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Manual of

Vaginal Surgery & Urogynecology

Master the Art to Get a Head Start

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CHAPTER

Staging of Pelvic Organ Prolapse: The POP-Q

Mugdha Kulkarni, Ajay Rane

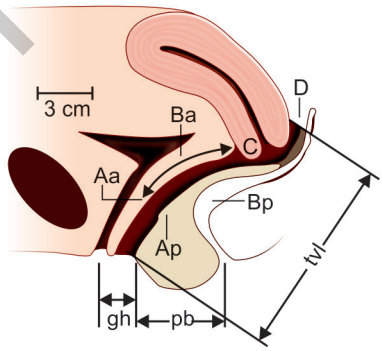
INTRODUCTION

Pelvic organ prolapse (POP) is defined as herniation of pelvic organs to or beyond the vaginal walls. Prevalence varies depending on description of symptoms or examination. When graded with the use of symptoms the prevalence is 3–6% compared with 41–50% when based on examination, this is likely as mild prolapse is common and often asymptomatic.

STAGING OF PELVIC ORGAN PROLAPSE

Historically prolapse was staged using a variety of imprecise classification systems. The pelvic organ prolapse quantification system (POP-Q) was introduced in 1996 and has become the standard classification system.[1] It is an objective, site-specific system used for describing and staging POP in women. It describes various points along the anterior, apical and posterior vaginal walls to create a map of the vagina. It has proven interobserver and intraobserver reliability and the most commonly used in medical literature.[2]

POP-Q is described using 9 points **(Fig. 1)**. Six defined points: Aa, Ba, C, D, Ap, Bp and 3 landmark points: GH, TVL, PB. Hymen acts as the reference point. This was chosen over the introitus as it is more precisely identified. Each point is measured in centimeters (0.5 cm can be used) above (proximal) or below (distal) to hymen. Plane of hymen is defined as zero (0). Minus sign



Anterior wall **Aa**	Anterior wall **Ba**	Cervix or cuff **C**
Genital hiatus **gh**	Perineal body **pb**	Total vaginal length **tvl**
Posterior wall **Ap**	Posterior wall **Bp**	Posterior fornix **D**

Fig. 1: Anatomical sites and nine point grid system for POP-Q.

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denotes point above hymen and positive sign can be used for points below. These measurements at nine sites are recorded in a grid to form a tic-tac-toe.

Maximum extent of prolapse is determined for the 6 defined points. Maximum prolapse is defined with the following:

- Vaginal wall becomes tight on straining
- Traction on the prolapse causing no further descent
- Patient confirms maximal protrusion.

Anterior Wall Points

- *Aa*: 3 cm proximal to the external urethral meatus. Denotes urethrovesical junction. Value can range from –3 to +3
- *Ba*: Most dependent portion of vagina between Aa and vaginal cuff. The value can range from –3 to the most prolapsed point beyond hymen (this may exceed +3).

Apical Vaginal Points

- *C*: Most distal edge of cervix or vaginal cuff (posthysterectomy)
- *D*: Deepest point in posterior fornix (only in women with cervix).

Posterior Wall Points

- *Ap*: Midline of posterior vaginal wall, 3 cm proximal to hymen
- *Bp*: Most dependent portion of vagina between Ba and vaginal cuff. The value can range from –3 to the most prolapsed point beyond hymen (this may exceed +3).

Landmark Points

- *TVL*: Total vaginal length, measured by reducing point C or D to its most superior position
- *GH*: Genital hiatus, measured from midline of urethral meatus to posterior midline hymen
- *PB*: Perineal body, posterior margin of the genital hiatus to mid anal opening.

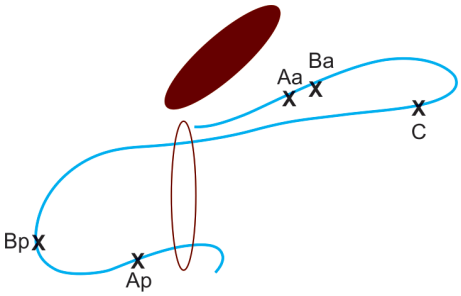
EXAMPLE OF POP-Q MEASUREMENT (FIG. 2)

Leading point of the prolapse is upper posterior vaginal Wallis 5 cm beyond hymen, Bp (+5). Point Ap is 2 cm distal to the hymen (+2) and vaginal cuff is 6 cm above hymen (–6).

POP-Q Staging

- *Stage 0*: No prolapse. Points Aa, Ap, Ba, and Bp are all –3 cm and point D or C equals or nearly equals TVL.
- *Stage I*: Most distal portion of the prolapse is >1 cm proximal to the level of the hymen (<-1 cm).
- *Stage II*: Most distal portion of the prolapse is between ≤1 cm proximal to the hymen and ≥1 cm distal to the hymenal plane (≥ –1 cm to ≤ +1 cm).

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–3 **Aa**	–3 **Ba**	–6 **C**
4.5 **gh**	1 **pb**	8 **tvl**
Ap +2	**Ap** +5	–

Fig. 2: Example of POP-Q measurement, using a nine point grid.

- *Stage III*: The maximum prolapse is more than 1 cm outside the hymen, but it is 2 cm less than the maximum possible protrusion [>+1 cm but <+(TVL-2) cm].
- *Stage IV*: Eversion of the total length of the vagina. The protrusion extends to or beyond (TVL-2) cm.

Simplified POP-Q

Simple POP-Q (S-POPQ) measures the anterior, posterior and up to two measurements of the apex, including both the cervix, in women who still have one, and posterior cul-de-sac. There is intersystem reliability with POP-Q.

ADVANTAGES

- Standardized terminology for clinician and researcher
- Interobserver and intraobserver reliability
- Longitudinal follow-up.

DISADVANTAGES

- More difficult to learn than traditional methods
- Patient position affects reproducibility
- Does not identify unilateral or asymmetrical defects.

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