

## PREVALENCE AND SEVERITY OF PELVIC ORGAN PROLAPSE IN SYMPTOMATIC AND ASYMPTOMATIC WOMEN IN RELATION TO AGE.

### Hypothesis / aims of study

Pelvic organ prolapse (POP) is a common, non-life-threatening condition-affecting women of all ages. It is associated with significant health-related quality of life issues. The aim of this cross-sectional study is to determine the prevalence of POP symptoms, POP signs and POP impact on quality of life in symptomatic and asymptomatic adult women (1, 2, 3).

### Study design, materials and methods

A cross-sectional study was performed in a cohort of community dwelling adult women. The study included women selected from database of gynaecological outpatient clinics. An age-stratified random sample were contacted and invited to undergo a clinical examination for symptoms and signs of pelvic floor prolapse. Symptomatic pelvic organ prolapse was defined as the symptom of a feeling of bulging, pressure or protrusion from the vagina (as determined by the prolapse quality-of-life (PQOL) and the physical examination sign of the pelvic organ prolapse according to the Pelvic Organ Prolapse Quantification system (POPQ) examination  $\geq$  stage II. Asymptomatic pelvic organ prolapse was defined as the absence of any symptoms of prolapse from the PQOL and POPQ stage 0 and I on examination. The P-QOL questionnaire consists of 20 questions pertaining to nine quality-of-life domains including: general health perceptions, prolapse impact, role limitations, physical limitations, social limitations, personal relationships, emotional problems, sleep/energy disturbances and severity measures. PQOL has been shown to be a simple, reliable, and valid tool in previous studies. Women with symptomatic prolapse were compared with asymptomatic women. Mann Whitney U Test was used.

### Results

A total of 785 from 1200 randomly selected females were included (65.4 %). The mean age was 47 years (range 18 – 82 years). Prevalence of POP increased by each decade of years, asymptomatic POP did not demonstrate a similar trend (Table 1). One in three women of 50 year old or older have a POP  $\geq$  stage II. Women of 60-70 years old are more severely affected comparing to the other age groups. One third of women  $\geq$  70 year old have a POP  $\geq$  stage III (Table 1). Prevalence of symptomatic pelvic organ prolapse had statistically significant trend toward advancing age, body mass index, parity, hysterectomy and postmenopausal status ( $p < 0.05$ ). More than 50% of women have and/or suffer from POP. 49.7% of subjects had no symptoms or signs of prolapse (Asymptomatic). One in 10 women have POP on vaginal examination but no symptoms. 3 in 10 women have prolapse symptoms but no evidence of POP. 2 out of 10 women have both symptoms and evidence of POP (Table 2). There was an association between the scores on the P-QOL and the severity of the pelvic organ prolapse based on the physical examination findings in symptomatic prolapse patients. The total scores for each of the P-QOL domains were found to be significantly higher in symptomatic prolapse subjects compared to asymptomatic subjects ( $p < 0.05$ ) (Table 3).

#### 1. Prevalence of POP-Q stages in different age groups of women.

Age (y)	Stage 0	Stage 1	Stage 2	Stage 3	Stage 4
< 40 (n = 256)	85.2 %	12.9 %	2.0 %	0.0 %	0.0 %
> 40 - 45 (n = 71)	64.8 %	21.1 %	11.3 %	2.8 %	0.0 %
> 45 - 50 (n = 110)	50.0 %	33.6 %	13.6 %	2.7 %	0.0 %
> 50 - 55 (n = 109)	30.3 %	37.6 %	28.4 %	2.8 %	0.9 %
> 55 - 60 (n = 79)	29.1 %	38.0 %	29.1 %	2.5 %	1.3 %
> 60 - 65 (n = 73)	21.9 %	31.5 %	35.6 %	9.6 %	1.4 %
> 65 - 70 (n = 53)	18.9 %	28.3 %	39.6 %	7.5 %	5.7 %
> 70 (n = 34)	5.9 %	23.5 %	29.4 %	35.3 %	5.9 %
Total (n=785)	51.3 %	25.7 %	17.7 %	4.2 %	1.0 %

#### 2. Prevalence of POP in different age groups of women based on sign (if POP $\geq$ II) and/or symptoms of prolapse (if two or more prolapse symptoms accordingly to PQOL questionnaire).

Age (y)	No sign/No symptom	Sign only	Symptoms only	Sign and symptoms
< 40 (n = 256)	80.9 %	1.2 %	17.2 %	0.8 %
> 40 - 45 (n = 71)	57.7 %	4.2 %	28.2 %	9.9 %
> 45 - 50 (n = 110)	52.7 %	6.4 %	30.9 %	10.0 %
> 50 - 55 (n = 109)	33.0 %	5.5 %	34.9 %	26.6 %
> 55 - 60 (n = 79)	21.5 %	6.3 %	45.6 %	26.6 %
> 60 - 65 (n = 73)	20.5 %	5.5 %	32.9 %	41.1 %
> 65 - 70 (n = 53)	22.6 %	11.3 %	24.5 %	41.5 %
> 70 (n = 34)	11.8 %	5.9 %	17.6 %	64.7 %
Total (n=785)	49.7 %	4.6 %	27.4 %	18.3 %

### 3. Prolapse quality-of-life domain scores and POP-Q scores

P-QOL mean score (SD)	Stage 0	Stage 1	Stage 2	Stage 3	Stage 4
General health perceptions	26.5 (20.6)	37.0 (19.2)	47.1 (17.6)	62.1 (18.9)	40.6 (18.6)
Prolapse impact	11.2 (21.8)	22.8 (23.8)	34.6 (24.1)	52.8 (23.9)	49.0 (37.1)
Role limitations	20.7 (29.6)	37.3 (32.5)	51.4 (30.2)	70.2 (27.6)	70.8 (21.4)
Physical limitations	4.2 (12.2)	14.6 (22.9)	29.0 (29.6)	56.6 (32.8)	60.4 (35.6)
Social limitations	2.6 (9.9)	8.4 (17.3)	19.2 (24.9)	51.0 (32.5)	50.0 (34.6)
Personal relationships	3.6 (14.5)	8.0 (18.6)	23.2 (29.1)	35.0 (34.2)	25.0 (31.9)
Emotional problems	3.8 (11.4)	12.0 (19.8)	27.3 (27.6)	46.1 (25.2)	41.7 (31.3)
Sleep/energy disturbances	14.1 (14.3)	24.2 (20.3)	34.5 (24.1)	52.0 (23.5)	39.6 (30.8)
Severity measures	3.7 (18.6)	9.6 (14.2)	17.8 (18.4)	40.7 (24.5)	41.7 (25.9)

#### Interpretation of results

POP is uncommon (2%) in women of 40 year old or younger. Prevalence of POP-Q stages significantly increases with increasing age of subjects. In younger subjects symptomatic prolapse was confirmed in 0.8%. In older subjects the prevalence increased to 64.7 %. There are no symptoms and signs or symptoms of prolapse in 49.7% of our population. The P-QOL questionnaire confirmed significant trend toward worsening symptom scores with advancing age in all domains.

#### Concluding message

Symptomatic pelvic organ prolapse was confirmed in 18% of this population and asymptomatic pelvic organ prolapse in 5%. The P-QOL questionnaire confirmed significant impact of symptomatic pelvic organ prolapse on quality of life.

#### References

1. Int Urogynecol J (2010) 21:53-61
2. Int Urogynecol J (2008) 19:1303-1307
3. Curr Opin Obstet Gynecol (2002) 14:503-507

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<b>Was this study approved by an ethics committee?</b>	Yes
<b>Specify Name of Ethics Committee</b>	Ethics committee of Jessenius School of Medicine, Martin
<b>Was the Declaration of Helsinki followed?</b>	Yes
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