

SIMPLIFYING PELVIC ORGAN PROLAPSE QUANTIFICATION (POPQ) USING A NEW VAGINAL SPECULUM

Aims of Study

To introduce a new vaginal speculum that can be used to perform pelvic organ prolapse quantification (POPQ) using a single instrument. To report our preliminary experience of performing POPQ with the use of the new speculum compared to the current method of using several instruments in terms of duration of the procedure and comfort for the patient.

Methods

The new vaginal speculum is the shape and size of the standard vaginal speculum currently being used. The new features include adjustable, removable top and bottom blades that are marked in centimeters from the tip to the base of the blade. The blades can be withdrawn partially or completely, or totally detached and then reinserted, or advanced back to the original position without removing the handle/base speculum from the vagina. In addition to the new blade mechanism, the handle/base speculum where the retractable blades slide freely is significantly shortened so the edge of the base blade when fully inserted is no deeper than the hymenal ring. An additional feature of the new speculum is the potential for adding a bifocal lens at the end of the speculum.

The ICS terminology and technique of POPQ were adopted in a preliminary study to gain experience with the new speculum.¹ The points that were measured include Aa, Ba, Ap, Bp, TVL, C, D (if present), GH and PB. Twenty-two patients in the senior author's office, who consented to be examined by either the new speculum or the standard method, were randomly assigned to the new speculum or standard equipment of performing POPQ. The standard equipment utilizes a disposable plastic speculum, a Sims half blade, a ring forceps, and a ruler. The entire procedure of POPQ was timed. At the conclusion of the examination, the patient was given a questionnaire and asked to check the level of discomfort for the entire examination from 0 - no discomfort, 1 - minimal discomfort, 2 - moderate discomfort, 3 - severe discomfort.

Results

There were 22 adult patients in this preliminary study, 11 patients (mean age 66.9) underwent the standard method and 11 patients (mean age 66.2) underwent POPQ using the new speculum. The POP stage was equally distributed: 8 patients each with Level 02 and 3 patients each with Level 3 & 4.

The mean duration of POPQ testing using the standard equipment was 142 seconds \pm 18.36 seconds (range 120-180 seconds) whereas for the new speculum, the duration was 103.18 seconds \pm 21.01 seconds (range 75-150 seconds). Using the Mann-Whitney test of comparison, the new adjustable speculum was significantly shorter in duration than the standard equipment, a mean difference of 38.82 seconds \pm 8.41 seconds ($p < 0.001$). The mean score for the discomfort level for the POPQ examination ranged from 01 (mean 0.63, SD=0.452) for the new speculum. For the conventional method, the score ranged from 02 (mean 1.13, SD=0.710). Although the p value was $p = 0.088$, the trend favors the new speculum. There was no complication or any mechanical breakdown with either instrument during the examination.

Conclusions

A new vaginal speculum is being introduced with the potential of simplifying the performance of POPQ. As our experience is very limited, further experience is needed both in practice and research to confirm the potential advantage of this instrument over the current ones.

References

Bump RC, Mattiasson A, Bo K, Brubaker LP, DeLancey JOL, Klarskov P, Shull BL, Smith ARB. The standardization of the terminology of female pelvic organ prolapse and pelvic floor dysfunction. *Am J Obstet Gynecol* 1996;175:10-7.