

PREVALENCE OF PELVIC FLOOR DISORDERS IN VARIOUS GYNECOLOGIC CANCERS

Hypothesis / aims of study

The prevalence of urinary incontinence and pelvic organ prolapsed is highest in women beyond childbearing age. This is also the group that is at highest risk for gynaecologic cancer. In a recent retrospective study of patients presenting to a gynaecologic oncology office revealed a prevalence of urinary incontinence of 53.2% and of pelvic organ prolapse to or beyond the hymen of 8.7%.¹ Risk factors differ for various gynaecologic cancers. Endometrial cancer is associated with unopposed estrogen exposure and obesity, ovarian cancer with nulliparity and familial factors, and cervical cancer with smoking and HPV. Pelvic floor disorders are associated with familial factors, age, parity and obesity. Based on different risk factors for different gynaecologic malignancies, it would be reasonable to assume that the prevalence of pelvic floor disorders varies between gynaecologic malignancies. Since this hypothesis has not been explored previously, we assessed the prevalence of urinary incontinence and pelvic organ prolapse stratified by type of gynaecologic malignancy: endometrial, cervical, and ovarian. We hypothesized that women with endometrial cancer will have a higher prevalence of pelvic floor disorders given both share common major risk factors.

The objective of this study was to determine whether the prevalence of urinary incontinence and pelvic organ prolapse differs

- in patients with different gynecological malignancies such as endometrial, ovarian, and cervical cancer and
- in women with gynecologic malignancy compared to women presenting with benign gynecologic conditions.

Study design, materials and methods

This is a retrospective chart review. A one-page screening questionnaire on pelvic floor dysfunction was administered as part of the baseline health questionnaire to all new patients presenting to a gynaecologic oncology practice between 04/01/10 to 08/31/11. Patients were asked whether they felt a bulge from their vagina or experienced involuntary loss of urine associated with activity, urge to urinate, or both. Medical records were used to extract information regarding demographics and gynaecologic diagnosis. Prevalence of urinary incontinence and of pelvic organ prolapse were determined for each gynaecologic malignancy and benign gynaecologic conditions. Chi-squared analysis was used to compare findings and test for significance. Logistic regression analysis was performed to control for involved organ, BMI, age and parity.

Results

A total of 549 subjects with a mean age of 57.9 years, mean BMI 32 kg/m² and median parity of 2 were included in this study. Of these, 189 (36.6%) had endometrial cancer, 73 (13.3%) had ovarian cancer, 50 (9.1%) had cervical cancer, and 201 (36.6%) had benign gynaecological conditions.

Of all subjects, 9.6% felt a bulge from the vagina and 49.4% experienced urinary incontinence. Of the subjects with symptoms of urinary incontinence, 174 (64.2%) reported predominately stress related urine loss, 76 (28%) leaked urine with an urge to void and 21 (7.8%) reported urine loss unrelated to activity or an urge to void. Two out of three subjects with incontinence and/or prolapse (64.6%) rated their symptoms as mild, the remainder (35.4%) rated their symptoms as moderate to severe.

When comparing symptoms related to pelvic organ prolapse and urinary incontinence between women with benign gynaecologic conditions and with cancer, there was no significant difference in prevalence, type or severity between the two groups. A bulge was felt by 7.5% women with benign disease and by 10.9% with malignancy (p=0.20). Urinary incontinence was reported by 50.1% of women with cancer and 48.1% of women with benign disease. Of those women with symptoms of urinary incontinence, close to one in three subjects with malignancy reported stress related urine loss (32.3%) compared to 30.7% women with benign conditions (p=0.44). The prevalence of urge urinary incontinence was virtually identical with 13.8% and 13.9%, respectively. Similarly, 34.9% of women with malignancy rated their symptoms as moderate to severe compared to 36.3% of women with benign gynaecologic conditions (p=0.81).

The prevalence of feeling a bulge and of symptoms of urinary incontinence in women with endometrial, ovarian and cervical cancer are summarized in Table 1.

Table 1: Prevalence of pelvic floor symptoms in common gynaecologic cancers

Symptom	Uterine Cancer	Ovarian Cancer	Cervical Cancer	Overall Gynaecologic Cancer	P-value
Feeling bulge	7.1%	16.7%	16.3%	10.9%	0.07
Urinary incontinence	55.6%	52.1%	54.0%	52.7%	0.52
SUI*	35.4%	31.5%	28.0%	32.3%	NS
UUI**	14.3%	15.1%	8.0%	13.8%	NS
Moderate to severe	34.9%	40.5%	38.5%	34.9%	0.34

*SUI = Stress urinary incontinence

**UUI = Urge urinary incontinence

After logistic regressions, age and BMI remained associated with symptoms in all groups (p<0.001), BMI was associated with SUI in all groups (p<0.01), and uterine cancer was borderline negatively associated with feeling a bulge in the malignant groups (p=0.07). There were no other associations between type of malignancy and any other outcome measures.

Interpretation of results

The prevalence of urinary incontinence and pelvic organ prolapse were similar in subjects with benign and malignant conditions in a cohort of women presenting to a gynaecologic oncology clinic. There was no significant difference between the prevalence of pelvic floor disorders or of the severity of symptoms when stratified by type of gynaecologic malignancy. We therefore rejected our hypothesis that prevalence of pelvic floor disorders is higher in patients with endometrial cancer compared to women with other types of gynaecologic cancer and benign gynaecologic conditions.

Concluding message

The prevalence of symptoms associated with pelvic organ prolapse and urinary incontinence is high in women presenting for treatment of gynaecologic cancer. The type of cancer is not a predictor for the presence of symptoms, while age and BMI are.

References

1. Buchsbaum GM. Prevalence of urinary incontinence and pelvic organ prolapse in women with gynecologic cancers. *Female Pelvic Medicine & Reconstructive Surgery*. Vol 17(5, Supplement 2), September/October 2011.

Disclosures

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