



Editorial

Pelvic organ prolapse



Pelvic organ prolapse (POP) is very common in women seen for routine gynecologic care, although it may be asymptomatic and its impact on women's quality of life (QoL) markedly varies.¹ Many women with POP experience comorbidity pelvic floor disorders, such as urinary and/or fecal problems, including incontinence which can seriously compromise QoL and limit social, psychological and sexual function. Because of importance of understanding the impact of POP and POP-associated comorbid pelvic floor disorders on QoL, there are a lot of studies available in the literature to provide meaningful suggestions both clinically and for cost-effectiveness research. We are glad to learn that Dr. Huang's study published in this issue of the *Journal of the Chinese Medical Association* entitled "A bibliometric and social network analysis of pelvic organ prolapse during 2007–2016" attempted to use the PubMed database to emphasize the importance on this issue of POP.²

The authors retrospectively reviewed 3294 articles and found the publications were mainly derived from the developed countries (high-income countries) and the majority of research focused on therapy (74.4% of highly-frequent MeSH/subheading words), suggesting that management of women with POP is frequently discussed, although the recent trend for this-type publication was declined. The number of published articles reached to the highest level ($n = 406$) in 2012 and dramatically dropped to the nadir ($n = 233$) in 2015 without a significant change in the next year ($n = 252$ in 2016).² The finding of Dr. Huang's study is interesting and worthy of a discussion.

First, the close anatomical and functional relationship of the lower urinary tract, lower genital tract and anorectum means that the POP is likely to have symptoms affecting multiple compartments.³ With an increasing elderly population, there is greater demand on the healthcare providers with more complicated patients due to the different etiologies, different modulating factors, and the accompanied comorbidities.⁴ Although therapy includes nonsurgical and surgical treatments,^{3,5} surgical approach increased significantly in the recent 10 years. New surgical techniques have been developed with a reduction of postoperative pain and a shorter period of hospitalization.⁶ Among these, the development of "mesh", either made by natural material and/or by biosynthesis, and

some modifications of surgical technologies, including laparoscopy, robotic surgery, and vaginal surgery might be most apparent. For this, an update of the *Cochrane Database Systematic Review* in 2017 summarizes the recent advances, such as (1) abdominal sacral colpopexy was better than vaginal sacrospinous colpopexy, because of a lower rate of recurrent vault prolapse (risk ratio [RR] 0.23, 95% confidence interval [CI] 0.07–0.77) and less dyspareunia (RR 0.39, 95% CI 0.18–0.86), but abdominal sacrocolpopexy needs a longer operating time, longer time to return to activities of daily living and increased cost; (2) standard anterior repair (transvaginal anterior colporrhaphy) might significantly increase the recurrent cystoceles compared to the use of mesh (polypropylene mesh) or graft inlays at the time of anterior vaginal wall repair (RR 1.39 or 2.72, 95% CI 1.02–1.90 and 1.20–6.14, based on different types of mesh or graft use, respectively); (3) posterior vaginal wall repair is better than transanal repair for posterior vaginal wall prolapse because of a lower rate of recurrent rectocele and/or enterocele (RR 0.24, 95% CI 0.09–0.64); and (4) the addition of a continence procedure to a POP operation, such as tension-free vaginal tape to endopelvic fascia plication (RR 5.5, 95% CI 1.36–22.32) and Burch colposuspension to abdominal sacrocolpopexy (RR 2.13, 95% CI 1.39–3.24) reduced the risk of women developing new postoperative stress incontinence.⁷ Taken together, surgical trend is clear and evidence is relatively strong, contributing to fewer publications of "POP" topics in the recent two years.

Second, a large and increasing body of studies has shown the relevance of the assessment of health-related QoL (HR-QoL) and functional status as important adjuncts to standard clinical outcomes.⁸ These assessments tools for women with POP after therapy, especially surgery, include Pelvic Floor Distress Inventory Questionnaire (PFDI-20), Pelvic Floor Impact Questionnaire (PFIQ-7), International Consultation on Incontinence Questionnaire (ICIQ), Pelvic Organ Prolapse Symptom Score (POP-SS), Prolapse Quality of Life Questionnaire (P-QoL), Research and Development 36-item Health Survey (RAND-36), Short Urogenital Distress Inventory (SUDI-6), 36-Item Short-Form Health Survey (SF-36), Urogenital Distress Inventory (UDI), Prolapse/Urinary Incontinence Sexual Questionnaire (PISQ), Pelvic Prolapse

Questionnaire (POP-Q), Incontinence Impact on the Quality of life (IIQ), Pelvic Organ Prolapse Distress Inventory (POPDI), Australian Pelvic Floor Questionnaire (APFQ), Prolapse Symptom Inventory (PSI), King's Health Questionnaire (KHQ), and utility preference instruments, such as Health Utilities Index Mark (HUI)-3 (Health Utilities Inc, <http://www.healthutilities.com>), EuroQol 5 dimensions (EQ-5D, EuroQol Group, <http://www.euroqol.org>), and Short Form (SF)-6D (QualityMetric Inc, <http://www.qualitymetric.com>).^{1,9,10} All tools are reproducible and reliable and provide the outcome evaluation after treatment. Since researchers used these effective tools to monitor the patients they treated, these results have been widely spreading, contributing to the largest number of articles published in 2014. After 2014, little new information is added, resulting in a significantly downward trend of publications addressing the topic of POP after 2015.

Third, Dr. Tsia-Shu Lo, working in the Department of Obstetrics and Gynecology, Chang Gung Memorial Hospital, Keelung Medical Center, Keelung, and is a top-one author addressing the topic of POP in Taiwan (near one hundred publications).¹¹ Dr. Huang and colleagues quantified 13 papers from Dr. Lo and ranked him as the copper-winner author in Dr. Huang's study.² Dr. Lo's publication number is only secondary to Dr. Dietz HP (n = 32) and Dr. Barber MD (n = 14).² Dr. Dietz HP, working in the Sydney Medical School Nepean, University of Sydney, Sydney, Australia, has published more than 200 articles addressing the topic of POP. A recent publication of Dr. Dietz derived from the *International Urogynecological Journal* studied the risk factors for prolapse recurrence.¹² The authors concluded that levator avulsion (odds ratio [OR] 2.76, 95% CI 2.17–3.51), preoperative stage 3–4 (OR 2.11, 95% CI 1.65–2.70), family history (OR 1.84, 95% CI 1.19–2.86), and hiatal area (OR 1.06/cm², 95% CI 1.02–1.10) are significant risk factors for prolapse recurrence.¹² Dr. Barber, working in the Cleveland Clinic, Cleveland, Ohio; and Duke University, Durham, North Carolina, a also highly productive author for the topic of POP, commented that the use of vaginal mesh devices worldwide has declined substantially, and many such devices are not longer commercially available.¹³ In fact, the vaginal mesh-related complication, such as erosion or exposure of the mesh into the vagina or other viscera for POP surgery is relatively high, and this led the US Food and Drug Administration to issue two public notifications in 2008 and 2011, although the UK medicines and Healthcare products Regulatory Agency still favored the benefits of POP mesh devices because mesh devices outweigh the risk.^{14,15}

In conclusion, with an increasing elderly population, age-related health problems, such as POP as shown in the current publication of the *Chinese Journal of Medical Association*² are increasing continuously. New technology and biomaterial development, including stem cell therapy, with a minimized risk of tissue reaction after treatment may play a more critical role for patients' care about the topic of POP in the future. We are looking forward to seeing more researchers' interest in this topic—POP.

Conflicts of interest

The authors declare that they have no conflicts of interest related to the subject matter or materials discussed in this article.

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