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ORIGINAL ARTICLE

The Prevalence and Risk Factors of Sexual Dysfunction in Gynaecological Cancer Patients

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ABSTRAK

Disfungsi seksual di kalangan pesakit kanser ginekologi adalah prevalens. Pada kebanyakan situasi, disfungsi seksual di kalangan penderita kanser ginekologi adalah di bawah paras pengenalpastian di mana terdapat pelbagai faktor morbiditi psikologi, faktor berpelbagaian yang berinteraktif berserta kengganan pesakit menceritakan masalah mereka kepada doktor perawat. Menentukan faktor berisiko disfungsi seksual di kalangan pesakit akan membuka ruang untuk kita memberi lebih perhatian kepada golongan yang memerlukan perhatian serta membolehkan satu strategi untuk mengenalpasti disfungsi seksual di peringkat awal, agar usaha pencegahan dan rawatan boleh dilaksanakan. Kajian ini bertujuan untuk menentukan prevalens dan faktor berisiko disfungsi seksual di kalangan pesakit kanser ginekologi di Hospital Sultanah Bahiyah, Alor Star. Fungsi seksual dikalangan 83 penderita kanser ginekologi yang berkahwin dinilai dengan skala swa-penilaian MVFSFI (Malay version Female Sexual Function Index). Skala swa-penilaian WHOQOL-BREF (World Health Organization-Quality of Life-26) yang digunakan untuk menilai domain kualiti kehidupan sementara MINI (Mini International Neuropsychiatry Interview) pula untuk menilai masalah psikiatri di kalangan pesakit. Kadar prevalens disfungsi seksual di kalangan pesakit kanser ginekologi ialah 65% (54/83). Disfungsi seksual berkait secara signifikan dengan tahap pendidikan yang rendah (kadar odds, OR: 3.055; sela keyakinan, CI 1.009-9.250), tempoh penderitaan kanser yang pendek (OR 0.966, CI 0.966- 0.998), rawatan kemoterapi yang berterusan (OR 3.045, CI 1.149-8.067), persepsi tentang kesakitan (OR 3.230, CI 1.257-8.303), kurangnya perhubungan seks (OR 1.862) dan tiga domain kualiti kehidupan termasuk kesihatan fizikal, psikologi dan perhubungan sosial (masing-masing OR 0.942, CI 0.908-0.978; OR 0.955, CI 0.916-0.995; OR 0.933, CI 0.894-0.973). Walaubagaimana pun, disfungsi seksual tidak berkait dengan kemurungan yang dialami oleh penderita kanser ginekologi (χ^2 = 1.224, p = 0.268). Kesimpulannya, prevalens disfungsi seksual di kalangan

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penghidap kanser ginekologi adalah tinggi, sama seperti kajian-kajian lain yang telah dijalankan. Memandangkan prevalens disfungsi seksual adalah berpelbagaian dimensi, justeru proses penilaian dan perawatan seharusnya mendukung konsep holistik serta berorientasikan pesakit.

Kata kunci: kanser ginekologi, disfungsi seksual, faktor risiko, kualiti kehidupan

ABSTRACT

Sexual dysfunction is highly prevalent in gynaecological cancer patients. Most of the time, sexual dysfunction in gynaecological cancer is underdiagnosed as there is overlapping of symptoms with other psychological morbidities, interplaying of multiple risks, patients' reluctance to complain or incompetence of health care provider to assess. Determining the risk factors of sexual dysfunction in cancer patients enables us to pay more attention to those who are vulnerable and to device strategies for early detection, prevention and treatment of sexual dysfunction in them. The main aim of the study was to determine the prevalence of sexual dysfunction and its risk factors in gynaecological cancer patients in Hospital Sultanah Bahiyah, Alor Star, Malaysia. Sexual function of eighty-three gynaecological cancer patients who were married were assessed with self-rated MVFSFI (Malay version Female Sexual Function Index). Self-rated WHOQOL-BREF (World Health Organization- Quality of Life- 26) which assessed the domains of quality of life was used while MINI (Mini International Neuropsychiatry Interview) was used for diagnosis of major depressive disorder. The prevalence of sexual dysfunction among the married gynaecological cancer patients was 65% (54/83). Sexual dysfunction was significantly associated with low education level (OR 3.055, CI 1.009-9.250), shorter duration of cancer (OR 0.966, CI 0.966- 0.998), ongoing chemotherapy (OR 3.045, CI 1.149-8.067), pain perception (OR 3.230, CI 1.257-8.303), absence of sexual intercourse for more than one month (OR 1.862) and three domains of quality of life such as physical health, psychological health and social relationship (OR 0.942, CI 0.908-0.978; OR 0.955, CI 0.916-0.995; OR 0.933, CI 0.894-0.973, respectively). However, sexual dysfunction was not associated with major depressive disorder (χ^2 = 1.224, p = 0.268). The prevalence of sexual dysfunction in gynaecological cancer patients was comparable to other studies of similar population. Since, the risk factors of sexual dysfunction in gynaecological cancer patients are multidimensional, the process of assessment and management need to be holistic and patient-oriented.

Keywords: gynaecological cancer, sexual dysfunction, risk factors, quality of life

INTRODUCTION

Throughout the world, cancer involving the female genital tract is a significant cause of morbidity and mortality worldwide. In the United States of America, ovarian cancer is one of the most deadliest and

common gynecological cancer in female. In Malaysia, the most common gynaecological cancer is cervical cancer, followed by ovarian cancer. According to The National Cancer Registry 2003 for Peninsular Malaysia showed that over 1,500 women developed cervical cancer of which 700 died each year. Yet, cervical cancer is the most preventable cancer in the general population. According to the National Cancer Registry, ovarian cancer happens to be the fourth most common cancer amongst females in Peninsular Malaysia and accounts for 5% of all cancer cases seen in female (Lim & Halimah 2004).

There is high prevalence of gynaecological cancer in Malaysia. However, proper research on the sexual dysfunction affected by the cancer is still lacking. In community-based studies, female sexual dysfunction is found to be highly prevalent in many countries and it ranges between 25% - 63% (Laumann et al. 1999; Brock et al. 2003). A prevalence of 30% has been reported in many Asian countries such as Hong Kong, Japan, Korea, Taiwan and Singapore (Nicolosi et al. 2005). Female sexual dysfunction can be categorized into sexual desire disorder, sexual arousal disorder, sexual lubrication problem, sexual orgasmic disorder, sexual satisfaction problem and sexual pain disorder (American Psychiatric Association 1994).

There are reports of sexual complaints in up to 90% of females diagnosed with cancer (Anderson 1990). With the cancer affecting the female genitalia organs directly, it is believed that its prevalence among gynaecological cancer patients is even higher, ranging from 40 to 100% (Casey 1996). The cancer effects such as vaginal dryness, pain or discomfort during penetration and smelly vaginal discharge can cause emotional distress (Taylor 2000). Dysfunction may also result from the treatment that is aimed at curing or containing disease such as radiotherapy and chemotherapy, or as a result of the psychological distress experienced by the patient and/or her partner during diagnosis and treatment (Amsterdam & Krychman 2008; Schover 1997; Schover & Jensen 1998; Anderson 1999). Other than gynaecological cancers, pain, medication, antidepressants, medical conditions such as diabetes, stroke, neurological problem and pain of osteoarthritis can cause sexual dysfunction direct or indirectly. To highlight, the causes of sexual dysfunction in gynaecological cancer patients are multidimensional and all of the possibilities for multiple causations or risk factors need to be reviewed.

Majority of gynaecological cancer patients with sexual dysfunction were untreated due to many reasons (Schover 1997). In the busy clinic and ward setting, health care providers and patients may not have the luxury of time and privacy to discuss about their concerns (Marwick 1999). Doctors and patients may also have their own personal discomfort to discuss sexual matters. This can be more obvious when the physician is a male doctor. Patients' husbands are also excluded most of the time during assessment of sexual function. The doctors' interviews and assessments may be limited by their lack of expertise and knowledge.

MATERIALS AND METHODS

Following approval by the Department of Psychiatry, ethics committee of Hospital Universiti Kebangsaan Malaysia (HUKM) and National Medical Research register (NMRR) necessary permission was obtained from the Head of Department of Gynae-oncology Hospital Sultanah Bahiyah, Alor Star, Malaysia. The samples were eventually gathered over a period of five months. The sample comprised patients diagnosed with gynaecological cancer who were receiving treatment. Eligibility criteria included age 18 years or older, ability to communicate effectively and to give informed consent. Exclusion criteria included patients with history of drug abuse, significant cognitive impairment, patients who refused to give consent and unable to communicate. Subjects were interviewed using questionnaires that included socio-demographic variable (i.e. age, ethnicity, religion, marital status, occupation, education level, husband's help in the household, presence of husband and children less than 18 years old at home and perceived social support) and medical variable (i.e. type of cancer, staging, cancer treatment modalities, pain perception, perceived social support, medical illness and psychiatric illness). Furthermore, three more questionnaires such as Mini International Neuropsychiatry Interview (MINI), Malay Version Sexual Female Sexual Function Index (MVFSFI) and World Health Organization Quality of Life (WHOQOL-BREF) were used. MINI was developed by Sheehan et al. (1998), MVFSFI and Malay version of WHOQOL-BREF have been validated and used previously in other studies (Sidi et al. 2007; Hasanah et al. 2003). In MVFSFI, the cut off total score for sexual dysfunction was 55 and the cut off score for each domain of sexual dysfunction: five for the sexual desire disorder (sensitivity 95% and specificity 89%); nine for sexual arousal disorder (sensitivity 77% and specificity 95%); 10 for disorder of lubrication (sensitivity 79% and specificity 87%); four for orgasmic disorder (sensitivity 83% and specificity 85%); 11 for sexual dissatisfaction (sensitivity 83% and specificity 85%); and seven for sexual pain disorder (sensitivity 86% and specificity 95%). All data were analysed using the Statistical Package for Social Sciences (SPSS) version 11.5 computer program.

Initially the individual effects of the socio-demographic and medical variables were tested. Student t-Test was used to analyze normally distributed quantitative variables such as age group. To analyze not normally distributed quantitative variables such as cancer duration, duration of absence of sexual intercourse among married patients, scoring of the MVFSFI and WHOQOL-BREF, Mann-Whitney U test was performed. Binary logistic regression test was used to analyze association between sexual dysfunction and those variables that deemed significant in the univariate and bivariate tests. Socio-demographic and medical variables that deemed significant (such as education level, duration of cancer, ongoing chemotherapy, pain perception and quality of life aspects such as physical health, psychological health and social relationship) were concurrently entered into the logistic regression.

RESULTS

Eighty-three out of 120 (69%) patients were married. The rest (37, 31%) were single, widowed, separated or divorced. All patients from the latter group denied having sexual partners and were excluded in the assessment of sexual dysfunction. With the cut-off point 55 or less for sexual dysfunction, the prevalence of sexual dysfunction was 65% (54/83).

The number of patients with desire dysfunction was 64 (77%), sexual arousal dysfunction (54, 65%), sexual lubrication problem (59, 71%), orgasmic dysfunction (47, 57%), sexual satisfaction problem (58, 70%) and sexual pain problem (47, 57%).

With regards to the cancer subjects who were married, 44 out of 83 (53%) married patients did not have sexual intercourse with their spouses for more than one month. The duration of absence of sexual intercourse ranged from 2 months to 240 months (median = 12 months) (IQR = 5 to 24 months).

Table 1 and 2 represents the relationship of sexual dysfunction with psychosocial variables, medical variables and domains of quality of life.

It depicts that sexual dysfunction was significantly associated with education level (OR 3.055, 95% CI 1.009-9.250), duration of cancer (OR 0.966, 95% CI 0.966-0.998), ongoing chemotherapy (OR 3.045, 95% CI 1.149-8.067), pain perception (OR 3.230, 95% CI 1.257-8.303), absence of sexual intercourse (OR 1.862) and three domains of quality of life such as physical health, psychological health and social relationship (OR 0.942, 95% CI 0.908-0.978; OR 0.955, 95% CI 0.916-0.995; OR 0.933, 95% CI 0.894-0.973 respectively).

Logistic regression analysis of the deemed significant variables however, did not show any significant association. This could be due to small sample size.

DISCUSSION

Even though there were no significant association based on binary logistic regression, there is no doubt that many confounders were operating which were masking associations. The prevalence of sexual dysfunction among married gynaecological cancer patients was 65%. This result was consistent with other studies done worldwide which stated the range from 40 to 100% (Anderson 1990; Casey 1996; Taylor 2000). Consistent with a study by Schover et al. (1998), the most common sexual problem for gynaecological cancer patients was sexual desire dysfunction. Gynaecological cancer patients are often able to reach sexual orgasm. However, it may be delayed due to cancer treatment, depression or anxiety (Schover 1997). Sexual orgasm dysfunction had the least prevalence, sharing the same prevalence as sexual pain disorder. According to studies (Schover 1997; Ganz et al. 1998; Broeckel et al. 2002), many sexual problems, even under favorable circumstances, may not resolve within the first two years of disease-free survival or may remain constant or even continue to increase. This could possibly explain that married cancer patients in this study with absence of sexual intercourse for more than one month accounted for more than

Table 1: Sexual dysfunction in relation to psychosocial, medical variables and quality of life domains

		Sexual Dysfunction		χ^2	p
		Absence	Presence		
Absence of Sexual Intercourse for >1 month	No	29	10	50.29	<0.001*
	Yes	0	44		
Ethnic	Malay	20	31	3.15	0.369
	Chinese	6	13		
	Indian	1	8		
Religion	Islam	22	31	4.46	0.216
	Buddhism	4	14		
	Christianity	2	2		
	Hinduism	1	7		
Education Level	Low	5	21	4.11	0.043*
	High	24	33		
Marital Satisfaction Before cancer	Strongly Agree	15	31	0.31	0.856
	Agree	12	19		
	Strongly Disagree	2	4		
Marital Satisfaction After Cancer	Strongly Agree	16	31	0.26	0.880
	Agree	11	18		
	Strongly Disagree	2	5		
Husband Helps in Household	No	8	17	0.14	0.712
	Yes	21	37		
Husband's Presence at Home	No	1	3	0.00	p>0.05
	Yes	28	51		
Presence of Children < 18 years old	No	16	37	1.46	0.228
	Yes	13	17		
Perceived Social Support	No	6	13	0.12	0.726
	Yes	23	4		
Cancer Diagnosis	Ovary	13	15	1.81	0.77
	Endometrium	8	10		
	Cervix	7	17		
	Vagina	0	1		
	Vulva	1	1		
Staging of Cancer	Early	13	17	1.46	0.228
	Advanced	16	37		
Metastasis	No	22	37	0.50	0.482
	Yes	7	17		

Recurrence	No	23	42	0.03	0.872
	Yes	6	12		
Operation	No	2	8	0.49	0.482
	Yes	27	46		
Ongoing Chemotherapy	No	21	25	5.21	0.022*
	Yes	8	29		
Completed Chemotherapy	No	20	33	0.50	0.478
	Yes	9	21		
Radiotherapy	No	21	39	0.00	0.985
	Yes	8	15		
Pain Perception	No	19	20	6.14	0.013*
	Yes	10	34		
Perceived Causal Attribution	Unknown	17	26	0.89	0.642
	Internal	3	6		
	External	9	22		
Medical Illness	No	11	27	1.11	0.293
	Yes	18	27		
Major Depressive Disorder	No	25	4	1.22	0.268
	Yes	41	13		
Past Psychiatric Illness	No	29	45	3.83	0.05
	Yes	0	9		
Family History of Psychiatric Illness	No	25	49	0.07	0.792
	Yes	4	5		

Table 2: Sexual dysfunction in relation to age and duration of cancer

	Sexual Dysfunction	Mean/Mean Rank		p level
Age	Absence	49.9 years	Student's t test	0.731
	Presence	49.7 years		
Duration of Cancer	Absence	49.50months	Mann-Whitney U test	0.038*
	Presence	37.97months		

half (53%) and there was association between this and sexual dysfunction.

The present study indicated that those with low education level experienced more sexual dysfunction. This might be due to the lack of understanding of their sexual difficulties and resources in getting treatment that could allay their sexual problems.

In the present study, patients with shorter cancer duration had higher prevalence of sexual dysfunction. Initial phase of diagnosis can be more distressing to some patients because they may experience direct or indirect sexual side effects of treatment. They are worried that sexual intercourse will further injure their diseased sexual organ

or they may have cancer recurrence as long as the survival period is not over. The experience of the pain makes them handicap while performing sexual acts and cause emotional and spiritual disturbances which result in sexual dysfunctions.

Ongoing chemotherapy was associated with sexual dysfunction. This could be due to the direct and indirect side effects of the chemotherapy that cause the sexual dysfunction (Amsterdem & Krychman 2008; Schover 1997; Anderson 1999; Auchincloss et al. 1998).

In the present study, there was no association between sexual dysfunction and major depressive disorder. This could be explained that when life threatening cancer became the major concern for the cancer patients, they were less disturbed by the sexual dysfunction. They might be so depressed that sexual problem was not as problematic as the depression itself. The distress due to sexual problem might become concern only after survival of cancer or stability of health was restored or guaranteed. This could be after 3 to 5 years of its diagnosis. Other possible explanation was that the cancer patients in their reproductive age in this study were minority (18%) where sexual intercourse might not serve the important purpose of reproduction. It was also possible that patients who had sexual problem might attribute it to their menopausal syndrome which they had to experience one day, they might not be overly concerned about its effect on sexual problems. Another possibility was that these women might also view sexual problem as a commonly shared problem among gynaecological cancer patients and thus became less distressed.

Cancer patients who had sexual dysfunction obtained lower scores in the physical health, psychological health and social relationship domains of quality of life. Sexual dysfunction and poor quality of life are bothersome to many cancer patients. This may interfere with a return to normal post-treatment life. Assessment, referral, intervention, and follow-up are mandatory for improving sexual dysfunction to maximize quality of life (Ganz et al. 1998).

CONCLUSION

Sexual dysfunction is highly prevalent in gynaecological cancer patients who were married and various risk factors were also involved.

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