

BURDEN OF TESTING IN THE ASSESSMENT OF FECAL INCONTINENCE

Hypothesis / aims of study

Diagnostic tools are used to determine the cause of fecal incontinence complaints and to guide future therapy. In the evaluation of fecal incontinence clinicians can use a large variety of diagnostic tools, including anorectal function tests and anorectal imaging techniques, next to medical history and physical examination. No consensus exists concerning the optimal diagnostic strategy in the assessment of fecal incontinence. Defining such a diagnostic strategy requires an evaluation of the effectiveness and costs of diagnostic tests and may include the burden these tests pose on patients.

This study was initiated to evaluate the burden of endoanal MRI, defecography and anorectal functional testing in patients with fecal incontinence.

Study design, materials and methods

Patients underwent three diagnostic sessions: one with endoanal MRI, a second with defecography, and a third one with a combination of anorectal function tests, consisting of anorectal manometry, pudendal nerve terminal motor latency, rectal capacity measurement, anal and rectal sensitivity measurement, and endoanal sonography. Only the data of patients who experienced all three test sessions are analysed in this study.

Consenting consecutive patients underwent a standard testing protocol. After finishing all tests, patients were requested to complete a self-administered questionnaire. The questionnaire consisted of three modules. First, a standard formatted Likert scoring module was used with four items concerning pain, embarrassment, discomfort, and anxiety. Responses were scored on a five-point scale with 1 indicating 'none' and 5 indicating 'extreme'. By adding the items scores, an overall burden score was determined. Second, a comparative assessment module was used, forcing patients to rank the different tests from least to most inconvenient. Finally, a behavioural intent module was used by asking patients whether or not they would recommend each test to friends or relatives, if opportune. Statistical analysis was performed with non-parametric tests.

Results

For 176 (20 male; 156 female) patients all test data were available and could be analysed. These patients had a mean age of 59.2 (SD \pm 12.1) years and duration of incontinence 8.4 (SD \pm 8.8) years. The reported burden of testing was low for all three tests, with average burden scores in the 1 to 2 range on all four items (figure 1).

For embarrassment ($p < .001$), discomfort ($p < .001$) and total burden ($p = .001$) MRI had the lowest average score (1.53, 1.63, and 6.08 respectively) and defecography the highest (1.86, 1.99, and 6.72 respectively). MRI scored also lowest regarding pain (1.36), whereas the highest pain score was observed for the anorectal function combination (1.74). The three tests did not differ significantly ($p = .115$) with respect to anxiety. MRI was scored as least inconvenient by 70% of patients. Only a small number of patients would not recommend one of the tests to a friend or relative: 5 for MRI (2.8%), 9 for defecography (6.6%), and 4 for the anorectal function test combination (2.8%).

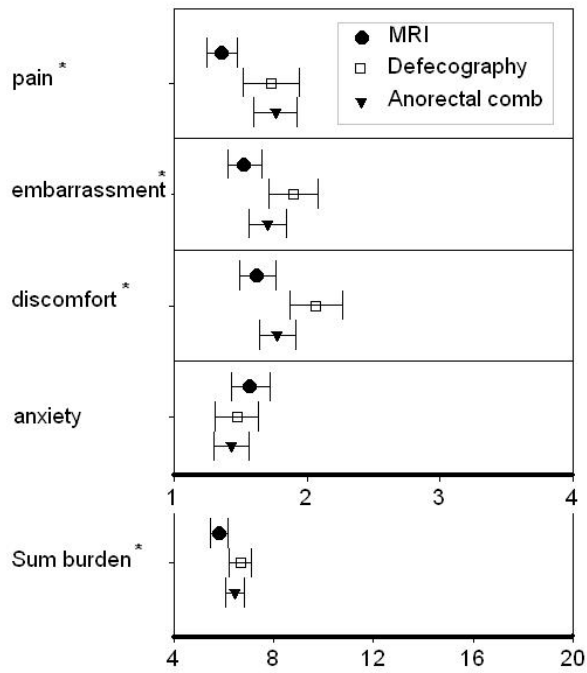
Interpretation of results

We found significant differences in patient burden between endoanal MRI, defecography and anorectal functional testing in patients with fecal incontinence, yet the average burden scores were low for all tests.

Concluding message

The role of burden of testing in the search for an optimal strategy is limited. The optimal diagnostic pathway will therefore be primarily based on maximizing diagnostic accuracy at acceptable costs. Efforts to collect more information on test accuracy and costs are underway.

Figure 1 Burden scores of the three tests in fecal incontinence with respect to pain, embarrassment, discomfort anxiety, and sum burden.



* Difference between 3 tests ($p < 0.05$)

Values indicate mean and 95% confidence interval; $n=176$.

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