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Clinical aspects of Real Time Ultrasound use in the Assessment of Male Pelvic Floor Muscle Function

Hypothesis / aims of study
The function of the pelvic floor muscles following surgical removal of the prostate may be compromised causing continence problems. Assessing the pelvic floor muscles of male patients with the conventional method of Digital Rectal Examination (DRE) is an invasive process that may be perceived as unpleasant by the patient and embarrassing by the therapist. Real time ultrasound (RTUS) has been used with female patients as an alternative to internal assessments. Controlling aspects of the assessment of the male pelvic floor that could affect reliability and validity of abdominal RTUS is examined in this paper.

Study design, materials and methods
Those recruited to the study were 28 men (mean age 66.2) with a history of treatment for prostate cancer. Both DRE and RTUS were used in assessment. The RTUS readings were repeated by different therapists to assess reliability and the findings from the procedures were correlated for evaluation of validity.

Results
An inability to maintain a moderately full bladder and having a large amount of scar tissue were found to cause the most difficulty in getting a complete picture of pelvic floor movement. Men who were continent had more movement of the bladder wall on RTUS than those who were incontinent (p=0.043). Measurements on screen correlated moderately with DRE findings (r=0.57, p= 0.002), and RTUS was found to have good reliability (ICC=.90).

Interpretation of results
By careful placement of the RTUS head, and bladder loading with small amounts of fluid, RTUS can be used clinically to examine male pelvic floor function. Its use would be enhanced once it has been established by DRE that a true pelvic floor contraction is occurring. A factor limiting the use of the RTUS is that it cannot be used to determine the strength of the pelvic floor muscle. RTUS can however be used to give an indication of pelvic floor function when DRE is contraindicated.

Concluding message
RTUS is a useful adjunct to assessment of the function of the male pelvic floor.

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What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**Yes**
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Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**