The Standardisation of Terminology of Female Pelvic Organ Prolapse and Pelvic Floor Dysfunction

Am J Obstet Gynec (1996) 175:10–17

Richard C. Bump, Anders Mattiasson, Kari B0, Linda P. Brubaker, John O. L. DeLancey, Peter Klarskov, Bob L. Shull and Anthony R. B. Smith

Produced by the International Continence Society Committee on Standardisation of Terminology (Anders Mattiasson, chairman), Subcommittee on Pelvic Organ Prolapse and Pelvicfloor Dysfunction (Richard Bump, chairman) in collaboration with the American Urogynecologic Society and the Society of Gynecologic Surgeons.

Condensation

A system of standard terminology for the description and evaluation of pelvic organ prolapse and pelvic floor dysfunction, adopted by several professional societies, is presented.

1. Introduction

The International Continence Society (ICS) has been at the forefront in the standardisation of terminology of lower urinary tract function since the establishment of the Committee on Standardisation of Terminology in 1973. This committee's efforts over the past two decades have resulted in the world-wide acceptance of terminology standards that allow clinicians and researchers interested in the lower urinary tract to communicate efficiently and precisely. While female pelvic organ prolapse and pelvic floor dysfunction are intimately related to lower urinary tract function, such accurate communication using standard terminology has not been possible for these conditions since there has been no universally accepted system for describing the anatomic position of the pelvic organs. Many reports use terms for the description of pelvic organ prolapse which are undefined; none of the many aspiring grading systems has been adequately validated with respect either to reproducibility or to the clinical significance of different grades. The absence of standard, validated definitions prevents comparisons of published series from different institutions and longitudinal evaluation of an individual patient.

In 1993, an international, multidisciplinary committee composed of members of the ICS, the American Urogynecologic Society (AUGS), and Society of Gynecologic Surgeons (SGS) drafted this standardisation document following the committee's initial meeting at the ICS meeting in Rome. In late 1994 and early 1995, the final draft was circulated to members of all three societies for a one-year review and trial. During that year several minor revisions were made and reproducibility studies in six centres in the United States and Europe were completed, documenting the inter- and intrarater reliability and clinical utility of the system in 240 women.'~5 The standardisation document was formally adopted by the ICS in October 1995, by the AUGS in January 1996, and by the SGS in March 1996. The goal of this report is to introduce the system to clinicians and researchers.

Acknowledgement of these standards in written publications and scientific presentations should be indicated in the Methods Section with the following statement: "Methods, definitions and descriptions conform to the standards recommended by the International Continence Society except where specifically noted."

2. Description of Pelvic Organ Prolapse

The clinical description of pelvic floor anatomy is determined during the physical examination of the external genitalia and vaginal canal. The details of the examination technique are not dictated by this document but authors should precisely describe their technique. Segments of the lower reproductive tract will replace such terms as "cystocele, rectocele, enterocele, or urethrovesical junction" because these terms may imply an unrealistic certainty as to the structures on the other side of the vaginal bulge particularly in women who have had previous prolapse surgery.

2.1. Conditions of the Examination

It is critical that the examiner sees and describes the maximum protrusion noted by the individual during her daily activities. Criteria for the end point of the examination and the full development of the prolapse should be specified in any report. Suggested criteria for demonstration of maximum prolapse should include one or all of the following: (a) Any protrusion of the vaginal wall has become tight during straining by the patient. (b) Traction on the prolapse causes no further descent. (c) The subject confirms that the size of the prolapse and extent of the protrusion seen by the examiner is as extensive as the most severe protrusion which she has experienced. The means of this confirmation should be specified. For example, the subject may use a small hand-held mirror to visualise the protrusion. (d) A standing, straining examination confirms that the full extent of the prolapse was observed in other positions used.

Other variables of technique that should be specified during the quantitative description and ordinal staging of pelvic organ prolapse include the following: (a) the position of the subject; (b) the type of examination table or chair used; (c) the type of vaginal specula, retractors, or tractors used; (d) diagrams of any customised devices used; (e) the type (e.g., Valsalva manoeuvre, cough) and, if measured, intensity (e.g. vesical or rectal pressure) of straining used to develop the prolapse maximally; (f) fullness of bladder and, if the bladder was empty, whether this was by spontaneous voiding or by catheterisation; (g) content of rectum; (f) the method by which any quantitative measurements were made.

2.2. Quantitative Description of Pelvic Organ Position

This descriptive system is a tandem profile in that it contains a series of component measurements grouped together in combination, but listed separately in tandem, without being fused into a distinctive new expression or “grade”. It allows for the precise description of an individual woman’s pelvic support without assigning a “severity value”. Second, it allows accurate site-specific observations of the stability or progression of prolapse over time by the same or different observers. Finally, it allows similar judgements as to the outcome of surgical repair of prolapse. For example, noting that a surgical procedure moved the leading edge of a prolapse from 0.5 cm beyond the hymeneal ring to 0.5 cm above the hymeneal ring denotes more meagre improvement than stating that the prolapse was reduced from Grade 3 to Grade 1 as would be the case using some current grading systems.

2.2.1. Definition of Anatomic Landmarks

Prolapse should be evaluated by a standard system relative to clearly defined anatomic points of reference. These are of two types, a fixed reference point and defined points which are located with respect to this reference.

(a) *Fixed Point of Reference*. Prolapse should be evaluated relative to a fixed anatomic landmark which can be consistently and precisely identified. The hymen will be the fixed point of reference used throughout this system of quantitative prolapse description. Visually, the hymen provides a precisely identifiable landmark for reference. Although it is recognised that the plane of the hymen is somewhat variable depending upon the degree of levator ani dysfunction, it remains the best landmark available. “Hymen” is preferable to the ill-defined and imprecise term “introitus”. The anatomic position of the six defined points for measurement should be centimetres above or proximal to the hymen (negative number) or centimetres below or distal to the hymen (positive number) with the plane of the hymen being defined as zero (O). For example, a cervix that protruded 3 cm distal to the hymen would be + 3 cm.

(b) *Defined Points*. This site-specific system has been adapted from several classifications developed and modified by Baden and Walker.6 Six points (two on the anterior vaginal wall, two in the superior vagina, and two on the posterior vaginal wall) are located with reference to the plane of the hymen.

Anterior Vaginal Wall. Because the only structure directly visible to the examiner is the surface of the vagina, anterior prolapse should be discussed in terms of a segment of the vaginal wall rather than the organs which lie behind it. Thus, the term “anterior vaginal wall prolapse” is preferable to “cystocele” or “anterior enterocele” unless the organs involved are identified by ancillary test two anterior sites are as follows:

Point Aa. A point located in the midline of the anterior vaginal wall three (3) cm proximal to the external urethral meatus. This corresponds to the approximate location of the “urethro-vesical crease”, a visible landmark of variable prominence that is obliterated in many patients. By definition, the range of position of Point Aa relative to the hymen is -3 to + 3 cm.

Point Ba. A point that represents the most distal (i.e., most dependent) position of any part of the upper anterior vaginal wall from the vaginal cuff or anterior vaginal fornix to Point Aa. By definition, Point Ba is at -8 cm in the absence of prolapse and would have a positive value equal to the position of the cuff in women with total post-hysterectomy vaginal eversion.

Superior Vagina. These points represent the most proximal locations of the normally positioned lower reproductive tract. The two superior sites are as follows:

Point C. A point that represents either the most distal (i.e., most dependent) edge of the cervix or the leading edge of the vaginal cuff (hysterectomy scar) after total hysterectomy.

Point D. A point that represents the location of the posterior fornix (or pouch of Douglas) in a woman who still has a cervix. It represents the level of uterosacral ligament attachment to the proximal posterior cervix. It is included as a point of measurement to differentiate suspensory failure of the uterosacralcardinal ligament complex from cervical elongation. When the

location of Point C is significantly more positive than the location of Point D, this is indicative of cervical elongation which may be symmetrical or eccentric. Point D is omitted in the absence of the cervix.

Posterior Vaginal Wall. Analogous to anterior prolapse, posterior prolapse should be discussed in terms of segments of the vaginal wall rather than the organs which lie behind it. Thus, the term “posterior vaginal wall prolapse” is preferable to “rectocele” or “enterocele” unless the organs ;nvolved are identified by ancillary tests. If small bowel appears to be present in the rectovaginal space, the examiner should comment on this fact and should clearly describe the basis for this clinical impression (e.g., by observation of peristaltic activity in the distended posterior vagina, by palpation of loops of small bowel between an examining finger in the rectum and one in the vagina, etc.). In such cases, a “pulsion” addendum to the point Bp position maybe noted (e.g., Bp = +5 [pulsion]; see Sections 3.1(a) and 3.1(b) for further discussion). The two posterior sites are as follows:

Point Bp. A point that represents the most distal (i.e., most dependent) position of any part of the upper posterior vaginal wall from the vaginal cuff or posterior vaginal fornix to Point Ap. By definition, Point Bp is at -3 cm in the absence of prolapse and would have a positive value equal to the position of the cuff in a women with total post-hysterectomy vaginal eversion.

Point Ap. A point located in the midline of the posterior vaginal wall three (3) cm proximal to the hymen. By definition, the range of position of Point Ap relative to the hymen is -3 to +3 cm.

(c) *Other Landmarks and Measurements*. The genital hiatus (GH) is measured from the middle of the external urethral meatus to the posterior midline hymen. If the location of the hymen is distorted by a loose band of skin without underlying muscle or connective tissue, the firm palpable tissue of the perineal body should be substituted as the posterior margin for this measurement. The perineal body (PB) is measured from the posterior margin of the genital hiatus to the midanal opening. Measurements of the genital hiatus and perineal body are expressed in centimetres. The total vaginal length (TVL) is the greatest depth of the vagina in cm when Point C or D is reduced to its full normal position. Note: Eccentric elongation of a prolapsed anterior or posterior vaginal wall should not be included in the measurement of total vaginal length. The points and measurements are represented in Fig. A.1.4.1.

2.2.2. Making and Recording Measurements

The position of Points Aa, Ba, Ap, Bp, C, and (if applicable) D with reference to the hymen should be measured and recorded. Positions are expressed as centi

Fig. A.1.4.1 The six sites (*Aa, Ba, C, D, Bp* and *Bp*), the genital hiatus (*gh*), perineal body (*pb*) and total vaginal length (*tvl*) used metres above or proximal to the hymen (negative number) or centimetres below or distal to the hymen

(positive number) with the plane of the hymen being defined as zero (0). While an examiner may be able to make measurements to the nearest half (0.5) cm, it is doubtful that further precision is possible. All reports should clearly specify how measurements were derived. Measurements may be recorded as a simple line of numbers (e.g., -3, -3, -7, -9, -3, -3, 9, 2, 2 for Points Aa, Ba, C, D, Bp, Ap, total vaginal length, genital hiatus, and perineal body respectively). Note that the last three numbers have no + or – sign attached to them because they denote lengths and not positions relative to the hymen. Alternatively, a three by three “tic-tac-toe” grid can be used to organise concisely the measurements as noted in Fig. A. 1.4.2 and/or a line diagram of the configuration can be drawn as noted in Figs A.1.4.3 and A.1.4.4. Figure A.1.4.3 is a grid and line diagram contrasting measurements indicating normal support to those of post hysterectomy vaginal eversion. Figure A.1.4.4 is a grid and line diagram representing predominant anterior and posterior vaginal wall prolapse with partial vault descent.

2.3. Ordinal Stages of Pelvic Organ Prolapse

The tandem profile for quantifying prolapse provides a precise description of anatomy for individual patients. However, because of the many possible combinations, such profiles cannot be directly ranked; the many variations are too numerous to permit useful analysis and comparisons when populations are studied. Consequently they are analogous to other tandem profiles such as the TNM Index for various cancers. For the TNM description of individual patient’s cancers to be useful in population studies evaluating prognosis or response to therapy, they are clustered into an ordinal set of stages. Ordinal stages represent adjacent categories that can be ranked in an ascending sequence of magnitude, but the categories are assigned arbitrarily and the intervals between them cannot be actually measured. While the committee is aware of the arbitrary nature of an ordinal staging system and the possible biases that it introduces, we conclude such a system is necessary if populations are to be described and compared, if

Fig. A.1.4.2 A three-by-three grid for recording the quantitative description of pelvic organ support.

Fig. A.1.4.3 a Example of a grid and line diagram of complete eversion of the vagina. The most distal point of the anterior wall (Point Ba), the vaginal cuff scar (Point C) and the most distal point of the posterior wall (Bp) are aH at the same position (+8) and Points Aa and Ap are maximally distal (both at +3). The fact that the total vagina length equals the maximum protrusion makes this a Stage IV prolapse. b Example of normal support. Points Aa and Ba and Points Ap and Bp are all -3 since there is no anterior or posterior wall descent. The lowest point of the cervix is 8 cm above the hymen (-8) and the posterior

fornix is 2 cm above this (-10). The vaginal length is 10 cm and the genital hiatus and perineal body measure 2 and 3 cm respectively. This represents Stage 0 support.

Fig. A.1.4.4 a Example of a grid and line diagram of a predominant anterior support defect. The leading point of the prolapse is the upper anterior vaginal wall, Point Ba (+6). Note that there is significant elongation of the bulging anterior wall. Point Aa is maximally distal (+3) and the vaginal cuff scar is 2 cm above the hymen (C = -2). The cuff scar has undergone 4 cm of descent since it would be at -6 (the total vaginal length) if it were perfectly supported. In this example, the total vaginal length is not the maximum depth of the vagina with the elongated anterior vaginal wall maximally reduced, but rather the depth of the vagina at the cuff with Point C reduced to its normal full extent as specified in Section 2.2.1 (c). This represents Stage III-Ba prolapse. b Example of a predominant posterior support defect. The leading point of the prolapse is the upper posterior vaginal wall, Point Bp (+5). Point Ap is 2 cm distal to the hymen (+2) and the vaginal cuff scar is 6 cm above the hymen (-6). The cuff has undergone only 2 cm of descent since it would be at -8 (the total vaginal length) if it were perfectly supported. This represents Stage III-Bp prolapse.

symptoms putatively related to prolapse are to be evaluated, and if the results of various treatment options are to be assessed and compared.

Stages are assigned according to the most severe portion of the prolapse when the full extent of the protrusion has been demonstrated. In order for a stage to be

s6: Urodynamics

assigned to an individual subject, it is essential that her quantitative description be completed first. The 2 cm buffer related to the total vaginal length in Stages O and IV is an effort to compensate for vaginal distensibility and the inherent imprecision of the measurement of total vaginal length. The 2 cm buffer around the hymen in Stage II is an effort to avoid confining a stage to a single plane and to acknowledge practical limits of precision in this assessment. Stages can be subgrouped according to which portion of the lower reproductive tract is the *most distal* part of the prolapse using the following letter qualifiers: a = anterior vaginal wall, p = posterior vaginal wall, C = vaginal cuff, Cx = cervix, and Aa, Ap, Ba, Bp, and D for the points of measurement already defined. The five stages of pelvic organ support (O through IV) are as follows:

Stage 0. No prolapse is demonstrated. Points Aa, Ap, Ba, and Bp are all at -3 cm and either Point C or D is between – TVL cm and – (TVL -2) cm (i.e., the

quantitation value for point C or D is ~ – (TVL -2) cm). Figure 3a represents Stage 0.

Stage I. The criteria for Stage O are not met but the most distal portion of the prolapse is more than 1 cm above the level of the hymen (i.e., its quantitation value is < -1 cm).

Stage II. The most distal portion of the prolapse is 1 cm or less proximal to or distal to the plane of the hymen (i.e., its quantitation value is >1 cm but <1 cm).

Stage III. The most distal portion of the prolapse is more than 1 cm below the plane of the hymen, but protrudes no further than two centimetres less than the total vaginal length in cm (i.e., its quantitation value is > + 1 cm but < + (TVL -2) cm). Figure A.1.4.4a represents Stage III-Ba and Figure A.1.4.4b represents Stage III-Bp prolapse.

Stage IV. Essentially complete eversion of the total length of the lower genital tract is demonstrated. The distal portion of the prolapse protrudes to at least (TVL -2) cm (i.e., its quantitation value is > + (TVL -2) cm). In most instances, the leading edge of stage IV prolapse will be the cervix or vaginal cuff scar. Figure 3B represents Stage IV-C prolapse.

3. Ancillary Techniques for Describing Pelvic Organ Prolapse

This series of procedures may help further characterise pelvic organ prolapse in an individual patient. They are considered ancillary either because they are not yet standardised or validated or because they are not universally available to all patients. Authors utilising these procedures should include the following information in their manuscripts: (a) Describe the objective information they intended to generate and how it enhanced their ability to evaluate or treat prolapse. (b) Describe precisely how the test was performed, any instruments that were used, and the specific testing conditions so that other authors can reproduce the study. (c) Document the reliability of the measurement obtained with the technique.

3.1. Supplementary Physical Examination Techniques

Many of these techniques are essential to the adequate pre-operative evaluation of a patient with pelvic organ prolapse. While they do not directly affect either the tandem profile or the ordinal stage, they are important for the selection and performance of an effective surgical repair. These techniques include, but are not necessarily limited to, the following: (a) performance of a digital rectal-vaginal examination while the patient is straining and the prolapse is maximally developed to differentiate between a high rectocele and an enterocele; (b) digital assessment of the contents of the rectal-vaginal septum during the examination noted in 3.1(a) to differentiate between a “traction” enterocele (the posterior cul-de-sac is pulled down with the prolapsing cervix or vaginal cuff but is not distended by intestines) and a “pulsion” enterocele (the intestinal contents of the enterocele distend the

rectal-vaginal septum and produce a protruding mass); (c) Q-tip testing for the measurement of urethral axial mobility; (d) measurements of perineal descent; (e) measurements of the transverse diameter of the genital hiatus or of the protruding prolapse; (f) measurements of vaginal volume; (g) description and measurement of rectal prolapse; (h) examination techniques for differentiating between various types of defects (e.g., central versus paravaginal defects of the anterior vaginal wall).

3.2. Endoscopy

Cystoscopic visualisation of bowel peristalsis under the bladder base or trigone may identify an anterior enterocele in some patients. The endoscopic visualisation of the bladder base and rectum and observation of the voluntary constriction and dilation of the urethra, vagina and rectum has, to date, played a minor role in the evaluation of pelvic floor anatomy and function. When such techniques are described, authors should include the type, size and lens angle of the endoscope used, the doses of any analgesic, sedative or anaesthetic agents used, and a statement of the level of consciousness of the subjects in addition to a description of the other conditions of the examination.

3.3. Photography

Still photography of Stage II and greater prolapse may be utilised both to document serial changes in individual patients and to illustrate findings for manuscripts and presentations. Photographs should contain an internal frame of reference such as a centimetre ruler or tape.

3.4. Imaging Procedures

Different imaging techniques have been used to visualise pelvic floor anatomy, support defects and relationships among adjacent organs. These techniques may be more accurate than physical examination in determining which organs are involved in pelvic organ prolapse. However, they share the limitations of the other techniques in this section, i.e., a lack of standardisation, validation and/or availability. For this reason, no specific technique can be recommended but guidelines for reporting various techniques will be considered.

3.4.1. General Guidelinesf or Imaging Procedures

Landmarks should be defined to allow comparisons with other imaging studies and the physical examination. The lower edge of the symphysis pubis should be given high priority. Other examples of bony landmarks include the superior edge of the public symphysis, the ischial spine and tuberosity, the obturator foramen, the tip of the coccyx and the promontory of the sacrum. All reports on imaging techniques should specify the following: (a) position of the patient including the position of her legs; (Images in manuscripts should be oriented to reflect the patient’s position when the study was performed and should not be oriented to suggest an erect position unless the patient was erect.) (b) specific verbal instructions given to the patient; (c) bladder volume and

content and bowel content, including any pre-study preparations; and (d) the performance and display of simultaneous monitoring such as pressure measurements.

3.4.2. Ultrasonography

Continuous visualisation of dynamic events is possible. All reports using ultrasound should include the following information: (a) transducer type and manufacturer (e.g., sector, linear, MHz); (b) transducer size; (c) transducer orientation; and (d) route of scanning (e.g., abdominal, perineal, vaginal, rectal, urethral).

3.4.3. Contrast Radiography

Contrast radiography may be static or dynamic and may include voiding colpo-cysto-urethrography, defecography, peritoneography and pelvic fluoroscopy among others. All reports of contrast radiography should include the following information: (a) projection (e.g., lateral, frontal, horizontal, oblique); (b) type and amount of contrast media used and sequence of opacification of the bladder, vagina, rectum and colon, small bowel and peritoneal cavity; (c) any urethral or vaginal appliance used (e.g., tampon, catheter, bead-chain); (d) type of exposures (e.g., single exposure, video); and (e) magnification – an internal reference scale should be included.

3.4.4. Computed Tomography and Magnetic Resonance Imaging

These techniques do not currently allow for continuous imaging under dynamic conditions and most equipment dictates supine scanning. Specifics of the technique should be specified including: (a) the specific equipment used, including the manufacturer; (b) the plane of imaging (e.g., axial, sagittal, coronal, oblique); (c) the field of view (d) the thickness of sections and the number of slices; (e) the scan time; (f) the use and type of contrast; and (g) the type of image analysis.

3.5. Surgical Assessment

Intra-operative evaluation of pelvic support defects is intuitively attractive but as yet of unproven value. The effects of anaesthesia, diminished muscle tone and loss of consciousness are of unknown magnitude and direction. Limitations due to the position of the patient must also be evaluated.

4. Pelvic Floor Muscle Testing

Pelvic floor muscles are voluntarily controlled, but selective contraction and relaxation necessitates muscle awareness. Optimal squeezing technique involves contraction of the pelvic floor muscles without contraction of the abdominal wall muscles and without a Valsalva manoeuvre. Squeezing synergists are the intraurethral and anal sphincteric muscles. In normal voiding, defecation and optimal abdominalstrain voiding, the pelvic floor is relaxed, while the abdominal wall and the diaphragm may contract. With

coughs and sneezes and often when other stresses are applied, the pelvic floor and abdominal wall are contracted simultaneously.

Evaluation and measurement of pelvic floor muscle function includes (1) an assessment of the patient's ability to contract and relax the pelvic muscles selectively (i.e., squeezing without abdominal straining and vice versa) and (2) measurement of the force (strength) of contraction. There are pitfalls in the measurement of pelvic floor muscle function because the muscles are invisible to the investigator and because patients often simultaneously and erroneously activate other muscles. Contraction of the abdominal, gluteal and hip adductor muscles, Valsalva manoeuvre, straining, breath holding and forced inspirations are typically seen. These factors affect the reliability of available testing modalities and have to be taken into consideration in the interpretation of these tests.

The individual types of tests cited in this report are based both on the scientific literature and on current clinical practice. It is the intent of the committee neither to endorse specific tests or techniques nor to restrict evaluations to the examples given. The standards recommended are intended to facilitate comparison of results obtained by different investigators and to allow investigators to replicate studies precisely. For all types of measuring techniques the following should be specified: (a) patient position, including the position of the legs; (b) specific instructions given to the patient; (c) the status of bladder and bowel fullness; (d) techniques of quantification or qualification (estimated, calculated, directly measured); and (e) the reliability of the technique.

4.1. Inspection

A visual assessment of muscle integrity, including a description of scarring and symmetry, should be performed. Pelvic floor contraction causes inward movement of the perineum and straining causes the opposite movement. Perineal movements can be observed directly or assessed indirectly by movement of an externally visible device placed into the vagina or urethra. The abdominal wall and other specified regions might be watched simultaneously. The type, size and placement of any device used should be specified as should the state of undress of the patient.

4.2. Palpation

Palpation may include digital examination of the pelvic floor muscles through the vagina or rectum as well as assessment of the perineum, abdominal wall and/or other specified regions. The number of fingers and their position should be specified. Scales for the description of the strength of voluntary and reflex (e.g., with coughing) contractions and of the degree of voluntary relaxation should be clearly described and intra- and inter-observer reliability documented. Standardised palpation techniques could also be developed for the semiquantitative estimation of the bulk or thickness of pelvic floor musculature around the circumference of the genital hiatus. These techniques could allow for the localisation of any atrophic or asymmetric segments.

4.3. Electromyography

Electromyography from the pelvic floor muscles can be recorded alone or in combination with other measurements. Needle electrodes permit visualisation of individual motor unit action potentials, while surface or wire electrodes detect action potentials from groups of adjacent motor units underlying or surrounding the electrodes. Interpretation of signals from these latter electrodes must take into consideration that signals from erroneously contracted adjacent muscles may interfere with signals from the muscles of interest. Reports of electromyographic recordings should specify the following: (a) type of electrode; (b) placement of electrodes; (c) placement of reference electrode; (d) specifications of signal processing equipment; (e) type and specifications of display equipment; (f) muscle in which needle electrode is placed; and (g) description of decision algorithms used by the analytic software.

4.4. Pressure Recording

Measurements of urethral, vaginal and anal pressures may be used to assess pelvic floor muscle control and strength. However, interpretations based on these pressure measurements must be made with a knowledge of their potential for artefact and their unproven or limited reproducibility. Anal sphincter contractions, rectal peristalsis, detrusor contractions and abdominal straining can affect pressure measurements. Pressures recorded from the proximal vagina accurately mimic fluctuations in abdominal pressure. Therefore it may be important to compare vaginal pressures to simultaneously measured vesical or rectal pressures. Reports using pressure measurements should specify the following: (a) the type and size of the measuring device at the recording site (e.g., balloon, open catheter, etc.); (b) the exact placement of the measuring device; (c) the type of pressure transducer; (d) the type of display system; and (e) the display of simultaneous control pressures.

As noted in Section 4.1, observation of the perineum is an easy and reliable way to assess for abnormal straining during an attempt at a pelvic muscle contraction. Significant straining or a Valsalva manoeuvre causes downward/caudal movement of the perineum; a correctly performed pelvic muscle contraction causes inward/cephalad movement of the perineum. Observation for perineal movement should be considered as an additional validation procedure whenever pressure measurements are recorded.

5. Description of Functional Symptoms

Functional deficits caused by pelvic organ prolapse and pelvic floor dysfunction are not well characterised or absolutely established. There is an ongoing need to develop, standardise, and validate various clinimetric scales such as conditionspecific quality of life questionnaires for each of the four functional symptom groups thought to be related to pelvic organ prolapse.

Researchers in this area should try to use standardised and validated symptom scales whenever possible. They must always ask precisely the same questions regarding functional symptoms before and after therapeutic intervention. The description of functional symptoms should be directed toward four primary areas: (1) lower urinary tract, (2) bowel, (3) sexual, and (4) other local symptoms.

5.1. Urinary Symptoms

This report does not supplant any currently approved ICS terminology related to lower urinary tract function.7 However, some important prolapse related symptoms are not included in the current standards (e.g., the need to manually reduce the prolapse or assume an unusual position to initiate or complete micturition). Urinary symptoms that should be considered for dichotomous, ordinal, or visual analogue scaling include, but are not limited to, the following: (a) stress incontinence, (b) frequency (diurnal and nocturnal), (c) urgency, (d) urge incontinence, (e) hesitancy, (f) weak or prolonged urinary stream, (g) feeling of incomplete emptying, (h) manual reduction of the prolapse to start or complete bladder emptying, and (f) positional changes to start or complete voiding.

5.2. Bowel Symptoms

Bowel symptoms that should be considered for dichotomous, ordinal or visual analog scaling include, but are not limited to, the following: (a) difficulty with defecation, (b) incontinence of flatus, (c) incontinence of liquid stool, (d) incontinence of solid stool, (e) faecal staining of underwear, (f) urgency of defecation, (g) discomfort with defecation, (h) digital manipulation of vagina, perineum or anus to complete defecation, (i) feeling of incomplete evacuation and (j) rectal protrusion during or after defecation.

5.3. Sexual Symptoms

Research is needed to attempt to differentiate the complex and multifactorial aspects of “satisfactory sexual function” as it relates to pelvic organ prolapse and pelvic floor dysfunction. It may be difficult to distinguish between the ability to have vaginal intercourse and normal sexual function. The development of satisfactory tools will require multidisciplinary collaboration. Sexual function symptoms that should be considered for dichotomous, ordinal, or visual analog scaling include, but are not limited to, the following: (a) Is the patient sexually active? (b) If she is not sexually active, why? (c) Does sexual activity include vaginal coitus? (c) What is the frequency of vaginal intercourse? (d) Does the patient experience pain with coitus? (e) Is the patient satisfied with her sexual activity? (f) Has there been any change in orgasmic response? (g) Is any incontinence experienced during sexual activity?

5.4. Other Local Symptoms

We currently lack knowledge regarding the precise nature of symptoms that may be caused by the presence of a protrusion or bulge. Possible anatomically based symptoms that should be considered for dichotomous, ordinal or visual analog scaling include, but are not limited to, the following: (a) vaginal pressure or heaviness; (b) vaginal or perineal pain; (c) sensation or awareness of tissue protrusion from the vagina; (d) low back pain; (e) abdominal pressure or pain; (f) observation or palpation of a mass.

Acknowledgements

The subcommittee would like to acknowledge the contributions of the following consultants who contributed to the development and revision of this document: W. Glenn Hurt, Bernhard Schussler, L. Lewis Wall.

References

1. Athanasiou S, Hill S, Gleeson C, Anders K, Cardozo L (1995). Validation of the ICS proposed pelvic organ prolapse descriptive system. Neurourol Urodyn 14:414-415 (abstract of ICS 1995 meeting).

2. Schussler B, Peschers U (1995). Standardisation of terminology of female genital prolapse according to the new ICS criteria: inter-examiner reproducibility. Neurourol Urodynamics 14:437438 (abstract of ICS 1995 meeting).

3. Montella JM, Cater lR (1995). Comparison of measurements obtained in supine and sitting position in the evaluation of pelvic organ prolapse (abstract of AUGS 1995 meeting).

4. Kobak WH, Rosenberg K, Walters MD (1995). Interobserver variation in the assessment of pelvic organ prolapse using the draft International Continence Society and Baden grading systems.(abstract of AUGS 1995 meeting).

5. Hall AF, Theofrastous JP, CundiffGC, Harris RL, Hamilton LF, Swift SE, Bump RC (1996). Interand intra-observer reliability of the proposed International Continence Society, Society of Gynecologic Surgeons, and American Urogynecologic Society pelvic organ prolapse classification system. Am J Obstet Gynecol (submitted through the program of the Society of Gynecologic Surgeons 1996 meeting).

6. Baden W, Walker T (1992). Surgical repair of vaginal defects. Philadelphia: Lippincott, pp 1-7, 51 -62

7. See this volume, Appendix 1, Part 2.