

PREVALENCE AND RISK FACTORS FOR SYMPTOMATIC PELVIC ORGAN PROLAPSE USING THE ICIQ-VAGINAL SYMPTOMS QUESTIONNAIRE: RESULTS FROM THE TWINSUK ADULT TWIN REGISTRY

Hypothesis / aims of study

Although the risk factors for anatomic pelvic organ prolapse (POP) among care-seeking women are well established there remains a paucity of work examining the epidemiology of symptomatic pelvic organ prolapse (sPOP) in the community. Population-based prevalence estimates of sPOP are an important both as baseline from which to detect the impact of both genetic and environmental risk factors across the life course, and for planning of future healthcare provision. The few available studies have produced disparate estimates from 2.9% [1] to 12.8% [2], using different questionnaires in different populations. The International Consultation on Incontinence - Vaginal Symptoms (ICIQ-VS) questionnaire has been recommended as a standard tool for assessing prolapse symptoms [3]. Although it has been extensively used as a post-surgical outcome measure in clinical trials, it has not previously been applied in an epidemiological survey. It includes two items on the sensation of vaginal bulging, which is considered to be the cardinal symptom of POP. The aim of this study was to estimate the prevalence of sPOP in a national sample using the ICIQ-VS, and assess the impact of age, parity and BMI on sPOP.

Study design, materials and methods

The study recruited participants in TwinsUK, a large UK population representative registry of adult twins. Women were invited to complete either an online or a postal questionnaire including items from the ICIQ-VS in January 2012. We defined symptomatic prolapse using two questions: "Are you aware of a lump or bulge coming down in your vagina?" and "Do you feel a lump or bulge coming out of your vagina altogether, so that you can feel it or see it on the outside?" (response options: never / occasionally / sometimes / most of the time / all of the time). We considered women responding to either item as "occasionally" or more often as an sPOP case for this analysis. Previous diagnosis or treatment for prolapse was identified using the items "Have you ever been diagnosed by a doctor or nurse with prolapse of the womb or vagina?" and "Have you ever had treatment for prolapse of the womb or vagina (including a pessary or prolapse surgery)?" (response options: yes / no). Risk factors for sPOP, including BMI and parity were assessed by self-report. The age standardised prevalence of POP was determined using population estimates for 5 year age bands from the 2011 UK National Census. Logistic regression was used to test predictors of sPOP.

Results

Out of 5,648 women invited to participate, we received 3,475 (61.5%) usable responses. We did not, however, find evidence of non-response bias, with women completing the questionnaire having similar demographics to non-responders across a number of parameters (mean age 61 vs 62, $p=0.18$; mean BMI 26.6 vs 26.2 $p=0.28$; mean parity 1.7 vs 1.7, $p=0.45$). The UK age standardised prevalence, for women aged over 20, of sPOP was 8.9%. There was a strong age gradient (see figure) equivalent to 24% increased risk of sPOP per decade (OR 1.24/decade, 95%CI 1.14-1.35, $p<0.001$). However, as previously reported, this effect was eliminated by adjustment for BMI and parity (mutually adjusted OR: BMI OR 1.03/kg/m², 95%CI 1.01-1.06, $p=0.02$; parity OR 1.31/delivery, 95%CI 1.17-1.46, $p<0.0001$). 45.6% of women reporting sPOP had received a diagnosis of prolapse from a nurse or doctor, compared with 6.0% of those not reporting sPOP. 7.8% of participants overall had received previous treatment such as a pessary or prolapse surgery, and of these women, 41.3% remained symptomatic.

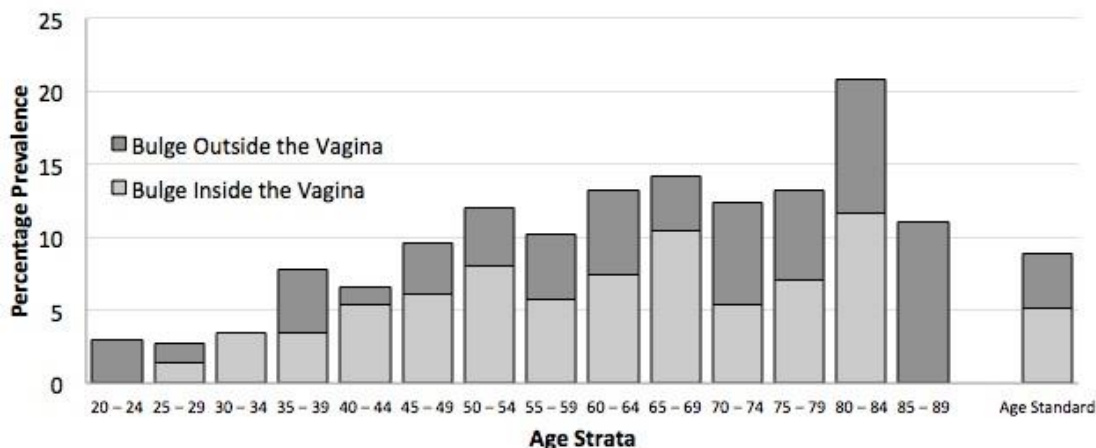


Figure: Age distribution of symptomatic prolapse in TwinsUK, with UK age standardised prevalence

Interpretation of results

The age standardised prevalence of sPOP in the UK is 8.9%, falling between previous estimates from the US [1] and Sweden [2]. Such estimates are likely highly sensitive to the symptom definition. Despite the striking age distribution, parity and BMI

were more important predictors of sPOP than age. The future change in prevalence may therefore be unpredictable as family sizes fall, but obesity increases. Although we observed quite high rates of diagnosis, few women had been offered treatment, and fewer still effective treatment. Although we did not find any non-response bias, these estimates may be inflated by the moderate response proportion. The ICIQ-VS items performed well both in online and postal formats, with low rates of missing data, and with good face validity for comparisons of a symptomatic bulge inside or outside the vagina.

Concluding message

In a large nationally representative cohort the age standardised prevalence of sPOP was 8.9%. Multivariable analyses indicated that BMI and parity were the most important determinants of sPOP. Despite the possible disparity between anatomic and symptomatic prolapse, our findings suggest that sPOP assessed using a questionnaire may be a useful phenotype for future large scale investigations of the genetic and environmental epidemiology of prolapse.

References

1. JAMA 2008 Sep 17;300(11):1311-6
2. BJOG 2013 Jan;120(2):152-60
3. BJOG 2006 Jun;113(6):700-12

Disclosures

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