**199**

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## CHRONIC CONSTIPATION: A PROSPECTIVE OBSERVATIONAL STUDY ON 786 UROGYNAECOLOGICAL PATIENTS

**Hypothesis / aims of study**

Chronic constipation is considered one of the most important factor in the pathogenesis of genital prolapse. However prevalence data in urogynaecologic population are scarcely reported and investigated in detail as far as concerns different types of constipation. No information are available on the relationship between constipation and the expression of genital prolapse in different vaginal segments. Aim of this study was to investigate the prevalence and features of constipation in an urogynecologic setting and to assess the relationship of this symptom with patients characteristics, urinary symptoms, findings at physical examination and urodynamic diagnosis.

**Study design, materials and methods**

Consecutive women referred to our urogynaecological outpatient clinic were prospectively investigated. For each woman we collected a general medical and urogynecological history. Urinary and prolapse symptoms were collected through an assisted visual analogue scale (score 0 – 10). Each woman filled in a specific questionnaire on bowel symptoms, including constipation and anal incontinence. Constipation was investigated whether hard stools and straining and/or less than 3 stools per week greater than 25% of the time. All the women underwent an urogynaecological examination; prolapse was assessed using the Half Way System classification(HWS) since data collection started in our unit with people not trained in the POP-Q system. Standard urodynamics or videocystourethrography was performed when needed. Patient's features, degree of genital prolapse, urinary, bowel, prolapse symptoms and urodynamic diagnosis were compared between constipated and non constipated women. Stata 6.0 software was used for statistics with a P value < 0.05 considered significant. The presence of prolapse in the anterior, central, posterior vaginal segment and the degree in each of them entered in a stepwise logistic regression analysis.

**Results**

Seven-hundred-and-eighty-six women were enrolled (mean age 59.5 years; range 19-90), 80.9% of them were in menopause. 249 (31.7%) complained of constipation; between them 172 (69.1%) complained only of difficult stool passage, while 13 (5,2%) referred exclusively decreased stool frequency and 64 (25,7%) presented both conditions. Anal incontinence was referred in 154 cases (19.6%). Genital prolapse ≥ 2 degree HWS was present in 348 (44.3%). Table 1 shows the comparison between constipated and non constipated women for history, urinary and bowel symptoms.

*Table I: Comparison between Constipated and Non Constipated women.*

| | **Constipated (n. 249)** ***Mean ± SD (Range/Median)*** | **Non Constipated (n. 537)** ***Mean ± SD (Range/Median)*** | ***P value (Wilcoxon rank sum test)*** |
|---|---|---|---|
| Age (years) | 61 ± 10.04(34-90) | 58.7 ± 11.43(19-90) | *0.012* |
| Vaginal delivery * | 2 ± 1 (2 ± 1) | 2 ± 1(2 ± 1) | *0.851* |
| Menopausal status (%) | 214/248 (86.3) | 422/536 (78.7) | *0.012 §* |
| Birth-weight (gr.) | 3702 ± 636 (1800 – 5800) | 3678 ± 609 (1600 – 6000) | *0.705* |
| Prolapse symptoms | 4 ± 3 (5) | 4 ± 3 (3) | *0.003* |
| Stress Incontinence | 4 ± 3 (4) | 5 ± 3 (6) | *0.371* |
| Nocturia | 4 ± 3 (3) | 4 ± 3 (3) | *0.792* |
| Urgency | 5 ± 3 (6) | 5 ± 3 (6) | *0.845* |
| Urge Incontinence | 4 ± 3 (2) | 4 ± 3 (3) | *0.830* |
| Complete voiding | 4 ± 3 (4) | 3 ± 3 (3) | *0.077* |
| Anal incontinence | 64/249 (25.7) | 90/537 (16.8) | *0.003 §* |

*V.A.S. = Visual Analogue Scale; * = Mode; § = Fisher's exact test*

No differences were observed for urodynamic diagnosis distribution.
Posterior colpocele was significantly more frequent (p=0.000) in constipated rather than in non constipated women. The same analysis was not significant for anterior and central descensus. At stepwise logistic regression for findings at physical examination the presence of posterior colpocele resulted as a risk factor for constipation (OR= 2.31; 95% CI 1.63-3.27), while the degree of anterior colpocele resulted as a protective factor (OR= 0.80; 95% CI 0.66-0.96). We therefore investigated the distribution of prolapse ≥ 2 degree in different vaginal segments as shown in table 2.

Table 2. Distribution of prolapse ≥ 2 degree in different vaginal segments in constipated and non constipated women.

| **Genital prolapse ≥ 2 (HWS)** | **Constipated (%)** | **Non Constipated (%)** | ***P value*** |
|---|---|---|---|
| Anterior | 29.4 | 36.4 | 0.033 |
| Central | 17.4 | 17.6 | 0.517 |
| Posterior | 16.9 | 7.6 | 0.000 |

**Interpretation of results**

Chronic straining at stool is commonly considered a pathophysiological factor for genital prolapse in general, while our results demonstrate an exclusive relationship with posterior colpocele. Vector forces on the pelvic floor expressed during straining at stool probably exert mainly from the rectum to the posterior vaginal wall, inducing the rectocele. The opposite interpretation of a causative role of posterior colpocele in inducing constipation would appear less likely as the correlation exists independently from the degree of prolapse.

**Concluding message**

One third of urogynaecological patient suffer from constipation and it is more frequently an evacuation disorder rather than a problem of decreased stool frequency. The relationship between chronic constipation and genital prolapse must be further investigated.