

INITIAL VALIDATION OF A NEW ANORECTAL ASSESSMENT TOOL

Hypothesis / aims of study:

Pelvic floor muscle dysfunction describes a wide range of clinical problems that include urinary and faecal incontinence, pelvic organ prolapse constipation and disordered defaecation. There are well established and validated methods for the assessment of pelvic floor muscle function centered in the anterior compartment for urinary incontinence and pelvic organ prolapse (1). These have been very useful clinically, for research and are a common language for communication between professionals. To date, there has been no validated assessment tool or rating scale for recording the results of digital anal assessment. This results in lack of a common language between professionals and problems with identifying clinical changes in muscle function in the many units where manometry is not available. This limits both clinical communication and research. A similar scale to that developed for assessment of pelvic floor vaginal examination (1: Modified Oxford Scale) has been developed (Table 1: in clinical use laid out over a single page). It covers the function of both the internal and external anal sphincters and ano-rectal coordination, thereby giving a global assessment of function both in terms of evacuation and continence.

The aim of the study was to establish inter-rater reliability of the anorectal assessment tool as the first stage in validation of this new instrument.

Table 1:

Resting tone	Squeeze	Evacuation
Gaping: At rest: Yes / No With traction: Yes / No	Puborectalis: 0 1 2 3 4 5 Strength of maximum anal squeeze: 0 1 2 3 4 5	Paradoxical contraction on straining: Yes / No
Resistance (to digital insertion): 0 1 2 3 4 5	Endurance of maximum squeeze: (seconds) Repeats (up to 10):	Propulsive effort during simulated evacuation: Good / fair / poor
Marked perineal descent: At rest: Yes/No During straining: Yes/No	Sub-max endurance squeeze (seconds):	Relaxation during simulated evacuation: Good / fair / poor
Cough reflex: Absent / weak / good	Fast twitch repeats (Up to 10):	Balloon expulsion: Yes / No / not done
Scars: Skin tags: Haemorrhoids:	Co-ordination of squeeze: Good / fair / poor Response: Good / fair / poor	

Key:

Resistance

0=open at rest; 1=no resistance; 2=poor; 3=fair; 4=good; 5=unable to insert finger

Puborectalis

0=nothing; 1=flicker; 2=weak/partial; 3=moderate + slight lift; 4=good + lift; 5=able to squeeze and lift against resistance

Max squeeze

0=nothing; 1=flicker; 2=weak/partial; 3=moderate + slight lift; 4=good + lift; 5=able to squeeze and lift against resistance

Study design, materials and methods:

Patients attending for biofeedback with symptoms of constipation or faecal incontinence were invited to participate. Those consenting were examined by two clinicians in random order; both clinicians were blinded to each other's findings. Examination took place with the patient lying in the left lateral position with knees flexed, and after visual inspection a gloved lubricated finger was inserted into the anus to conduct the assessment.

Our hypothesis was that there would be agreement within one point on the 0-5 scales for examination and 90%+ agreement on the categorical observations.

Results:

69 patients (67 women and two men, mean age 51 years, range 22-84 years).

were examined by two investigators blinded to each other's findings and the results were recorded on the standard form (Table 1). The primary presenting problem was faecal incontinence in 41 and constipation in 24, with 4 patients reporting another problems (e.g. anal pain). Data were input into SPSS for analysis.

Observation: Examiners agreed about the presence or absence of scars in 93% of patients. However, there was less agreement about the presence or absence of skin tags (77% agreement) or visible haemorrhoids (80% agreement). There was also agreement about perineal descent at rest (97%) and during straining (93%). There was 97% agreement about gaping at rest and 72% agreement about gaping with traction.

Digital examination: results are given in Table 2. Complete agreement indicates that both examiners recorded identical results. Agreement to within one category indicates either complete agreement or to within one category.

Table 2:

Criteria	Complete agreement	Agreement to within one category
Resistance to finger insertion	56%	97%
Strength of maximum squeeze	39%	94%

Endurance of maximum squeeze	27%	72%
Number of repetitions of squeeze	22%	62%
Fast twitch repeats	49%	57%
Coordination of squeeze effort	55%	96%
Response	54%	91%
Paradoxical contraction	87%	N/A
Propulsive effort	52%	96%
Relaxation	71%	91%

Interpretation of results:

Results indicate that experienced clinicians interpret the results of the anorectal assessment in reasonably similar, but not identical manner. Lowest agreement was found on criteria that might reasonably be expected to alter on two consecutive examinations (such as ability to conduct fast-twitch contractions of a fatigable muscle).

Concluding message:

A structured anorectal examination recorded in a standard format warrants further evaluation as a clinical and research tool. Further discussion and agreement is needed on the crucial elements of anorectal assessment.

Reference:

Physiotherapy (2001). **87**: 12; 631-642.

<i>Specify source of funding or grant</i>	None
<i>Is this a clinical trial?</i>	No
<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	Yes
<i>Specify Name of Ethics Committee</i>	Harrow Research Ethics Committee
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	Yes