organ prolapse with transperineal ultrasound

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Abstract

Objectives:To identify the best parameter(pubis-cervix measurement, pubis-uterine fundus measurement or pubis-Douglas cul-de-sac measurement) on transperineal ultrasound, based on the difference between measurements taken at rest and with the Valsalva maneuver, for differential diagnosis presurgical between uterine prolapse (UP) and cervical elongation(CE) without UP. **Design:**Observational prospective cohort study. **Setting:**Valme University Hospital, Seville, Spain. **Sample:**60 consecutively recruited patients who underwent corrective surgery of the middle compartment (UP or CE without UP). **Methods:**A transperineal ultrasound was performed, and the descent of the pelvic organ was measured in relation to the posteroinferior margin of the pubis in the midsagittal plane, referencing the uterine fundus, Douglas cul-de-sac and the cervix. **Main outcome measures:**Difference between measurements taken at rest and with the Valsalva for the uterine fundus, Douglas cul-de-sac and the cervix maneuver. **Results:**Receiver-operating characteristic(ROC) curves were constructed for the three evaluated measures, based on the difference between rest and Valsalva, for the diagnosis of UP. For the pubis-cervix distance, an area under the curve(AUC) of 0.59 was obtained; for the pubis-uterine fundus distance, the AUC was 0.81; and for the pubis-Douglas cul-de-sac distance, the AUC was 0.69. Based on the best AUC(the difference in the pubis-uterine fundus distance at rest and with the Valsalva maneuver), a cut-off point of 15 mm was established for the diagnosis of UP (sensitivity:75%; specificity:95%; positive predictive value:86% and negative predictive value:89%). **Conclusions:**A difference [?]15 mm in the pubis-uterine fundus distance at rest and with the Valsalva maneuver is useful to differentiate UP from CE without UP by ultrasound.

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