The standardization of terminology of female pelvic organ prolapse and pelvic floor dysfunction

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

Durham, North Carolina

This article presents a standard system of terminology recently approved by the International Continence Society, the American Urogynecologic Society, and the Society of Gynecologic Surgeons for the description of female pelvic organ prolapse and pelvic floor dysfunction. An objective site-specific system for describing, quantitating, and staging pelvic support in women is included. It has been developed to enhance both clinical and academic communication regarding individual patients and populations of patients. Clinicians and researchers caring for women with pelvic organ prolapse and pelvic floor dysfunction are encouraged to learn and use the system. (Am J Obstet Gynecol 1996;175:10-7.)

Key words: Pelvic organ prolapse, pelvic floor dysfunction, prolapse, prolapse description, prolapse staging, pelvic muscles

The International Continence Society (ICS) has been at the forefront in the standardization 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 worldwide acceptance of terminology standards that allow clinicians and researchers interested in the lower urinary tract to communicate efficiently and precisely. Although female pelvic organ prolapse and pelvic floor dysfunction are intimately related to lower urinary tract function, such accurate communication by standard terminology has not been possible for these disorders because there has been no universally accepted system for describing the anatomic position of the pelvic organs. Many reports use terms that are undefined for the description of pelvic organ prolapse; none of the many aspiring grading systems has been adequately validated with respect to either reproducibility or the clinical significance of different grades. The absence of standard, validated definitions prevents comparisons of published series from different institutions and longitudinal evaluations of an individual patient.

In 1993 an international multidisciplinary committee composed of members of the ICS, the American Urogynecologic Society, and the Society of Gynecologic Surgeons drafted this standardization document after 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 1-year review and trial. During that year several minor revisions were made, and reproducibility studies in six centers in the United States and Europe were completed, documenting the interrater and intrarater reliability and clinical utility of the system in 240 women.[1-5] The standardization document was formally adopted by the ICS in October 1995, by the American Urogynecologic Society in January 1996, and by the Society of Gynecologic Surgeons 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."

From the International Continence Society Committee on Standardisation of Terminology, Subcommittee on Pelvic Organ Prolapse and Pelvic Floor Dysfunction, in collaboration with the American Urogynecologic Society and the Society of Gynecologic Surgeons.
Reprint requests: Richard C. Bump, MD, Duke University Medical Center, Box 3609, Durham, NC 27710.

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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 article, but authors should precisely describe the 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.

Conditions of the examination. It is critical that the examiner sees and describes the maximum protrusion noted by the individual during her daily activities. Crite-

ria 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 (1) Any protrusion of the vaginal wall has become tight during straining by the patient. (2) Traction on the prolapse causes no further descent. (3) The subject confirms that the size of the prolapse and the extent of the protrusion seen by the examiner are as extensive as the most severe protrusion that she has had. The means of this confirmation should be specified. For example, the subject may use a small handheld mirror to visualize the protrusion. (4) 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 customized devices used; (e) the type (e.g., Valsalva maneuver, 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 catheterization; (g) content of rectum; and (f) the method by which any quantitative measurements were made.

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 judgments regarding 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 meager improvement than stating that the prolapse was reduced from grade 3 to grade 1, as would be the case using some current grading systems.

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 that are located with respect to this reference.

Fixed point of reference. Prolapse should be evaluated relative to a fixed anatomic landmark that 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 recognized that the plane of the hymen is somewhat variable depending on 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 centimeters above or proximal to the hymen (negative number) or centimeters below or distal to the hymen (positive number) with the plane of the hymen being defined as zero. For example, a cervix that protruded 3 cm distal to the hymen would be +3 cm.

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.

The first points are on the 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 that 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 tests. There are two anterior sites.

Point Aa: A point located in the midline of the anterior vaginal wall 3 cm proximal to the external urethral meatus, corresponding to the approximate location of the "urethrovesical 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 −3 cm in the absence of prolapse and would have a positive value equal to the position of the cuff in women with total posthysterectomy vaginal eversion.

Two points are on the superior vagina. These points represent the most proximal locations of the normally positioned lower reproductive tract.

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 uterosacral-cardinal ligament complex from cervical elongation. When the location of point C is significantly more

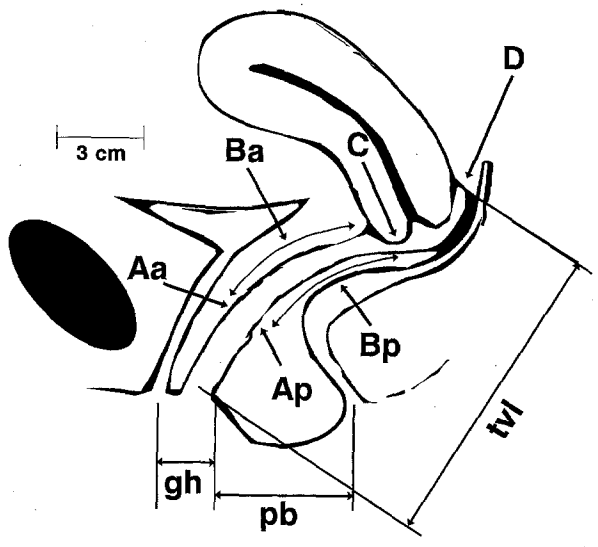

Fig. 1. Six sites (points *Aa, Ba, C, D, Bp,* and *Ap*), genital hiatus *(gh),* perineal body *(pb),* and total vaginal length *(tvl)* used for pelvic organ support quantitation.

positive than the location of point D, it is indicative of cervical elongation, which may be symmetric or eccentric. Point D is omitted in the absence of the cervix.

Two points are on the posterior vaginal wall. Analogous to anterior prolapse, posterior prolapse should be discussed in terms of segments of the vaginal wall rather than the organs that lie behind it. Thus the term "posterior vaginal wall prolapse" is preferable to "rectocele" or "enterocele" unless the organs involved are identified by ancillary tests. If small bowel appears to be present in the rectovaginal space, the examiner should comment on this fact and 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 may be noted (e.g., Bp = +5 [pulsion]; see below for further discussion).

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 woman with total posthysterectomy vaginal eversion.

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

OTHER LANDMARKS AND MEASUREMENTS. The genital hiatus 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 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 centimeters. The total vaginal length is the greatest depth of the vagina in centimeters 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 presented in Fig. 1.

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 centimeters above or proximal to the hymen (negative number) or centimeters below or distal to the hymen (positive number) with the plane of the hymen being defined as zero. Although an examiner may be able to make measurements to the nearest 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, not positions relative to the hymen. Alternatively, a three-by-three "tic-tac-toe" grid can be used to concisely organize the measurements, as noted in Fig. 2, or a line diagram of the configuration can be drawn, as noted in Figs. 3 and 4. Fig. 3 is a grid and line diagram contrasting measurements indicating normal support to those of posthysterectomy vaginal eversion. Fig. 4 is a grid and line diagram representing predominant anterior and posterior vaginal wall prolapse with partial vault descent.

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 cancers. For the TNM description of individual 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. Although the committee is aware of the arbitrary nature of an ordinal staging system and the possible bi-

ases that it introduces, we conclude such a system is necessary if populations are to be described and compared, if 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. For a stage to be 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 0 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 by use of the following letter qualifiers: a = anterior vaginal wall, p = posterior vaginal wall, C = vaginal cuff, Cx = cervix, and Aa, Ap, Ba, Bp, and D = the points of measurement already defined. The five stages of pelvic organ support (0 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 (total vaginal length) cm and −(TVL-2) cm (i.e., the quantitation value for point C or D is ≤−[TVL-2] cm). Fig. 3, *B*, represents stage 0.

Stage I: The criteria for stage 0 are not met, but the most distal portion of the prolapse is >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 proxinal 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 >1 cm below the plane of the hymen but protrudes no further than 2 cm less than the total vaginal length in centimeters (i.e., its quantitation value is >+1 cm but <+[TVL-2] cm). Fig. 4, *A*, represents stage III Ba and Fig. 4, *B*, 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. Fig. 3, *A*, represents stage IV C prolapse.

Ancillary techniques for describing pelvic organ prolapse

This series of procedures may help further characterize pelvic organ prolapse in an individual patient. They are considered ancillary either because they are not yet standardized or validated or because they are not universally available to all patients. Authors using these procedures should include the following information in their articles: (1) Describe the objective information they intended to generate and how it enhanced their ability to evaluate or treat prolapse. (2) 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. (3) Document the reliability of the measurement obtained with the technique.

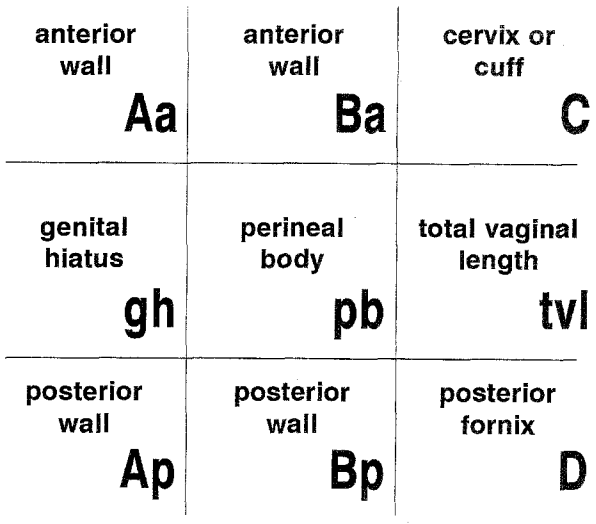

Fig. 2. Three-by-three grid for recording quantitative description of pelvic organ support.

Supplementary physical examination techniques. Many of these techniques are essential to the adequate preoperative evaluation of a patient with pelvic organ prolapse. Although these techniques 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, (1) 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; (2) digital assessment of the contents of the rectal-vaginal septum during the examination 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); (3) cotton swab testing for the measurement of urethral axial mobility; (4) measurements of perineal descent; (5) measurements of the transverse diameter of the genital hiatus or of the protruding prolapse; (6) measurements of vaginal volume; (7) description and measurement of rectal prolapse; and (8) examination techniques for differentiating between various types of defects (e.g., central vs paravaginal defects of the anterior vaginal wall).

Endoscopy. Cystoscopic visualization of bowel peristal-

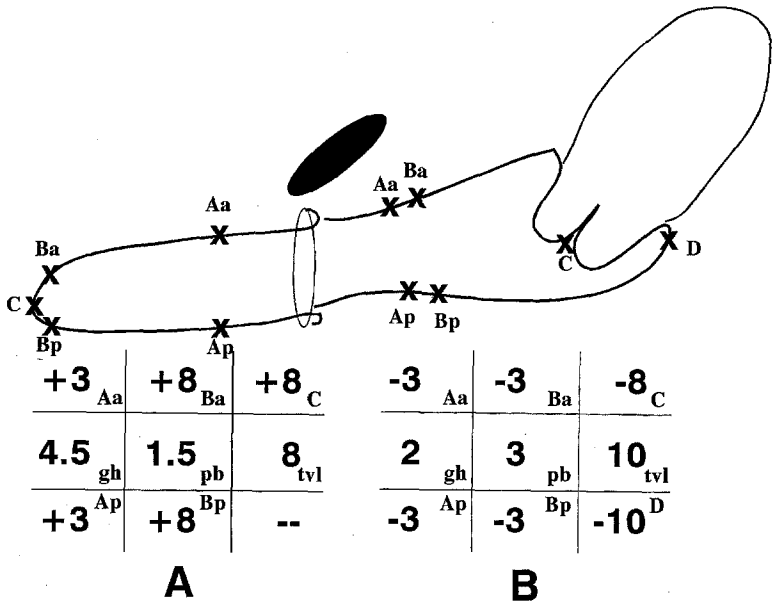

Fig. 3. A, Grid and line diagram of complete eversion of vagina. Most distal point of anterior wall (point *Ba*), vaginal cuff scar (point *C*), and most distal point of the posterior wall (point *Bp*) are all at same position (+8) and points *Aa* and *Ap* are maximally distal (both at +3). Because total vaginal length equals maximum protrusion, this is stage IV prolapse. **B,** Normal support. Points *Aa* and *Ba* and points *Ap* and *Bp* are all −3 because there is no anterior or posterior wall descent. Lowest point of the cervix is 8 cm above hymen (−8) and posterior fornix is 2 cm above this (−10). Vaginal length is 10 cm and genital hiatus and perineal body measure 2 and 3 cm, respectively. This represents stage 0 support.

sis under the bladder base or trigone may identify an anterior enterocele in some patients. Endoscopic visualization 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 anesthetic 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.

Photography. Still photography of stage II and greater prolapse may be used to both document serial changes in individual patients and illustrate findings for articles and presentations. Photographs should contain an internal frame of reference such as a centimeter rule or tape.

Imaging procedures. Different imaging techniques have been used to visualize 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 standardization, validation, or availability). For this reason, no specific technique can be recommended, but guidelines for reporting various techniques will be considered.

General guidelines for 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 pubic 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 (1) position of the patient, including the position of the legs (Images in articles 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.); (2) specific verbal instructions given to the patient; (3) bladder volume and content and bowel content, including any prestudy preparations; and (4) the performance and display of simultaneous monitoring such as pressure measurements.

Ultrasonography. Continuous visualization of dynamic events is possible. All reports that use ultrasonography should include the following information: (1) transducer type and manufacturer (e.g., sector, linear, megahertz), (2) transducer size, (3) transducer orientation, and (4) route of scanning (e.g., abdominal, perineal, vaginal, rectal, urethral).

Contrast radiography. Contrast radiography may be static or dynamic and may include voiding colpocystourethrography, defecography, peritoneography, and pelvic fluoroscopy, among others. All reports of contrast radiography should include the following information: (1) projection (e.g., lateral, frontal, horizontal, oblique); (2) type and

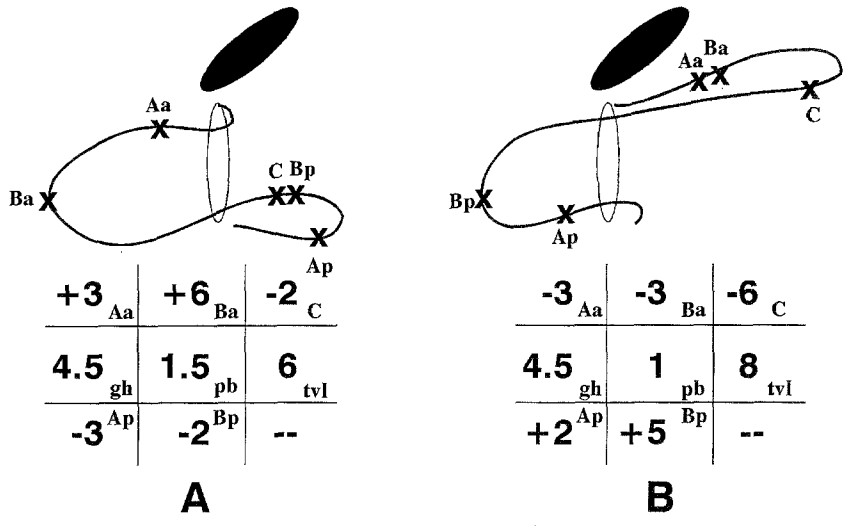

Fig. 4. A, Grid and line diagram of predominant anterior support defect. Leading point of prolapse is upper anterior vaginal wall, point *Ba* (+6). There is significant elongation of bulging anterior wall. Point *Aa* is maximally distal (+3) and vaginal cuff scar is 2 cm above hymen (*C* = −2). Cuff scar has undergone 4 cm of descent because it would be at −6 (total vaginal length) if it were perfectly supported. In this example total vaginal length is not maximum depth of vagina with elongated anterior vaginal wall maximally reduced but rather depth of vagina at cuff with point C reduced to its normal full extent, as specified in text. This represents stage III Ba prolapse. **B,** Predominant posterior support defect. Leading point of prolapse is upper posterior vaginal wall, point *Bp* (+5). Point *Ap* is 2 cm distal to hymen (+2) and vaginal cuff scar is 6 cm above hymen (−6). Cuff has undergone only 2 cm of descent because it would be at −8 (total vaginal length) if it were perfectly supported. This represents stage III Bp prolapse.

amount of contrast media used and sequence of opacification of the bladder, vagina, rectum and colon, small bowel, and peritoneal cavity; (3) any urethral or vaginal appliance used (e.g., tampon, catheter, bead-chain); (4) type of exposures (e.g., single exposure, video); and (5) magnification (an internal reference scale should be included).

Computed tomography and magnetic resonance imaging. Computed tomography and magnetic resonance imaging do not currently allow for continuous imaging under dynamic conditions, and most equipment dictates supine scanning. Specifics of the technique should be specified, including (1) the specific equipment used, including the manufacturer; (2) the plane of imaging (e.g., axial, sagittal, coronal, oblique); (3) the field of view; (4) the thickness of sections and the number of slices; (5) the scan time; (6) the use and type of contrast; and (7) the type of image analysis.

Surgical assessment. Intraoperative evaluation of pelvic support defects is intuitively attractive but as yet of unproved value. The effects of anesthesia, diminished muscle tone, and loss of consciousness are of unknown magnitude and direction. Limitations because of the position of the patient must also be evaluated.

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 maneuver. Squeezing synergists are the intraurethral and anal sphincteric muscles. In normal voiding, defecation, and optimal abdominal-strain voiding, the pelvic floor is relaxed, whereas 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 flood 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 maneuver; 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 article are based on both the scientific literature and 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 information should be specified: (1) patient position, including the position of the legs; (2) specific instructions given to the patient; (3) the status of bladder and bowel fullness; (4) techniques of quantification or qualification (estimated, calculated, directly measured); and (5) the reliability of the technique.

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.

Palpation. Palpation may include digital examination of the pelvic floor muscles through the vagina or rectum and assessment of the perineum, abdominal wall, 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 intraobserver and interobserver reliability documented. Standardized 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 localization of any atrophic or asymmetric segments.

Electromyography. Electromyography from the pelvic floor muscles can be recorded alone or in combination with other measurements. Needle electrodes permit visualization of individual motor unit action potentials, whereas 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 (1) type of electrode, (2) placement of electrodes, (3) placement of reference electrode, (4) specifications of signal processing equipment, (5) type and specifications of display equipment, (6) muscle in which needle electrode is placed, and (7) description of decision algorithms used by the analytic software.

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 artifact and their unproved 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 with simultaneously measured vesical or rectal pressures. Reports using pressure measurements should specify (1) the type and size of the measuring device at the recording site (e.g., balloon, open catheter, etc.), (2) the exact placement of the measuring device, (3) the type of pressure transducer, (4) the type of display system, and (5) the display of simultaneous control pressures.

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

Description of functional symptoms

Functional deficits caused by pelvic organ prolapse and pelvic floor dysfunction are not well characterized or absolutely established. There is a continuing need to develop, standardize, and validate various clinimetric scales such as condition-specific 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 standardized 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.

Urinary symptoms. This article 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 analog scaling include, but are not limited to, the following information: (1) stress incontinence, (2) frequency (diurnal and nocturnal), (3) urgency, (4) urge incontinence, (5) hesitancy, (6) weak or prolonged urinary stream, (7) feeling of incomplete emptying, (8) manual reduction of the prolapse to start or complete bladder emptying, and (9) positional changes to start or complete voiding.

Bowel symptoms. Bowel symptoms that should be considered for dichotomous, ordinal, or visual analog scaling

include, but are not limited to, the following information: (1) difficulty with defecation, (2) incontinence of flatus, (3) incontinence of liquid stool, (4) incontinence of solid stool, (5) fecal staining of underwear, (6) urgency of defecation, (7) discomfort with defecation, (8) digital manipulation of vagina, perineum, or anus to complete defecation, (9) feeling of incomplete evacuation, and (10) rectal protrusion during or after defecation.

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 information: (1) Is the patient sexually active? (2) If she is not sexually active, why? (3) Does sexual activity include vaginal coitus? (4) What is the frequency of vaginal intercourse? (5) Does the patient have pain with coitus? (6) Is the patient satisfied with her sexual activity? (7) Has there been any change in orgasmic response? (8) Is any incontinence experienced during sexual activity?

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 information: (1) vaginal pressure or heaviness, (2) vaginal or perineal pain, (3) sensation or awareness of tissue protrusion from the vagina, (4) low back pain, (5) abdominal pressure or pain, and (6) observation or palpation of a mass.

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