

PREVALENCE, INCIDENCE, PROGRESSION AND REGRESSION OF PELVIC ORGAN PROLAPSE IN A COMMUNITY COHORT: RESULTS OF A 5-YEAR LONGITUDINAL STUDY

Hypothesis / aims of study

Longitudinal data on the natural history of pelvic organ prolapse and associated risk factors is scarce. The aim of this cohort study of women in the community is to determine the prevalence, one and five year incidence, progression and regression of pelvic organ prolapse (POP) and pelvic floor symptoms and to evaluate risk factors.

Study design, materials and methods

An age-stratified random sample from the electoral roll of 493 women in the community aged 40-79 years underwent an interview applying validated pelvic floor function questionnaires (1) and clinical examination including ICS pelvic organ prolapse quantification. The interviews and pelvic examination were repeated after one and five years (year 2 and 5). All interviews and examinations were performed by one gynaecologist. These women are taking part in a comprehensive longitudinal study of ageing which has been approved by the local ethics committee. Women were divided into age groups (40-49, 50-59, 60-69, 70-79 years) and groups regarding childbirth (no births, caesarean section only, at least one spontaneous or instrumental vaginal delivery). Women who have had previous pelvic floor surgery were excluded, as were women who failed to attend the year 5 POPQ examination; leaving 410 women for analysis. Incidences were calculated as new cases over 1 and 5 years out of women who did not have prolapse in year 1. Progression was defined as the number of cases with deteriorating prolapse out of women with stage 1 POP in year 1. Regression was considered when there was a spontaneous reduction in POPQ-stages.

Results

The results of the POPQ exams years 1, 2 and 5 are presented in Table 1. The prevalence of stage 2 prolapse increased significantly over 5 years (Friedman tests; $p < 0.001$). There was significantly more anterior than posterior vaginal wall prolapse (Wilcoxon, $p < 0.001$). Table 2 shows the incidences, progression and regression data for any POP (anterior, posterior or C).

Table 1: POPQ examination

	year 1	year 2	year 5
Anterior POP 0	199 (48.4%)	171 (41.6%)	174 (42.3%)
1	153 (37.2%)	175 (42.6%)	142 (34.5%)
2	58 (14.1%)	64 (15.6%)	94 (22.9%)
3	1 (0.2%)	1 (0.2%)	1 (0.2%)
Posterior POP 0	303 (73.7%)	294 (71.5%)	254 (61.8%)
1	80 (19.5%)	88 (21.4%)	122 (29.7%)
2	28 (6.8%)	29 (7.1%)	35 (8.5%)
3	0	0	0
Cervix/vault 0	377 (91.7%)	376 (91.5%)	331 (80.5%)
1	33 (8.0%)	34 (8.3%)	80 (19.5%)
2	1 (0.2%)	1 (0.2%)	0
3	0	0	0

Table 2: One and five-years incidence, progression and regression of anterior, posterior or uterine/vault prolapse

	Incidence	Progression	Regression
1 year	46/163 (28.2%)	17/169 (10.1%)	23/247 (9.3%)
5 years	75/163 (46.0%)	49/169 (29.0%)	42/247 (17.0%)

There was a significant discrepancy between the subjective awareness of prolapse and the measured POP (Fig. 1). Only 30% of women with stage 2 prolapse had prolapse symptoms and only 19% were bothered by it. In women with prolapse symptoms the median Ba was -2 (-3 - +2) and Bp -3 (-3 - +1) compared with women without prolapse symptoms with Ba at -1 (-1 - +1) and Bp at -2 (-3 - +1); (Mann-WhitneyU tests; $p < 0.001$).

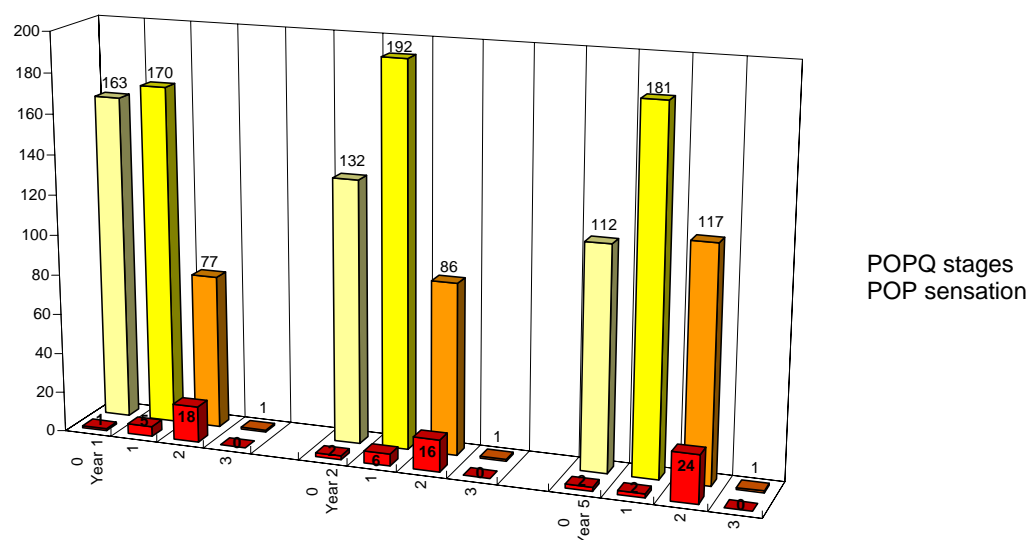


Figure 1: POPQ stages in years 1, 2 and 5 with corresponding numbers of women with prolapse sensation (red columns in front).

Prolapse progression was significantly associated with mode of delivery (Chi-square; $p=0.003$). None of the women with caesarean sections only developed prolapse. Use of systemic oestrogen resulted in a higher POP incidence rate (OR 1.7 95%CI 1.1-2.5, $p=0.016$). There were no risk factors found for prolapse regression.

Interpretation of results

There are high incidence and progression rates of POP, especially of anterior vaginal wall prolapse. However, only few women are aware of their prolapse and even less were bothered by it and most of those only slightly. There is also a surprisingly high spontaneous regression rate which has been described previously (2). Systemic oestrogen use and vaginal deliveries were risk factors for POP.

Concluding message

This is the first longitudinal study in community dwelling women that provides POPQ data and uses a validated pelvic floor questionnaire. POP is common but many women are not aware or bothered by it.

References

- 1 Neurourol Urodynam 2004; 23: 398-399.
- 2 Am J Obstet Gynecol 2004; 190: 27-32.

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DISCLOSURES: NONE

CLINICAL TRIAL REGISTRATION: This clinical trial has not yet been registered in a public clinical trials registry.

HUMAN SUBJECTS: This study was approved by the Human Research Ethics Committee, Royal Brisbane & Women's Hospital and followed the Declaration of Helsinki Informed consent was obtained from the patients.