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IMPROVEMENT OF THE LOWER URINARY TRACT SYMPTOMS IN PATIENTS WITH UTERINE FIBROIDS BY SURGICAL TREATMENT

Hypothesis / aims of study
Symptomatic uterine fibroids are sometimes accompanied by lower urinary tract symptoms (LUTS) such as frequency, urgency, or slow stream. The aim of this study was to investigate the change of the LUTS and the LUTS-related QOL indices by surgical treatment in patients who underwent myomectomy or hysterectomy for uterine fibroids.

Study design, materials and methods
This was a prospective cohort study. Patients were recruited between June 2012 and May 2013. All patients enrolled in this study presented with complaints attributed to the presence of uterine fibroids and were hospitalized to undergo either a hysterectomy or myomectomy to treat these symptoms.
The Bristol Female Lower Urinary Tract Symptom-Scored Form (BFLUTS-SF) questionnaire was adopted to detect and evaluate LUTS in this study. It consists of mostly five-level rated 19 questions concerning LUTS and LUTS-related QOL, divided into 5 subscales: frequency, incontinence, quality of life, voiding symptoms, and sexuality.
Before enrollment, patients received full explanation of this survey and those who accepted to participate filled out a private Japanese translation of the BFLUTS-SF on the day before surgical procedure[1]. Demographics, medical and obstetric history, previous surgeries and peri-operative information were collected from the electronic health record of the hospital. Another BFLUTS-SF was sent by postal mail at a point in 6 to 18 postoperative months to those who had given written consent for a second survey. BFLUTS-SF subscale scores before and after treatment were compared using Wilcoxon signed-rank test.

Results
Of 116 patients who started to participate, 68 responded to the second inquiry by potal mail. Eventual 64 valid pairs of pre- and post-operative scores were used for statistical analysis.
59 of the patients had menstrual cycle at presentation. Forty-seven were nulliparae. Demographic and peri-operative data are summarized in Table 1.

Table 1 Demographic data and surgical treatment

Mean age±SD (years)		43.1±4.2
Mean BMI±SD (kg/m2)		21.4±2.9
Median (range) vaginal parity		0 (0–5)
Median (range) duration of preoperative Gn-RH analog treatment (months)		0 (0–7)
Mean uterine / enucleated fibromata weight ±SD (g)		395.1±315.3
Procedure	Laparoscopically-assisted myomectomy	19
	Laparoscopic myomectomy	16
	Total abdominal hysterectomy	9
	Total laparoscopic hysterectomy	9
	Vaginal hysterectomy	2
	Abdominal myomectomy	8
	Trans-cervical resection	1
Uterine appendage	Preserved	60
	Bilateral salpingo-oophorectomy	2
	Hemi salpingo-oophorectomy	2

Baseline and postoperative BFLUTS-SF subscale scores and calculated p values are summerized in Table 2. On analysis by Wilcoxon signed-rank test, there were slight but statiscally significant improvement in all of the six subscales.

Table 2 Baseline and postoperative BFLUTS-SF subscale scores

Subscale	Baseline (mean±SD)	median	6-18 months postoperative (mean±SD)	median	P value
Frequency	2.91±1.76	3	1.44±1.42	1	4.2 E-08
Incontinence	1.47±1.84	1	0.98±1.52	0	3.5 E-03
QOL	2.05±2.48	1	0.80±1.18	0	1.7 E-04
Voiding	1.00±1.54	0	0.45±0.92	0	3.8 E-03
Sexual	0.31±0.73	0	0.13±0.38	0	3.3 E-02
Total	7.73±5.12	7	3.80±3.53	3	4.6 E-08

Comparison by Wilcoxon signed-rank test, using IBM SPSS Statistics ver22.

Interpretation of results

Women who seeked surgical treatment of symptomatic uterine fibroids were sometimes aware of LUTS. Our study indicated that subscale scores of the BFLUTS-SF in the patients responded to the second inquiry was better for some time after the surgical treatment of the uterine lesion. Since an enlarged uterus can exert various types of mechanical effect to the female lower urinary tract such as pressure against the urinary bladder or bladder neck mobility restriction, it is possible that some of the LUTS in our patients were due to the uterine fibroids. However, the dimension of change in the BFLUTS-SF subscales varied.

Concluding message

From a urogynecological point of view, LUTS are an inseparable aspect of uterine fibroids. An inquiry asking about LUTS, for instance the BFLUTS-SF, may go a long way during lthe ong management of uterine fibroids.

References

1. Parker-Autry C, Harvie H, Arya LA, Northington GM. Lower urinary tract symptoms in patients with uterine fibroids: Association with fibroid location and uterine volume. Female Pelvic Med Reconstr Surg. 2011;17(2):91-96.

Disclosures

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