

HYSTERECTOMY: INDICATIONS AND DEPRESSION AS ADVERSE PSYCHOLOGICAL CONSEQUENCE

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ABSTRACT

OBJECTIVE

To determine the common indications of hysterectomy in the hospital and also to assess the psychological impact of hysterectomy.

STUDY DESIGN

Analytical Cross-sectional Study.

PLACE AND DURATION OF STUDY

Hamdard University Hospital from January 2018 to July 2020.

SUBJECTS & METHODS

Total 112 hysterectomies were performed during this period. The common indications of hysterectomies were noted. Beck Depression Inventory questionnaire was filled by patients directly or under supervision to assess depression. Levene's test and Beck Depression Inventory questionnaires were applied to see the relationship with menopausal status, indications and types of hysterectomies. *p* value is < 0.05 considered significant.

RESULTS

The most common indication of hysterectomies in perimenopausal women was heavy menstrual bleeding 92 (82.1%), out of 92, 44 (39.2%) were due to uterine fibroids, 8 (7.1%) were adenomyosis, 6 (5.3%) were endometrial hyperplasia and 6(5.3%) had ovarian cyst. Other indications were Uterovaginal Prolapse 2 (1.7%) and carcinoma cervix 2 (1.7%). The study also found that 8 (12.5%) women developed mild mood disturbance, 4(6.3%) borderline clinical depression, moderate depression while 2 (3.2%) developed extreme depression after their hysterectomy. The study also showed the depression level in groups, having total abdominal hysterectomy with ovarian conservation, equality of variance score *b* was found to be 6.834 with a statistically significant *p*-value of 0.01, with a standard error difference of 3.150.

CONCLUSION

We concluded that women who had pre-mature menopause and had a hysterectomy at later stages of life require more support and counselling to maintain good psychological health after hysterectomy.

KEYWORDS

Hysterectomy, Depression, Psychological consequence, Beck Depression Inventory.

INTRODUCTION

Hysterectomy is one of the commonest major Gynecological operations performed worldwide, after caesarean section. It involves removal of uterus with or without removal of both fallopian tubes and ovaries (TAH±BSO: Total abdominal hysterectomy with or without Bilateral Salpingo-Oopherectomy). The procedural routes can be laparotomy, vaginally, or minimally invasive techniques (laparoscopy, robotic surgery).¹⁻⁴

The common indications include heavy menstrual bleeding, uterine leiomyoma, endometriosis, uterine prolapse, and malignant conditions of the internal genital tract.^{1,3-5}

Hysterectomy is not a life-threatening procedure, but women who undergo hysterectomy face a multitude of physical and psychosocial problems, estrogen deficiency (in case of removal of ovaries) and may have a more detrimental effect on their health. Feeling of loss of femininity is also a main cause of anxiety and depression after hysterectomy.⁶⁻⁹ The uterus is considered an organ that defines key functions commonly associated with womanhood, such as pregnancy and childbirth. Some women consider it a part of their femininity and attractiveness, thus it is very important for their self-image. Women can feel a loss of identity even when the procedure is done after menopause. Abdominal hysterectomy also causes an unfavorable effect on sexual function that is not prevented by estrogen replacement therapy.⁵

Studies show that patient education about potential outcomes after hysterectomy may enhance their satisfaction with the procedure, with less or no long-term psychological morbidities,^{10,11} but still the association between hysterectomy and subsequent, long-term psychological health is not well defined. In order to assess the overall health of women after the procedure, it is important that doctors also understand the matters that affect the patient's mental health and wellbeing. The present study explores the common indications of hysterectomy and its subsequent long-term psychological effects.

SUBJECTS AND METHODS

We conducted an analytical cross-sectional study from Jan 2018

to July 2020. Hundred and twelve hysterectomies were performed during this period. Common indications of hysterectomies were noted with demographic characteristics on a pre-designed proforma after their consent. Patients' follow-up was done at 6 months, 1 year and 2 years. Beck Depression Inventory questionnaire was filled by patients directly or under supervision to assess depression. Patients with a previous history of psychological problems or had hysterectomies because of genital tract malignancies and uterine prolapse were excluded from this study. Consent was taken and patients were assured about confidentiality of data. The ethical approval was taken from the ethical review committee.

The Beck Depression Inventory (BDI) is a 21-item, self-report rating inventory that measures characteristic attitudes and symptoms of depression (Beck, et al., 1961).

This inventory comprises twenty-one questions to assess the severity of depression. Each question has a set of four possible responses, ranging from scores 0 (symptom not present) to 3 (symptom very intense). The sum of all the questions' score was compared to a key to determine the depression's intensity, where the highest possible total for the whole test is sixty-three and lowest being zero. The following cut-off scores were used: between 1 and 10 was normal, from 11 to 16 was considered mild mood disturbance, 17 till 20 as borderline clinical depression, between 21 and 30 signified moderate depression, and from 31 till 40 was considered severe depression. Anything above 40 was considered as extreme depression.

SPSS version 23 was used to analyze the data, frequencies and percentages were noted. Levene's test and Beck Depression Inventory questionnaire were applied, along with menopausal status, indications and types of hysterectomies. The p value of <0.05 is considered significant.

RESULTS

One Hundred and Twelve hysterectomies were reviewed. Table 1 shows that, most of them were between 41-50 years 64 (57%), 30 (26.8%) were less than 40 years, 8 (7%) were 51-60 years and 10 (8.9%) were 61-70 years. Sixty-Eight (60.7%) were Urdu speaking, 16(14.3%) were Sindhi, 18(16%) were Pathaan, 10 (8.9%) Punjabi, Balochi and Saraiki. Out of 112, 94 (83.9%) women were peri-menopausal, while 18 (16.1%) were post-menopausal and most of them were multiparous 104 (92.9%).

Regarding medical diseases among the subjects: 40 (35.7%) were hypertensive, 10 (8.9%) were diabetic, 5 (4.5%) had thyroid disorders, 3 (2.7%) had respiratory diseases, 4 (3.6%) were severely anaemic (Hb<6), 43 (38.3%) had mild to moderate anaemia, 3(2.7%) women were morbidly obese (class III), 8 (7.1%) were obese class II, 6 (5.3%) obese class I, and 25 (22.3%) were overweight.

The most common indication of hysterectomies in Peri-

Table 1
Relationship of Menopausal with demographic and medical characteristics.

Variables	Menopausal status		p value
	Peri-menopausal	Menopausal	
Age			< 0.001
31-40 years	30	0	
41-50 years	62	2	
51-60 years	2	6	
61-70 years	0	10	
Ethnicity			0.001
Urdu speaking	64	4	
Sindhi	10	6	
Pathan	14	4	
Others	6	4	
Parity			0.199
Nulliparous	8	0	
Multiparous	86	18	
Education			< 0.001
Illiterate	31	16	
Primary/secondary	63	2	
Diabetic mellitus	4	6	< 0.001
Hypertension	30	10	0.055
Respiratory problem	1	2	0.016
Thyroid disorder	5	0	0.317
Anemia	0	4	< 0.001
Obesity	3	0	0.442
Duration of hysterectomy			0.805
6 months	16	4	
1 year	38	6	
2 years	40	8	
Type of hysterectomy			< 0.001
TAH with ovarian conservation	40	0	
TAH+BSO	52	14	
Vaginal hysterectomy	2	4	
Depression inventory self-score (n=64)	(n=52)	(n=12)	0.002
Normal	38	4	
Mild mood disturbance	6	2	
Borderline clinical depression	4	0	
Moderate depression	4	4	
Extreme depression	0	2	

menopausal women was heavy menstrual bleeding 92 (82.1%). Out of these 92, 44 procedures (39.2%) were due to uterine fibroids, 8 (7.1%) for adenomyosis, 6(5.3%) were for endometrial hyperplasia and 6(5.3%) had ovarian cysts. The other indications were Uterovaginal Prolapse (uv prolapse) 2 (1.7%) and carcinoma cervix 2(1.7%).

Eighteen (16%) post- menopausal women had undergone

Table 2
Group Statistics

	Type of hysterectomy	n	Mean	Std. Deviation	Std. Error Mean
Depression Inventory self-score	TAH with ovarian conservation	26	8.15	7.309	1.433
	TAH + BSO	38	9.95	10.529	1.708
Total Score B	TAH with ovarian conservation	26	7.54	8.977	1.760
	TAH + BSO	38	13.84	14.223	2.307

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Depression Inventory self-score	Equal variances assumed	1.421	.238	-.752	62	.455	-1.794	2.383
	Equal variances not assumed			-.804	61.974	.424	-1.794	2.230
Total Score B	Equal variances assumed	6.834	.011	-2.001	62	.050	-6.304	3.150
	Equal variances not assumed			-2.172	61.681	.034	-6.304	2.902

hysterectomy. 10 (8.9%) had post-menopausal bleeding, out of them, 2 (1.7%) had endometrial hyperplasia, 2 (1.7%) had carcinoma endometrium, 4 (3.5%) had ovarian carcinoma and 2 (1.7%) had ovarian cysts. The other indication were UV-Prolapse 6(5.3%) and 2(1.7%) due to chronic pelvic pain.

Our findings showed that 40 (35.7%) women had hysterectomy with conservation of ovaries, 64 (58.9%) had hysterectomy with removal of both ovaries, while 8 (7.1%) women had vaginal hysterectomy.

Sixty-four women who fulfilled the inclusion and exclusion criteria were assessed for psychological well-being. Eight women were excluded due to genital tract malignancy, 8 due to UV- prolapse, 12 women were taking anti-psychotic medications prior to the hysterectomy, while 20 women were lost to follow-up.

According to Beck Depression Inventory, we found that 8 (12.5%) women developed mild mood disturbance, 4 (6.3%) borderline clinical depression, 8 (12.5%) moderate depression, while two (3.2%) developed extreme depression after their hysterectomy.

When we compared Peri-menopausal group with post-menopausal women, we explored that more post-menopausal women developed moderate to severe depression. On analysis, we found that women who experienced premature menopause had severe depression. Furthermore, women with moderate depression had feelings of loss of femininity and inadequate counselling and support prior to their hysterectomy.

Table 2 shows the depression level in groups having TAH with ovarian conservation. On Levene's test for equality of variance score b was found to be 6.834 with a statistically significant p-value of 0.01, with a standard error difference of 3.150 and degree of freedom at 62.

DISCUSSION

In the United States, about 600,000 women undergo hysterectomy every year.^{3,4} Although many advantages of hysterectomy have been known, it is still unknown how it affects the psychological wellbeing and sexual functioning.¹²

A number of studies have assessed the association between hysterectomy and subsequent psychological health. We found that women who had pre-mature menopause and had undergone hysterectomy had significantly higher depression scores. These findings are consistent with previous studies,¹³⁻¹⁵ and give potential explanation of the association between hysterectomy at younger age and subsequent psychological health.

Recent studies suggest that declining levels of estrogen may be associated with vulnerability to poor psychological health.¹⁶ Moreover, some women do not achieve their desired family size.^{17,18} and also loss of femininity, i.e. fear of loss of sexual functioning and relationship with their sexual partners resulted in long-term psychological health problems.^{6,19-25}

A study has shown that hysterectomy does not cause any adverse psychological outcome in otherwise psychologically healthy women.⁶ These findings contradict with our study, as we found mild and even moderate-to-severe levels of depression after hysterectomy in previously psychologically healthy women.

Few studies reported that women who had pre-surgical psychological issues and genital tract cancers had developed post-surgical psychological problems.²⁶⁻²⁹ We especially excluded those women who had malignancies and previous psychological health concerns. In addition, we assessed our study population for a relatively longer period, and these became the major strengths of this study.

However, the limitations of this study were the small sample size and less number of post-menopausal women for

comparison with other study population. Hence, we recommend further studies on a larger sample with bigger post-menopausal group to have a better understanding of long-term psychological morbidities.

CONCLUSION

The study concluded that women who had pre-mature menopause and had a hysterectomy at later stages of life require more support and counselling to maintain good psychological health after hysterectomy.

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