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A Clinical Study

RESEARCH ARTICLE

Risk Awareness on Uterine Cancer among Australian Women

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Abstract

Uterine cancer is the most common invasive gynaecological cancer in Australia. Early detection is a key predictive factor achieved by increasing public awareness and participation in screening. This observational study measures awareness of gynaecological malignancies, particularly uterine, among women in two rural areas of New South Wales, Australia. Patients presenting to gynaecology clinics in January to March 2014 were invited to complete a structured questionnaire. Women with a history of cancer and incomplete questionnaires were excluded. Of the 382 patients invited to participate, 329 (86%) responded with complete feedback. Most respondents were younger than than 50 years (66%) and married with at least 2 children (74%). The majority (94%) of participants had no awareness of uterine cancer and many (46%) were unable to identify common risk factors including obesity, diabetes and hypertension. The ability to identify risk factors was correlated to age, marital status and obesity. The study identifies poor awareness on uterine malignancies in two typical areas of rural Australia. Although external validity is limited by sociological factors, poor awareness of uterine cancer among rural patients in this study represents a valid public health concern. It is imperative to improve awareness of uterine cancer and available screening programs to facilitate early detection and cure.

Keywords: Uterine cancer - risk awareness - gynaecology - gynaecological cancers - women - rural Australia

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Introduction

Gynaecological malignancies account for 9% of all cancer in Australian females (AIHW and Cancer Australia, 2012). Of these, uterine cancer is the most common with an incidence of 17 per 100,000 - a 54% increase from 1982 to 2008 (AIHW, 2012). In contrast is a similarly significant decrease in incidence of cervical cancer to 7 per 100,000 due in part to a well-orchestrated National Cervical Screening Program to detect and manage women at risk for cervical malignancy (AIHW and Cancer Australia, 2012). Unfortunately, despite such initiatives for cervical cancer, the overall incidence of gynaecological cancer is projected to remain unchanged until at least 2020 (AIHW, 2012). One explanation is that the reduced incidence of cervical cancer is insufficient to counteract the increased incidence of uterine and endometrial cancer, particularly in the context of an ageing population. After all, there is still no effective standardised screening tool for uterine and endometrial cancer, placing a large emphasis instead on risk reduction and symptom recognition. A lack of awareness of risk factors and symptoms contributing to later detection and poorer treatment outcomes have been identified in rural populations internationally (Ackermanm et al., 2005; Sule and Shehu, 2008; Al-Azri et al., 2014; Basu et al., 2014; Jo et al., 2014). The aim of the present study is to assess awareness on uterine and endometrial cancer among rural Australian women and to identify demographic factors associated with this awareness by employing a health style survey.

Materials and Methods

This observational study was conducted in the outpatient gynaecology department at two rural sites in New South Wales, Australia between January 2014 and March 2014. English-speaking female patients attending the departments were invited to complete a structured questionnaire. Female patients with a visual or hearing disability or history of cancer were excluded. The level of knowledge and opinion of the participants on uterine cancer were assessed using an anonymous paper based structured pre-validated questionnaire (Ackermann et al., 2005). The survey included questions on demographics and personal characteristics, general knowledge on gynaecological carcinomas, risk factors associated with cervical and endometrial cancers and their cure.

Ethical approval for the study was obtained from the

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Table 1. Sample Characteristics

Variable	Number (n)	Percentage (%)
Age group		
<35	98	29.8
35-49	86	26.1
>49	145	44.1
Marital status		
Single	37	11.3
Married	189	57.5
Domestic partnership	24	7.3
Divorced or ccc	24	7.3
Widowed	52	15.8
Number of children		
No children	44	13.5
One child	40	12.2
Two children	98	29.8
More than two children	145	44.1
Educational status		
High school degree	158	48
Secondary school	159	48.3
Employment status		
Unemployed	78	23.7
Employed	230	69.9

respective institutional review boards of both hospitals. Informed consent was obtained from the participants prior to their participation in the study. Statistical analysis was accomplished using Statistical Package for Social Science (SPSS) Version 19 software (IBM Corporation, SPSS Inc., Chicago, Illinois, USA). Qualitative data was presented in the form of number and percentage values. Chi-square test was employed as a test of significance for the data to arrive at P values and the P value was significant when less than 0.05.

Results

Of the 382 patients invited to participate, 329 (86%) responded with complete feedback as required. Respondents were grouped according to age: Group I (age <35 years) had 98 (30%) respondents, Group II (age 35-49 years) had 86 (26%) and Group III (age>49 years) had 145 (44%). Median age was 45 years. Most (218, 66%%) respondents were married with at least 2 children. Other characteristics were recorded and are displayed in Table 1.

Table 2. Have You Sought Information about Gynaecological Cancer?

Variable	Class	Yes n (%)	No n (%)	p-value
Age group	<35	19 (23%)	62 (77%)	0.01
	35-49	37 (36%)	67 (64%)	
	>49	59 (44%)	76 (56%)	
Marital status	Single	14 (38%)	23 (62%)	0.61
	Married	64 (34%)	123 (66%)	
	Domestic partnership	19 (37%)	32 (63%)	
	Divorced or separated	7 (29%)	17 (71%)	
	Widowed	11 (50%)	11 (50%)	
Number of children	No children	8 (19%)	35 (81%)	0.03
	One child	13 (33%)	27 (68%)	
	Two children	33 (34%)	63 (66%)	
	More than two children	62 (43%)	81 (57%)	
Educational status	Secondary school	56 (36%)	101 (64%)	0.97
	Senior school	56 (36%)	100 (64%)	
Employment status	Unemployed	40 (43%)	52 (57%)	0.07
	Employed	70 (33%)	145 (67%)	
Obesity	Non obese	58 (35%)	109 (65%)	0.27
	Obese	34 (42%)	47 (58%)	

Table 3. Do You Think You Know Enough About Uterine Cancer?

Variable	Class	Yes n (%)	No n (%)	p-value
Age group	<35	1 (1.2%)	80 (99%)	0.06
	35-49	6 (5.8%)	97 (94%)	
	>49	12 (9.2%)	119 (91%)	
Marital status	Single	2 (5.6%)	34 (94%)	0.24
	Married	9 (5.0%)	172 (95%)	
	Domestic partnership (0%)	3 (5.8%)	49 (94%)	
	Divorced or seperated	2 (8.3%)	22 (92%)	
	Widowed	4 (17%)	19 (83%)	
Number of children	No children		44 (100%)	0.06
	One child	1 (2.5%)	39 (98%)	
	Two children	5 (5.3%)	89 (95%)	
	More than two children	14 (10%)	125 (90%)	
Educational status	Secondary school	15 (9.8%)	138 (90%)	0.02
	Senior school	5 (3.2%)	150 (97%)	
Employement status	Unemployed	10 (11%)	81 (89%)	<.01
	Employed	7 (3.3%)	204 (97%)	
Obesity	Non obese	11 (6.8%)	151 (93%)	0.59
	Obese	4 (5.0%)	76 (95%)	

Table 4. What is the Most Common Gynaecological Cancer?

Variable	Class	Cervical Cancer n (%)	Endometrial Cancer n (%)	Ovarian Cancer n (%)	p-value
Age group	<35	44 (62%)	10 (14%)	17 (24%)	0.5
	35-49	64 (70%)	8 (8.8%)	19 (21%)	
	>49	69 (61%)	19 (17%)	25 (22%)	
Marital status	Single	19 (79%)	2 (8.3%)	3 (13%)	0.23
	Married	96 (60%)	28 (18%)	36 (23%)	
	Domestic partnership	29 (62%)	5 (11%)	13 (28%)	
	Divorced or separated	19 (83%)	1 (4.3%)	3 (13%)	
	Widowed	15 (71%)	1 (4.8%)	5 (24%)	
Number of children	No children	25 (66%)	4 (11%)	9 (24%)	0.34
	One child	24 (69%)	2 (5.7%)	9 (26%)	
	Two children	44 (56%)	15 (19%)	20 (25%)	
	More than two children	86 (69%)	16 (13%)	22 (18%)	
Educational status	Secondary school	88 (68%)	18 (14%)	23 (18%)	0.29
	Senior school	87 (62%)	17 (12%)	36 (26%)	
Employment status	Unemployed	50 (66%)	9 (12%)	17 (22%)	0.89
	Employed	123 (65%)	26 (14%)	39 (21%)	
Obesity	Non obese	91 (62%)	24 (16%)	32 (22%)	0.14
	Obese	52 (70%)	5 (6.8%)	17 (23%)	

Table 5. Participants Assessment of Important Risk Factors in Uterine Cancer

Risk factor	Cervical cancer, n (%)				Endometrial cancer, n (%)			
	<35 yrs	35-49 yrs	>49 yrs	p-value	<35 yrs	35-49 yrs	>49 yrs	p-value
Genetic factors	64 (81%)	85 (85%)	89 (71%)	0.04	64 (88%)	82 (88%)	90 (80%)	0.28
History of breast cancer	59 (75%)	64 (64%)	71 (57%)	0.04	54 (74%)	64 (68%)	67 (60%)	0.13
Chronic viral inspection	20 (25%)	23 (23%)	27 (22%)	0.83	15 (21%)	18 (19%)	24 (21%)	0.92
Age over 50	24 (30%)	33 (33%)	46 (37%)	0.62	21 (29%)	28 (30%)	44 (39%)	0.22
Smoking	31 (39%)	53 (53%)	51 (41%)	0.11	26 (36%)	44 (47%)	43 (38%)	0.29
Childlessness	5 (6%)	10 (10%)	6 (5%)	0.3	6 (8%)	8 (9%)	5 (5%)	0.44
No. of pregnancies	11 (14%)	13 (13%)	7 (6%)	0.09	15 (21%)	13 (14%)	8 (7%)	0.03
Sexually active at young age	31 (39%)	34 (34%)	37 (30%)	0.36	18 (25%)	21 (22%)	17 (15%)	0.23
Age at first menstrual period	7 (9%)	8 (8%)	4 (3%)	0.18	7 (10%)	11 (12%)	6 (5%)	0.25
Age upon entering menopause	5 (6%)	9 (9%)	14 (11%)	0.5	5 (7%)	8 (9%)	10 (9%)	0.88
Obesity, high blood pressure & diabetes	32 (41%)	39 (39%)	51 (41%)	0.96	31 (43%)	35 (37%)	41 (37%)	0.7

The majority (205, 64%) of respondents had not previously sought information about uterine cancer. Respondents who were older, single/widowed, unemployed, had at least 2 children and were obese were more likely to have sought information (Table 2). Only age (p=0.01) and number of children (p=0.03) were statistically significant.

The majority (296, 94%) of respondents did not feel they knew enough about uterine cancer. Respondents who were older, widowed, unemployed, did not complete senior schooling, had at least 2 children and were not obese were more likely to feel they knew enough (Table 3). Only employment status (p≤0.01) and educational status (p=0.02) were statistically significant.

The majority (238, 87%) of respondents did not correctly identify uterine cancer as the most common gynaecological cancer. Respondents who were older, married, had at least 2 children, employed and were not obese were more likely to correctly identify uterine and endometrial cancer as the most common. This was not statistically significant.

The majority (94%) of participants had no awareness of uterine cancer (Table 4). In addition, many (63%) were unable to identify common risk factors including obesity, diabetes and hypertension (Table 5). The ability to identify risk factors was correlated to age

Discussion

A recent study across specific developing countries has revealed that only 9.7% of patients knew that unusual vaginal discharge or abnormal bleeding were early symptoms of gynaecological malignancies (Sule and Shehu, 2008). Educational level of these patients was found to be inversely associated with the time of presentation at hospital (Sarkar et al., 2011). The number of women who participate in cancer screening programs depends on their knowledge of the disease and their hope regarding the chances of a cure after the diagnosis. Educative awareness programs are useful to identify cancer risk factors and also employ risk reduction strategies to promote early detection of cancer. Research by Pande et al. (2014) has in fact shown a 62.5% decrease in the number of patients with colorectal cancer presenting as an emergency subsequent to a National Bowel Cancer Awareness Campaign. Moreover, there has been a remarkable reduction of invasive cervical cancer in 85% of women who had participated in organised screening programs (Aareleid et al., 1993). Twinn et al. (2002) have found a correlation between women's knowledge of risk factors of cervical cancer and their attendance to screening programs. However, assessment of patient awareness and their baseline knowledge with regards to uterine cancer,

especially among rural women in Australia has not been hitherto, studied.

The present study is a lucid field questionnaire conducted to evaluate the level of awareness on uterine cancer in healthy adult female participants from rural sectors of regional Australia. Statistical projections demonstrate the number of cases of both cervical and endometrial cancers will continue to increase until 2020 (AIHW, 2012). Hence, there is an urgency to act upon the problem and augment the awareness on uterine cancer among the designated population.

Our study has revealed inadequacy in the knowledge regarding risk factors among the participants despite the remarkable decrease in cervical cancer morbidity and mortality in the Australian communities which had adopted modern cytological screening programs (Boone et al., 2012).

Our study has revealed that 63.22% of the participant women were unfamiliar with risk factors for gynaecological cancer. Goodall has also pointed out that women's understanding of a disease is ever related and proportional to the national awareness on the screening test concerned (Goodall, 2001). It is imperative to mention here that 49% of the survey participants had revealed that physicians were the principal source for their information on uterine cancer, highlighting the need for public awareness campaigns on gynaecological malignancies.

The study has also revealed that 280 (85%) of the participants have had Pap smears in the recent past and 297 (90%) of them felt it was important to seek information on gynaecological malignancies. According to Ulman-Wlodarz et al. (2011) knowledge of the main risk factors among the patients as well as the Pap smear collection protocol is necessary to reduce the cervical cancer morbidity.

Trivers et al. (2011) have reported that there exists an instinctive health consciousness among women to seek and care for symptoms associated with gynaecological malignancies. The overall knowledge about cervical cancer was far better when compared to endometrial cancer in the present study.

Younger women were less aware of the risk factors, including sexual activity at a young age, multiple sexual partnership, age at first menstrual period, infertility, number of pregnancies and gestations. Interestingly, the younger women (<35years) were more informed about gynaecological malignancies contrary to the earlier reports (Ackermann et al., 2005). This may due to effective implementation of modern day screening and vaccination programs.

In conclusion, findings of this study strongly suggest that awareness of gynaecological malignancies, especially, of uterine cancer among women in rural Australia is poor. Most of the participants have been found to have no adequate knowledge on uterine cancer in spite of their periodic visits to a gynaecologist. The study has also exposed a significant knowledge deficit on the risk factors for uterine cancer among the sample population which may have serious consequences in terms of health, wellbeing, longevity, early detection, cancer survival and mortality of women in rural Australia. Although the outcome of this study should not be generalised and extended to all Australian women, poor awareness on the occurrence and risk factors of uterine cancer among these women raises serious questions on public health issues in Australia and the implementation of various women centric public health campaigns. There is an urgent need to educate the population on not only on the disease but also the risk factors and value of early detection.

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