

Bladder ultrasonography for diagnosing detrusor overactivity: test accuracy study and economic evaluation

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Plain English summary

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Overactive bladder (OAB) is a distressing condition that affects about 12% of the population. The symptoms are the frequent and urgent desire to urinate, sometimes with loss of control of the bladder. The underlying cause may be uncontrollable contractions of the bladder wall called detrusor overactivity. These contractions can be observed during an intimate test called urodynamics (UDS), in which the bladder is artificially filled with water. Drugs can then be prescribed to relax the bladder.

The contractions cause the bladder wall to thicken and the thickness can be measured by vaginal ultrasonography. If there is a good relationship between bladder wall thickness, contractions and symptoms, ultrasonography could replace UDS.

We undertook a study in over 600 women with OAB symptoms. Participants underwent both ultrasonography and UDS. Women preferred the ultrasonography test to UDS, but we found that the ultrasonography results did not relate to the UDS diagnosis, nor to the severity of symptoms. Repeating ultrasonography did not produce consistent measurements.

We also asked women about their symptoms and treatments at 6 and 12 months after testing. We found that doctors use UDS results to provide the most appropriate treatment, but only 57% of women reported symptom improvements. We also found UDS provides value for money.

The results of our study conclusively show that ultrasonography is not useful for diagnosis of OAB. More research is needed to compare whether women have better outcomes if treatment decisions are based on the urodynamic results or on symptoms only.

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