IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 20, Issue 4 Ser.9 (April. 2021), PP 23-26
www.iosrjournals.org

Depression Following Hysterectomy with Bilateral Oophorectomy

∗Dr. Pratanu Saha[1], Dr. Ritam De[2], Dr. Indranil Saha[3]
[1]*(Assistant Professor, Department of Psychiatry, Gouridevi Institute of Medical Sciences and Hospital,India),*
[2]*(Assistant Professor, Department of Gynaecology and Obstetrics,Gouridevi Institute of Medical Sciences and Hospital,India),* [3]*(Professor & HOD, Department of Community Medicine, IQ City Medical College, India)*
**Corresponding Author – Dr. Pratanu Saha*

Abstract :
Background: *There are numerous reports of high psychiatric disorders including depression following hysterectomy.On the contrary there're many studies that didn't show increased psychiatric morbidity. With this background aim of this study is to assess prevalence of Major Depressive Episode (MDE) among women following hysterectomy with bilateral oophorectomy.*
Materials and Methods: *This cross-sectional case-control study was conducted at the department of Psychiatry in collaboration with the department of Gynaecology & Obstetrics of GIMSH, Durgapur, West Bengal, India from July, 2020 to January,2021. For this purpose 30 married women, after 3 to 6 months of planned hysterectomy with bilateral oophorectomy satisfying the inclusion and exclusion criteria were selected as case group and similar number age-matched married women who attended at out-patient department of G & O for various gynaecological problems but didn't undergo hysterectomy were selected as control group. Both groups were clinically evaluated for MDE according to the American Psychiatric Association Diagnostic and Statistical Manual of Mental disorders, 5th edition (DSM-V) criteria and subjected to Hamilton Rating Scale for Depression (HRSD) to quantify the levels of depression in the subjects.*
Results : *83.3% of cases were found to suffer MDE whereas only 26.6% of control group experienced the same which was found to be statistically significant by Pearson's chi-square test. Regarding severity of depressive episode 46.7% of case group suffered mild, 20% moderate and 16.6% severe episode whereas in control group 20% suffered mild and 6.6% moderate episode.*
Conclusion: *Prevalance of MDE very high among women following hysterectomy with bilateral oophorectomy.*
Keywords: *major depressive episode, depression, hysterectomy with bilateral oophorectomy, post-hysterectomy.*

Date of Submission: 14-04-2021 Date of Acceptance: 28-04-2021

I. Introduction

Hysterectomy is one of the most commonly performed gynaecological surgical procedure throughout the world[1]. Prophylactic bilateral oophorectomy is often done in women older than age 35 years who require a hysterectomy in an effort to reduce the probability of ovarian carcinoma. Surgical menopause occurs when bilateral oophorectomy done along with hysterectomy. The symptoms that follow surgical castration before the age of natural menopause generally are more pronounced than are those that follow natural menopause[2]. In recent years it has become clear that transition to menopause confers a risk for depression. New- onset depression affects 20 to 30% of women during the menopausal transition[2]. There's evidence that during the menopausal transition the risk for an episode of major depression is 2 to 3 fold for those women with no history of major depression during the child bearing years[3].

Besides the biological effects of hormonal changes related with surgical menopause loss of reproductive capacity may present a psychological challenge to those who are not reconciled to the loss of fertility. A common psychodynamic theory states that the uterus has a special symbolic meaning for women, so that it's loss leads to a feeling of reduced faminity which in turn leads to psychiatric disorders[4,5]. High risks of adverse psychological reactions to hysterectomy have been reported by numerous authors[6]. Depression should be considered as one of the major postoperative complications of hysterectomy[7]. On the other hand a few prospective studies concluded that hysterectomy seldom led to psychiatric disorders[6,8,9].Two Indian studies also came to diametrically opposite conclusions[10,11]. With this background the present study has been designed to assess the prevalence of Major Depressive Episode (MDE) in women following hysterectomy with bilateral oophorectomy.

II. Materials and Methods

As case group 30 married women were selected 3 to 6 months after planned hysterectomy with bilateral oophorectomy after ruling out exclusion criteria. For control group similar number age-matched married women who attended outpatient department for different gynaecological problems during the same time period but didn't undergo hysterectomy were selected. Both case and control groups were interviwed thoroughly in presence of a closely related family member after taking consent from patients and their related family members. For this purpose all gynaecological treatment documents have been checked and detailed past psychiatric history including history of any psychotropic medication were taken into account. The studied groups were evaluated for MDE by Mental Status Examination and diagnosed according to the American Psychiatric Association Diagnostic and Statistical Manual of Mental disorders, 5th edition (DSM-V)[12] criteria and additionally subjected to 17-items Hamilton Rating Scale for Depression (HRSD) to quantify the levels of depression in the subjects. This study was done from July, 2020 to January, 2021 in the department of Psychiatry and department of Gynaecology and Obstetrics, Gouridevi Institute of Medical Sciences and Hospital, Durgapur, West Bengal, India.

Hamilton Rating Scale for Depression (HAM-D,HRSD),developed by M. Hamilton, is the most widely utilised rating scale to assess symptoms of depression. It is an observer-rated scale consisting of 17 to 21 (including two 2-part items weight and diurnal variation) items, however, 17-items are useful for assessing severity of depression. Ratings are made on the basis of the clinical interview plus any additional available information such as nursing or family member report. The items are rated on either a 0 to 4 spectrum or a 0 to 2 spectrum. Items cover depressed mood, guilt feelings, suicide, insomnia, working capacity, retardation, agitation, psychic and somatic anxiety, somatic symptoms, genital symptoms, hypochondriasis, loss of weight and insight. The scores are summed to give a total score. The possible range of score varies from 0–52. The higher the score of the subject the greater is the level of depression. A score of 0–7 indicates absence of depression, 8–13 mild depression, 14-18 moderate depression, 19-22 severe depression and 23 & above denotes very severe depression. The scale has high validity against global judgement and high reliability [13]. The scale has been validated for Indians. [14]

Inclusion criteria :

1. Married Women.
2. Underwent planned hysterectomy with bilateral oophorectomy.
3. Operative procedure done 3 to 6 months ago.

Exclusion criteria :

1. Patients with past history of psychiatric illness or taking any psychotropic medicines.
2. Patients with severe medical disorders (rather than that led to hysterectomy) or substance abuse.
3. Patients underwent hysterectomy with bilateral oophorectomy due to malignant aetiology.

Statistical analysis :

Collected data were compiled in Microsoft excel worksheet. Categorical data were expressed in number and proportion. Association between categorical variables was assessed by Pearson's chi-square test. P value 0.05 or less was considered as statistically significant. Data analysis was done in SPSS software 20.0 (Statistical package for the social Sciences Inc., Chicago, IL, USA.)

III. Results

Majority of the cases belonged to the age group of 35 – 39 years (33.3%), followed by 45 – 49 years (30.1%); while majority of the control cases i.e. 30.1% were from age group of 40 – 44 years. No statistical significant association was found between cases and controls regarding the age distribution. Regarding residence, both the cases (66.7%) and controls (73.3%) came from rural area without any significant difference. About 96.7% and 90% cases and controls respectively were multipara. Most of the cases (43.3%) and controls (49.9%) were educated up to secondary level, followed by primary school level i.e. 36.7% and 30.1% respectively without any significant distribution (Table 1).

Among the cases, majority of the subjects i.e. 46.7% belonged to the score range of 8 – 13, followed by 20% subjects in the score range of 14 – 18. While among the controls, about 2/3rd of the subjects (73.4%) had HAM-D score between 0 – 7, followed by 20% subjects in the score range of 8 – 13. None of the control subjects had score beyond 18. The distribution of the cases and controls in the different score range was found to be statistically significant by Pearson's chi-square test (Table 2).

Table 1: Distribution of Cases & Controls according to age

Variables	Cases (n = 30) No. (%)	Controls (n = 30) No. (%)	Chi-square test
Age range (Years)			
35-39	10 (33.3)	8 (26.7)	$\chi^2 = 0.83$; df = 3*; P = 0.83
40-44	8 (26.7)	9 (30.1)	
45-49	9 (30.1)	8 (26.7)	
50-54	1 (3.3)	2 (6.6)	
55-59	1 (3.3)	2 (6.6)	
60-64	1 (3.3)	1 (3.3)	
Habitat			
Rural	20 (66.7)	22 (73.3)	Yates corrected chi-square = 0.07; df = 1; P = 0.77
Urban	10 (33.3)	8 (26.7)	
Educational levels			
Illiterate	5 (16.7)	3 (10.0)	$\chi^2 = 1.2$; df = 2**; P = 0.54
Primary schooling	11 (36.7)	9 (30.1)	
Secondary schooling	13 (43.3)	15 (49.9)	
Graduate	1 (3.3)	3 (10.0)	
Parity			
Unipara	1 (3.3)	3 (10.0)	Fischer Exact P value = 0.61
Multipara	29 (96.7)	27 (90.0)	

* For chi-square calculation 3 rows have been merged together i.e. (50 to 64 years)
** For chi-square calculation 2 rows have been merged together i.e. (Secondary schooling and graduate)

Table 2: Distribution of Cases & Controls according to HAM-D score

HAM-D Score	Cases (n = 30) No. (%)	Controls (n = 30) No. (%)	Chi-square test
0 to 7	5 (16.7)	22 (73.4)	$\chi^2 = 20.13$; df = 2*; P < 0.05
8 to 13	14 (46.7)	6 (20.0)	
14 to 18	6 (20.0)	2 (6.6)	
19 to 22	4 (13.3)	0	
23 & above	1 (3.3)	0	

* For chi-square calculation 3 rows have been merged together i.e. (Score 14 and above)

IV. Discussions

The present study revealed that most of the cases were in their late reproductive age. The age of the subjects ranged from 35 to 64 years, of which 90.1% belonged to 35 to 49 years. In similar studies Bhatia et al showed that majority of the cases (44%) belonged to 35 to 44 years whereas Roy et al found majority (49.5%) of the cases belonged to 35 to 40 years of age group[11,15]. So the present study finding was consistent with the findings of other studies. Regarding parity we found 96.7% of cases were multipara. This is similar to the finding by Bhatia et al who found 80% multipara out of total 50 cases and by Roy et al who found 98.6% multipara out of total 365 cases[11,15]. The preponderance of multiparity might be due to the fact that conventionally conservative treatments are preferred over hysterectomy before completion of the family.

In this study 83.3% of cases were found to suffer MDE whereas only 26.6% of control group experienced the same which is statistically significant. Regarding severity of depressive episode 46.7% of case group suffered mild, 20% moderate and 16.6% severe episode whereas in control group 20% suffered mild and 6.6% moderate episode. None of the control group was found to suffer severe episode. Richards observed depression in 73% of women (n=56) who had had history of hysterectomy within last 5 years as against 29% among age-matched women who had had history of major surgery[16]. In a similar study by Sehlo MG, Ramadani

H 31.6% of cases were found to suffer MDE following hysterectomy whereas 2.7% of control group to experience MDE following cholecystectomy[17]. Habib MA et al also reported rate of Depressive episode 33.3% among post-hysterectomy cases (n=50)[18]. In the present study high level of depression might be due to the fact that patients have been interviewed early, within 3 to 6 months following hysterectomy. As depression is mostly a self-limiting illness it's expected that some women get rid of depressive symptoms in course of time even without any treatment. So longer is the time-gap of assessment following hysterectomy lesser is the chance to find depressive symptoms. Secondly, contrary to study by Sehlo MG, Ramadani H, in the present study those who underwent hysterectomy without bilateral oophorectomy haven't been selected as case[17]. Surgical menopause might play a role in causing depression among those women who didn't attain physiological menopause before undergoing operation.

Contrary to these findings, in an Indian study, Bhatia et al didn't find any post-hysterectomy increase of depression[11]. In another Indian study, Chaudhary S, Bhattacharyya TK also reported that hysterectomy (n=36) didn't follow increased psychiatric morbidity[19]. Differences in selecting study populations, time-gap of assessment following hysterectomy and difference in study design might be the reasons behind varied results.

V. Conclusions

Limitations of our study are firstly, study sample is relatively small and secondly, if case population could additionally be interviewed before hysterectomy operation then impact of hysterectomy causing depression would be clearer. In spite of these shortcomings we can conclude from this study that following hysterectomy women may suffer depression more often than who didn't undergo hysterectomy but more studies comprising larger number of cases are needed to reach concrete conclusions.

Acknowledgements

We would like to thank Prof.(Dr.) Subodh Kumar Bhattacharya, Dean & Principal of Gouridevi Institute of Medical Sciences and Hospital, Durgapur, West Bengal, India, for allowing us to conduct this study in this Institution and also his continuous inspiration.

References

[1]. Graesslin O, Martin-Morille C, Leguillier-Amour MC,Darnoud T, Gonzales N, Banchaeri F, et al. Local investigation concerning psychic and sexual functioning a short time after hysterectomy. Gynecol Obstet Fertil 2002;30(6):474-82.
[2]. Benjamin J Sadock,Verginia A Sadock, Pedro Ruiz:Kaplan & Sadock's Comprehensive textbook of psychiatry,10th edition,published by Wolters Kluwer,2017:2522-3
[3]. Cohen L, Soares C, Vitonis A et al. Risk for new onset of depression during the menopausal transition: the Harvard Study of Moods and Cycles. Arch Gen Psychiatry 2006;63:375-82.
[4]. Drellich MG, Bieber I. The psychologic importance of the uterus and its functions: some psychoanalytic implications of hysterectomy. J Nerv Ment Dis 1958;126(4):322-36.
[5]. Hollender MH. A study of patients admitted to a psychiatric hospital after pelvic operations. Am J Obstet Gynecol 1960;79(3):498-503.
[6]. Gath D, Cooper P, Day A. Hysterectomy and psychiatric disorder: I. Levels of psychiatric morbidity before and after hysterectomy. Br.J.Psychiatry 1982; 140:335-42.
[7]. Barker MG. Psychiatric illness after hysterectomy. BMJ1968;2:91-5.
[8]. Gath D, Cooper P, Day A. Hysterectomy and psychiatric disorder : Demographic, psychiatric and physical factors in relation to psychiatric outcome. Br J Psychiatry. 1981;140:343–350. [PubMed] [Google Scholar]
[9]. Meikle S, Brody H. An investigation into the psychological effects of hysterectomy. J Nerv Ment Dis. 1977;164:36–41. [PubMed] [Google Scholar]
[10]. Vyas JN, Rathore RS, Sharma P, Singhal AK. A study of psychiatric aspects of hysterectomy. Indian Journal of Psychiatry. 1989;31:83–89. [PMC free article] [PubMed] [Google Scholar]
[11]. Bhatia MS, Kaur N, Goyal U. Psychiatric reactions in hysterectomy. Indian Journal of Psychiatry. 1990;32:52–56. [PMC free article] [PubMed] [Google Scholar]
[12]. American Psychiatric Association: Diagnostic and Statistical Manual of mental disorders, Fifth Edition, Arlington,VA,American Psychiatric Association,2013:160-161
[13]. Hamilton M. Rating scale for depression. J Neurol Neurosurg Psychiatry. 1960;23:56–62. [PMC free article] [PubMed] [Google Scholar]
[14]. Jiloha RC. The Hamilton depressive rating scale in normals and depressives. J Personality and Clinical Studies. 1989;5:254–256. [Google Scholar]
[15]. Roy P, Roy S, Dey GS, Das M. Psychiatric disorders following hysterectomy. Bang J Psychiatry 2015;29(2):44-7.
[16]. Richards DH. A post-hysterectomy syndrome. Lancet 1974;2(7887):983-5.
[17]. Sehlo MG, Ramadani H.Depression Following Hysterectomy. Current Psychiatry.2010;17(2): 1-6.
[18]. Habib MA, Begum F, Afroz S. Psychiatric morbidity after hysterectomy. TAJ 2002;15(1):28-31.
[19]. Chaudhary S, Bhattacharyya TK.Psychiatric effects of hysterectomy. Med J Armed Forces India. 1995;51(1): 27–30.

Dr. Pratanu Saha, et. al. "Depression Following Hysterectomy with Bilateral Oophorectomy."*IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*, 20(04), 2021, pp. 23-26.