

USE OF PELVIC ORGAN PROLAPSE QUANTITATIVE SYSTEMS IN THE PUBLISHED LITERATURE: AN UPDATED SYSTEMATIC REVIEW

Hypothesis / aims of study

Until the 1990's, lack of a standardized system to quantitatively describe pelvic organ prolapse (POP) hampered effective communication among physicians, longitudinal evaluation of patients and meaningful comparisons between case series and trials. In 1996, after completion of validation studies and endorsement by the International Continence Society (ICS), the American Urogynecologic Association (AUGS) and the Society of Gynecologic Surgeons, the description of the Pelvic Organ Prolapse Quantification system (POPQ) was published.

In 1999, 13.3% of the articles in specialized journals adopted POPQ. The utilization rose to 29.1% in 2002 [1], 64.9% in 2004 and 82.1% in 2007 [2]. However, in 2009, a survey among members of AUGS and ICS found that 76% of the specialists used POPQ with 2/3 of the non-users reporting having used POPQ in the past [3]. This raised the question of whether the published specialized literature after 2007 would show a decline in the use of POPQ or, would it continue to show an increase in the use in published literature.

The primary aim of this study was to evaluate the use of the POPQ in 2009 in representative specialized journals. Secondly we compared the results of 2009 with data we had collected in the period of 2004 and 2007.

Study design, materials and methods

The following journals were selected for review: American Journal of Obstetrics and Gynecology, British Journal of Obstetrics and Gynecology, British Journal of Urology International, International Urogynecology Journal, Journal of Urology, Neurourology & Urodynamics, Obstetrics and Gynecology, and Urology. Articles published in 2009 were searched by two independent reviewers. Titles, abstracts and methods were thoroughly assessed. Articles were included if any attempt to grade or stage POP was found. Exclusion criteria were reviews, editorials, letters and articles in abstract form.

POP quantitative descriptive systems were categorized as POPQ, Baden-Walker (BW), other specified systems (OS) and not specified system (NS) (when a system was used in the articles but the reviewers could not establish with certainty which one). Other features noted were: specialty of the 1st author, specialty of the journal of publication, the country of origin of the article and if the journal was endorsed or not by the medical societies (ICS, AUGS and SGS) that first adopted POPQ. Differences between the two reviewers were resolved by a third independent author.

Chi-square tests using SPSS 17.1 (SPSS Inc., Chicago IL) for statistical analysis $p < 0.05$ was considered statistically significant.

Results

A total of 131 articles in 2009 were included. In that year, 89.3% of the articles used POPQ (compared with 79.8% in the pooled data from 2004 and 2007, $p=0.026$); BW, decreased from 15.3% to 10.7% ($p=0.243$), OS went from 3.7% to 0.8% ($p=0.103$) and NS decreased from 7.4% to 2.3% ($p=0.049$). POPQ was used in 90.6% (48/53) of the articles originated in the US, 87% (47/54) of those from Europe and 91.7% (22/24) of those from the rest of the world ($p=0.52$). While articles originated in the US increased POPQ use by 3.4% ($p>0.05$), there was an 18.9% increase in the use of POPQ in articles originated elsewhere ($p=0.04$).

POPQ was used by 84.8% of first authors identified as Urologists, 88.2% of obstetrician/gynecologists, 91.4% of Urogynecologists and 100% of other specialties ($p>0.05$). All the groups showed increase use of POPQ compared with the prior periods reaching statistical significance ($p=0.046$) among Urologists. Urologists used BW more frequently (17.7%) than Urogynecologists (8.6%) ($p>0.05$). Urology journals used POPQ in 89.5% of the articles compared to Ob/Gyn and Urogynecology journals with 80% and 92.7%, respectively ($p>0.05$). The frequency of POPQ use increased since 2004-07 in the journals from the three specialties: Ob/Gyn from 62.8% to 80%, Urology from 61.1% to 89.5% ($p=0.044$) and Urogynecology from 70% to 92.7% ($p=0.033$).

The three journals endorsed by the medical societies that have endorsed POPQ used this system in 92.5% of the articles compared to 81.6% of the other five journals ($p=0.067$). Both groups increased the use from 2004-07 to 2009 by 9 and 10.8% respectively ($p>0.05$).

Interpretation of results

The use of POPQ has increased steadily in the specialized literature since 1996, reaching 89.3% of the articles in 2009. A decrease in the use of unspecified systems was also observed. The use of POPQ is greater in journals endorsed by the institutions that officially adopted it. In 2009, the differences in frequencies in the use of POPQ between the subgroups analyzed were not statistically significant. Of note, compared with 2004 and 2007, the use of POPQ increased in 2009 in all of the subgroups studied.

Concluding message

POPQ is being universally adopted as the standard language of Female Pelvic Medicine and Reconstructive Surgery.

Fig. 1: Frequency (%) of utilization of POP grading systems (1999-2009*)

* 1999-2007 data from prior studies [1-2]

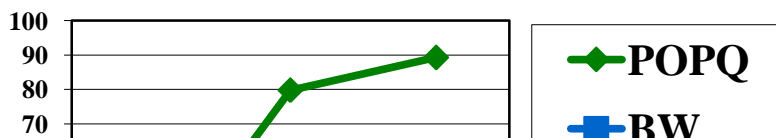
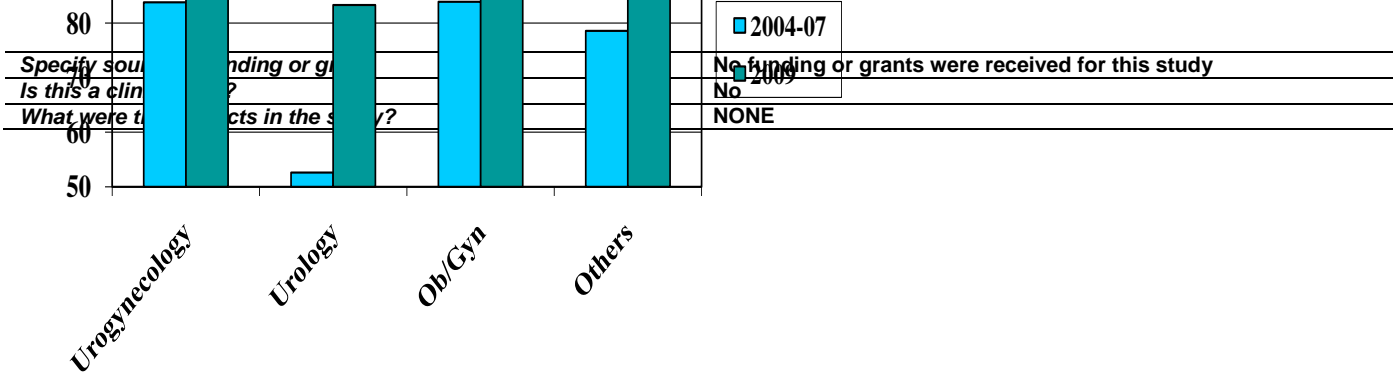


Fig. 2: Frequency (%) of POPQ use according to 1st author specialty

References

1. Muir TW et al.; Am J Obstet Gynecol. 2003 Dec;189(6):632-5
2. Treszezamsky AD et al.; Int Urogynecol J. 2010 Mar;21(3):359-63
3. Pham T et al.; Pelvic Med & Surg. 2009 Sep; 15(5): (abstract)



Specify source of funding or grants received for this study
 Is this a clinical trial?
 What were the subjects in the study?
 No funding or grants were received for this study
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