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CLINICAL ARTICLE

Indications for gynecologic surgery and their implications for sexual function in menopausal women

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Abstract

Objective: To determine the indications for gynecologic surgery and the effect of surgery on dyspareunia and sexual intercourse frequency in menopausal women in Accra, Ghana. *Method:* Women who had gynecologic surgery between January 2005 and December 2007 were invited for an interview about dyspareunia and frequency of intercourse before and after surgery. *Results:* Of the 93 women interviewed who underwent hysterectomy, 29 (31.1%) had dyspareunia before surgery and 13 (14.0%) after ($P=0.006$). Of the 65 women who had benign tumors, before surgery 26 (40%) were sexually active, while after surgery 43 (66%) were sexually active ($P=0.001$). However, frequency of intercourse did not change for those with malignancies. The mean frequency of intercourse before surgery was 2.11 per week, compared with 2.46 per week after surgery ($P=0.50$). *Conclusion:* Gynecologic surgery reduced dyspareunia. More women became sexually active following surgery for benign but not malignant tumors, but the mean overall frequency of intercourse did not change significantly in the interviewed population.
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1. Introduction

The mean age for menopause has been estimated at 48 years in Ghana [1,2]; and by the time they reach the age of 50 years, many Ghanaian women are experiencing such symptoms as hot flushes, vaginal dryness, and excessive sweating, which can all be relieved by estrogen therapy. Menopausal women sometimes also undergo surgery to remove tumors, normalize organ function, or correct a deformity. Menopausal symptoms and effects of surgery can affect sexual function in women.

In Ghana, as in many African countries, issues relating to sexuality and sexual activity are not openly discussed, and it is

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Table 1 Parity and age distribution of the patients

Diagnosis	No. of patients (N=93)	Parity (mean±SD)	Age (mean±SD), y
Cervical cancer	11	6.6±2.9	60.5±9.4
Endometrial cancer	7	4.7±2.7	64.2±9.1
Ovarian cancer	15	4.2±3.4	58.7±6.6
Uterine fibroids	42	3.8±2.7	53.2±3.7
Uterine prolapse	9	5.6±2.5	64.4±8.9
Ovarian tumor	9	5.0±1.9	65.1±8.1

commonly assumed that women of menopausal age do not engage in sexual activity. This assumption, however, is incorrect, and it is important to ensure that surgical interventions in menopausal women preserve adequate sexual function.

Sexual function in women has not been sufficiently studied in Ghana, and Olarinoye [7] made the same observation for Nigeria when studying sexual function in women with diabetes. One may assume that the subject has not been much studied in the whole of West Africa.

The frequency of sexual intercourse may be affected by physical, psychological, and socioeconomic factors. One factor is dyspareunia, whose prevalence ranges from 7% to 60% [3,4]. Dyspareunia is the most common cause of sexual dysfunction encountered in general and gynecologic practice [5,6].

The objective of this study was to determine the main indications for gynecologic surgery in women older than 50 years, and the association of surgery with changes in dyspareunia and intercourse frequency.

2. Materials and methods

A review of the gynecologic operating room records and records from the Statistics and Documentation Unit of the Korle Bu Teaching Hospital (KBTH), Accra, Ghana, was carried out in February 2008 for the period January 2005 through December 2007. Over these 2 years, 310 major gynecologic operations were performed in women who were 50 years or older.

The women who had undergone these operations were invited to the KBTH for an interview. Those who were regularly reporting to the hospital for follow-up were invited and interviewed by their gynecologists, and the remaining women were invited by telephone or mail. Public health nurses helped in making home contacts and administering this oral interview.

The 93 women who agreed to be interviewed provided answers to the 4 following questions: (1) Did you have pain at intercourse before surgery? (2) Do you now have pain at intercourse? (3) How many times per week were you having intercourse then? and (4) How many times per week do you have intercourse now? In addition to the interview the following data on each woman were noted: name, age, parity, indication for surgery, type of surgery performed, and histopathologic report (if available). The responses to the interview questions and the data on each woman were collated by a research assistant.

The sample size for the study was calculated using the Epi-Info software, version 3.3.2 (a freeware available from the Centers for Disease Control at the following Web site: http://www.cdc.gov/epiinfo/). We assumed the prevalence rate of dyspareunia to be 33.3%. Since we further assumed the worst postoperative prevalence of dyspareunia to be 25%, the minimum study population for a 95% confidence interval was 88.

Microsoft Excel software (Microsoft, Redmond, WA, USA) was used to capture the data, which were then transferred for further analysis to SPSS version 10.0 (SPSS, Chicago, IL, USA). Descriptive statistics were employed for the analysis of the demographic factors. The prevalence of dyspareunia and the mean frequency of sexual intercourse before and after surgery were compared using the χ^2 and the t tests. $P<0.05$ was considered significant.

3. Results

Of the 310 women who had undergone a gynecologic operation during the period of the study, 93 were interviewed. The indications for surgery included uterine fibroids, utero-vaginal prolapse, benign ovarian tumors, endometrial cancer, ovarian cancer, and cervical cancer (Table 1).

The main presenting complaints were an abdominal mass or distension (80%), irregular vaginal bleeding (35%), postmenopausal bleeding (42%), an offensive vaginal discharge (25%), and a mass in the introitus (18%). The main intercurrent conditions were anemia (20%), hypertension (15%), diabetes mellitus (3%), and urinary tract infection (5%).

The 93 patients underwent hysterectomy with bilateral oophorectomy. Those with endometrial cancer were treated by hysterectomy and radiotherapy; those with ovarian cancer underwent debulking followed by cytotoxic therapy; and those with cervical cancer underwent radical surgery and radiotherapy.

The mean age at menopause was 49.6±4.3 years for the 67 women who were menopausal before surgery. There were 29 (31.1%) women with dyspareunia before and 13 (14.0%) after

Table 2 Sexual function before and after surgery [a]

Diagnosis	Dyspareunia		Weekly frequency of intercourse		Patient sexually active	
	Before surgery	After surgery	Before surgery	After surgery	Before surgery	After surgery
Uterine fibroids (n=42)	13	3	4.9	5.2	24	36
Uterine prolapse (n=9)	5	2	3.2	4.2	1	3
Ovarian cancer (n=15)	4	2	1.4	1.8	1	4
Cervical cancer (n=11)	4	1	0.44	0.67	1	1
Endometrial cancer (n=7)	2	0	1.0	1.0	1	0
Ovarian tumor (n=9)	1	2	0.11	0.11	2	2

[a] Values are given as number of patients unless otherwise indicated.

surgery, and the prevalence of dyspareunia was significantly lower after surgery than before (P=0.006) (Table 2).

Of the 65 women who underwent surgery for benign tumors, 26 (40%) had intercourse before and 43 (66%) had intercourse after surgery, and the difference was significant (P=0.001).

The sexual activity of the 28 women with malignancies did not change much following surgery. Before surgery only 2 (9.1%) of these women were sexually active compared with 3 (11%) after surgery.

The mean frequency of intercourse for the 93 women was 2.11 per week before surgery and 2.46 per week after surgery, and the difference was not significant. (P=0.50).

4. Discussion

This was a review of the indications for gynecologic surgery in women who were in the perimenopausal or menopausal period. The sexual repercussion of surgery was also studied for these women. The mean age at menopause for the study group was similar to that reported in earlier studies [2]. The high mean parity noted for all diagnoses portrays a pronatalist society (Table 1).

The lower prevalence of dyspareunia after surgical treatment was probably due to tumor bulk reduction and the treatment of concomitant pelvic infections. Since fibroids are often associated with pain caused by degeneration, extrusion, torsion, and/or infection, we were expecting to observe a decreased frequency of dyspareunia following surgery for uterine fibroids. On the other hand, we were expecting to note an increased frequency of dyspareunia after surgery for cervical cancer because of the shortening of the vagina associated with Wertheim hysterectomy. Although our expectation was verified in both instances, there was no significant change in the frequency of sexual intercourse after treatment. This finding is in agreement with that of Dragistic and Milad [8] but differed from others [5]. The frequency of intercourse may have been influenced by other factors [9].

We used dyspareunia and frequency of sexual intercourse as indicators for sexual function in this preliminary study. Women are often asked about these indicators in general gynecological practice. Open discussions about sexual activity are not common in the Ghanaian community, but the 2 indicators that we carefully chose enabled us to do this preliminary study of this taboo subject. Future investigations, which would be easily done in other cultural settings, would involve libido, lubrication, and orgasm.

The review of indications for major gynecologic surgery was limited by incomplete documentation and the absence of histopathologic records in some cases. Most of the operations were performed for uterine fibroids, for which the patients had abdominal hysterectomy with bilateral salpingo-oophorectomy. No patient had prior administration of gonadotropin-releasing hormone analogues to reduce the size and vasculature of the fibroid prior to surgery. No minimal-access surgery, such as the hysteroscopic resection of submucoid polyps, was performed. No patient underwent radiologically assisted uterine artery embolization. The surgical management of fibroids at KBTH does not involve the use of any new method, and it is time to research and invest in methods preserving the uterus and cervix as a means to positively influence sexual function after surgery [10].

As the uterus, menstruation, and fertility are seen by many women as fundamental to their femininity [10], sexual function can be unpredictable after hysterectomy and bilateral salpingo-oophorectomy. Women often find it difficult to become aroused after hysterectomy, particularly when they experienced depression before surgery. Along with the desire for sexual intercourse, arousal, lubrication, and orgasm, dyspareunia is likely to be affected by the removal of the ovaries [11]. Hormone therapy is a good solution for women with no contraindications, but our patients find it too costly.

We found that about 90% of the women treated at KBTH for gynecologic malignancies were sexually active neither before nor after treatment. In some cases, postoperative radiation as a mode of management produces fibrosis of the vaginal wall; and because Wertheim hysterectomy is accompanied by the removal of the upper third of the vagina, the women thus treated end up with a shortened vagina. Gynecologists ought to try and minimize mutilation, preserve ovarian function, reconstruct the vagina if possible, and involve their patients' partners; and they ought to inquire about their patients' sexual activity during follow-up visits, and refer them for sexual counseling when needed [10].

Not many women 80 years or older underwent gynecologic surgery at KBTH during the period of the study, and this is a reflection of the demography of the country. A rigorous preoperative assessment of patients by gynecologists, physicians, and anesthetists generally takes place in the United States, and this helped optimize the outcome and reduce intraoperative and perioperative fatalities in elderly patients [12].

In a study carried out in Accra, Duda et al. [13,14] revealed the high importance the women attach to their body image. Moreover, Welbourne [15] stated the need to define total patient well-being not only in terms of physical and psychological health but also to include the patient's sexual relations. Gynecologists working in the Ghanaian community should take these factors into consideration before and after they perform major surgery.

In conclusion, in this study, gynecologic surgery was associated with a reduced frequency of dyspareunia. Women became more sexually active following surgery for benign but not for malignant tumors, but overall the mean frequency of intercourse did not change significantly. Gynecologists must therefore counsel their patients and their partners about sexual function.

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