

The effect of hysterectomy on psychiatric morbidity "anxiety and depression"

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Abstract

Objective: To evaluate the psychiatric morbidity (anxiety and depression) in women underwent an abdominal and vaginal hysterectomy of a benign indication

Design and setting: This is a prospective observational study which was done in the Obstetric and Gynecology and Neuropsychiatry Departments, Sohag University Hospital.

Methods: One hundred and two women were scheduled for undergoing hysterectomy after fulfilling the inclusion criteria. All women underwent a thorough history taking and complete clinical and psychiatric examination. General health questionnaire (GHQ-28) was used to assess women with psychiatric co-morbidity before and after the operation. All women with psychiatric co-morbidity was re-evaluated by Beck depression inventory (BDI) and Hamilton anxiety scale (HAMA) before and after hysterectomy.

Results: On screening for psychiatric co-morbidity using the GHQ-28 for the 96 women who completed the follow up protocol of the study 35(36.46%) scored ≥ 4 (Group I) with psychiatric co-morbidity, and 61(63.54%) scored < 4 (Group II) without psychiatric co-morbidity. GHQ-28 was reapplied to all women in group II "post-operatively" where 48 (78.69%) scored ≥ 4 (group IIa) and 13(21.31%) scored < 4 (group IIb. Severe anxiety and depressive symptoms were the most common presentation after the operation and represented 8(40%) and 8(53.3%).of patients of group I, respectively. In patient of group II (without psychiatric morbidity) after hysterectomy, depressive and anxiety symptoms was the most common presentation in nulliparous women and was found in 7(63.64%) and 3(27.27%), respectively. However, the least depressive and anxiety symptoms was observed in women with ≥ 5 and was found in 12(38.7%) and 9(29.03%), respectively. It is not worthy that the majority of women free from psychiatric co-morbidity was observed in women with parity ≥ 5 and represented 10(32.5%) of patients.

Conclusion and recommendation. It was clear that there was a definite significant relation between hysterectomized women and psychiatric morbidity of a depressive and anxiety nature. So we recommend that before hysterectomy in benign conditions, gynecologists should exhaust great effort of using the available recent less invasive modalities of treatment as a first option.

Key Words: Hysterectomy, anxiety and depression ,psychiatric morbidity

Introduction:

Hysterectomy has become the second most commonly done major operation after cesarean section in many parts of industrialized countries. This trend is spreading to developing countries. However, the morbidity and mortality associated with the procedure have been greatly diminished ⁽¹⁾. This has encouraged widening the indications for hysterectomy to include more benign diseases and symptoms related to genital system ⁽²⁾. It is estimated that about 33% of USA female population having hysterectomy by the age of 60 years ⁽²⁾. The uterus for many women is important to gender identity, sexuality, marital relation and self esteem much more than potentially problem bearing form it after reproduction has been completed ⁽³⁾

The decline of sexual activity after hysterectomy increases incidence of depression and anxiety. The increase incidence of menopausal symptoms even when the ovaries were conserved due to disturbance of the vasculature may increase the depression and anxiety. The younger the patient at time of operation, the severer the symptoms ⁽⁴⁾.

The psychiatric morbidity following hysterectomy has received increasing attention, depression and anxiety have been reported as a two squeals of hysterectomy by Josh JM., et al, 2000. Repeated and controlled studies indicate that hysterectomy may yield problems for some women including depression and anxiety (Carraanza-Libras., et al, 1997). Hysterectomy not uncommonly complicates a woman's psychological state and some women developed immediate post operative symptoms of severe anxiety that significantly impacted their quality of life (Chunq-Park M., 2005). Hysterectomy has short and long term negative psychological consequences so that this line of treatment should be critically and comprehensively re-evaluated (Flory N., et al, 2005). So the objective of this study was to evaluate the psychiatric morbidity (anxiety and depression) in women underwent an abdominal and vaginal hysterectomy of a benign indication.

Patients and Methods:

This is a prospective observational study which was done in the Obstetric and Gynecology and Neuropsychiatry Departments, Sohag University Hospital during the period from May 2005 to January 2007. After study approval from the ethical committee of the faculty, 102 women were scheduled for an abdominal and vaginal hysterectomy in this period was recruited in this study.

The inclusion criteria of this study were:

1. The age ranged between 35-60 years.
2. No past or family history of psychiatric illness.
3. Benign indication for hysterectomy.
4. Emergency hysterectomies and malignancies were excluded
5. An informed consent was obtained from every patient before participation in the study.

All women underwent a thorough history taking, clinical examination, ultrasound examination, and colposcopic evaluation. Investigation for medical fitness before the operation. All women were subjected to complete psychiatric history and clinical examination using the semi structured psychiatric interviewing used in Ain-Shams university psychiatric department. Operative intervention was done in the form of hysterectomy (either abdominal or vaginal) and all the specimens were examined histopathologically to rule out malignancy in every case. Operative and post-operative course were smooth for all patients and all cases were discharged within one week and followed up after 2 weeks in out-patient clinic. One month later the patients were psychiatrically re-examined after the operation.

Baseline assessment of the psychiatric co-morbidity for all women recruited in the study before hysterectomy was done using the general health questionnaire (GHQ-28). Patients who scored 4 or more represented the group with psychiatric co-morbidity (group I) and those who scored less than 4, the group without psychiatric co-morbidity (group II). All women with psychiatric co-morbidity (group I) was reevaluated by Beck depression inventory (BDI) and Hamilton anxiety scale (HAMA).

Then final assessment of the psychiatric co-morbidity for women in group II, after hysterectomy was done using the general health questionnaire (GHQ-28) to evaluate the impact of hysterectomy on their psychiatric well being. Patients who scored ≥ 4 represented the group IIa, and those who scored < 4 represented group IIb. Women with psychiatric co-morbidity (group IIa) reevaluated by BDI and HAMA as more specific test to assess the impact of treatment on depressive and anxiety symptoms.

General health questionnaire 28: It is a self administrated screening test, designed to identify short term changes in mental health (depression, anxiety, social dysfunction and somatic symptoms). It is a pure state measure. It is a measure of morbidity and is neither syndrome nor medical disorder specific. The GHQ is ideal for use in community and non-psychiatric setting and has four different versions. The GHQ-28 is the most well known and popular version of GHQ with a cut off score of 4 offering the best predictive value. The reliability and validity of the questionnaire has been extensively studied and it's widely accepted as an efficient screening instrument for general psychological disturbance (Goldberg Williams, 1988).

Beck's depression inventory : It is developed by Beck (1961), it is one of the most widely used measures for assessing depression severity in diagnosed patients and for detecting possible depression in normal populations. It is composed of 21 self report items, each of which corresponds to a specific category of depressive symptoms and/or attitude. Each category describes a specific behavioral manifestation of depression and consists of graded series of 4 self evaluated statements describing increasing levels of severity from natural to maximal. Numerical values from 0-3 are assigned each statement to indicate the degree of severity. A total score ranging from

0-63 is obtained by summing scores across items. Its reliability and validity are well documented (Beck et al, 1988).

Hamilton Anxiety Scale (HAMA) :It is a rating scale developed in the late 1950 to assess anxiety symptoms. The scale is designed to administer by a clinician. It consists of 14 items each defined by a series of symptoms. Each item is range from 0 (not present) to 4 (sever, grossly disabling), with the total score ranging from 0 to 56. The HAMA has been used extensively to monitor treatment response in studies of generalized anxiety disorder and may also be useful for this purpose in clinical settings. A score of 14 has been suggested as a threshold for clinically significant anxiety, but scores of 5 or less are typically in individuals in the community. Reliability and validity are fairly good.

Statistical Analysis:

Statistical analysis was performed using SPSS software (version 11.0). Data were presented in form of mean, range, standard deviation and percentage. Comparing between groups was done using the Student's t-test for real numbers and Pearson Chi- square test (X^2 . test)for non real variables. A P.value of ≤ 0.05 was considered statistically significant.

Results:

Table I: shows the patients characteristics of the study groups. No clinical significant difference as regard, the age , duration of marriage and level of education between the two groups of the study. One hundred and two patients were underwent an abdominal and vaginal hysterectomies. Only 96(94.12%)women complete the follow up protocol of the study with drop-out rate of 6(5.88%). On screening for psychiatric co-morbidity using the GHQ-28 for the 96 women who completed the follow up protocol of the study 35(36.46%) scored ≥ 4 (Group I) with psychiatric co-morbidity, and 61(63.54%) scored < 4 (Group II) without psychiatric co-morbidity (Fig. 1).

GHQ-28 was reapplied to all women in group II (without psychiatric co-morbidity) “post-operatively” where 48(78.69%) scored ≥ 4 (group IIa) with psychiatric co-morbidity and 13 (21.31%) scored < 4 (group IIb), without psychiatric co-morbidity (Fig. 2). The total patients with depressive symptoms before and after hysterectomy was assessed by BDI in group I before operation 15/35 (42.86%) and in group IIa after operation 29/48 (60.42%) (Fig. 3).

Table II and (Fig. 4) demonstrate the severity of depressive symptoms by BDI before and after operation in the fifteen patient of Group (1). Mild depressive symptoms was the most common symptoms before the operation and was found in 7(46.67%), however severe depressive symptoms was the most common presentation after the operation and represented 8(53.3%).

Fig.(5). shows the total patients with anxiety symptoms before and after hysterectomy was assessed by HAMA in group I before operation 20/35 (57.14%) and in group IIa after operation 19/48 (39.5%). Table (3) and Fig. (6) demonstrate the severity of anxiety symptoms by HAMA before and after operation in Group (1), Mild anxiety symptoms was the most common symptoms in group I before the operation and was found in 10(50%) of patients, however, severe anxiety symptoms was the most common presentation after the operation and represented 8(40%) of patients of group I.

Table IV: shows the relation between parity and depression and anxiety after the operation in patient of group II (without psychiatric morbidity). Depressive and anxiety symptoms was the most common presentation in nulliparous women and was found in 7(63.64%) and 3(27.27%), respectively. The least depressive and anxiety symptoms was observed in women with ≥ 5 and was found in 12(38.7%) and 9 (29.03%), respectively. It is not worthy the majority of women free from psychiatric co-morbidity was observed in women with parity ≥ 5 and represented 10(32.5%) of patients.

Table I: patient's characteristics of study groups.

	Group I (N=35)	Group II (N=61)	p.value
Age (years) Mean \pm SD range	45.6 \pm 3.8 39-58	47.3 \pm 4.9 37-59	NS
Duration of marriage (years)	20.6 \pm 4.1 15-31	22.1 \pm 4.4 17-31	NS
Level of education (N&%):			
- illiterate	15 (43%)	29 (47.5%)	NS
- Primary school	10 (28.6%)	16 (26.3%)	NS
- Secondary school	6 (17.1%)	10 (16.4%)	NS
- University	4 (11.3%)	6 (9.8%)	NS

All data were presented in number, percentage, mean and SD

Fig (1): Screening for psychiatric co-morbidity using the GHQ-28 for the 96 women who completed the follow up protocol of the study.

Figure (1)

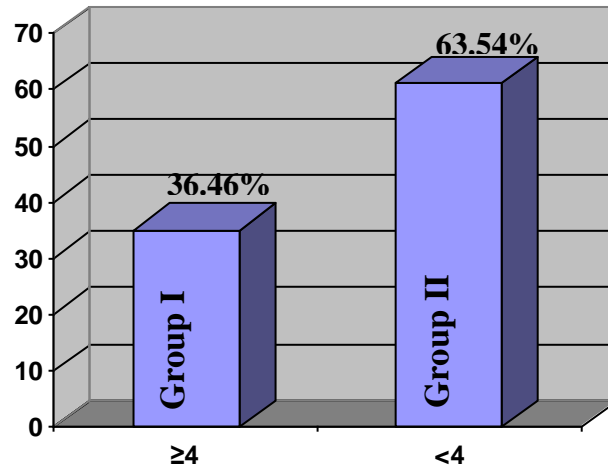


Fig (2): Screening for psychiatric co-morbidity using the GHQ-28 for women of group II after the operation.

Figure (2)

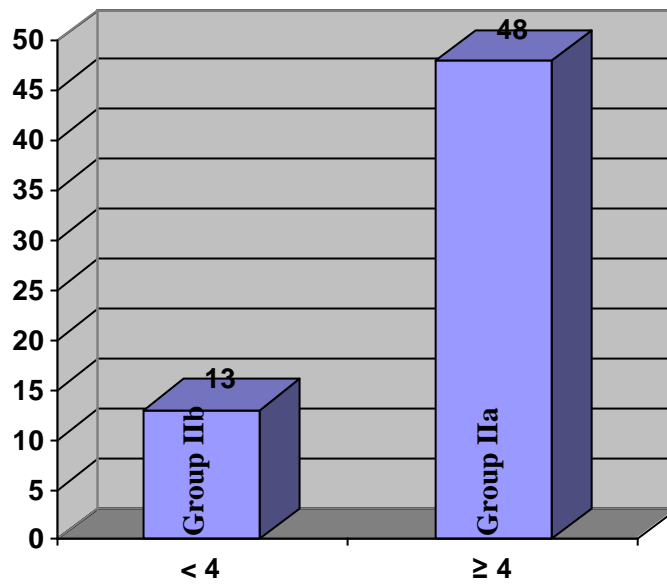


Fig (3): The total patients with depressive symptoms before and after hysterectomy were assessed by BDI in patients with psychiatric morbidity in both groups.

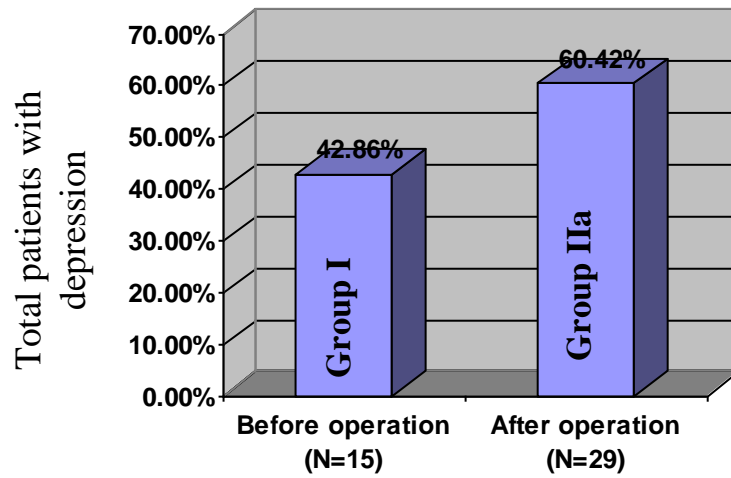


Figure (3)

Figure (4): Severity of depressive symptoms by BDI in group I pre and post-operative

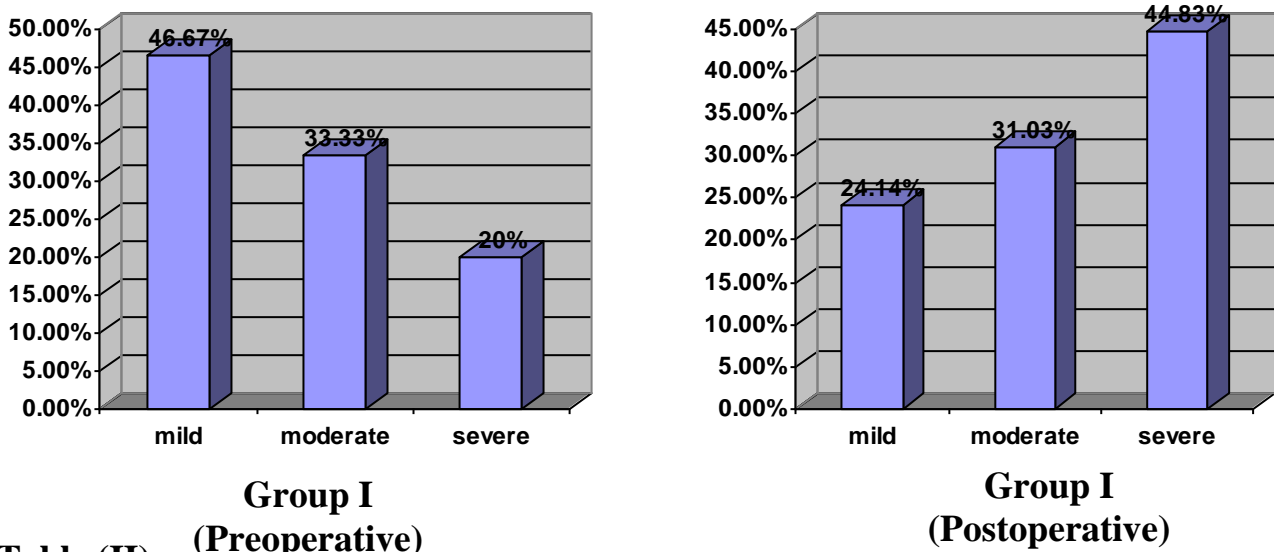


Table (II)

	Pre-operative (N=15)		Post-operative (N=15)	
	N.	%	N.	%
Mild	7	46.67%	2	13.3%
Moderate	5	33.33%	5	33.4%
Severe	3	20%	8	53.3%

Fig. (5): The total patients with anxiety symptoms before and after hysterectomy was assessed by HAMA

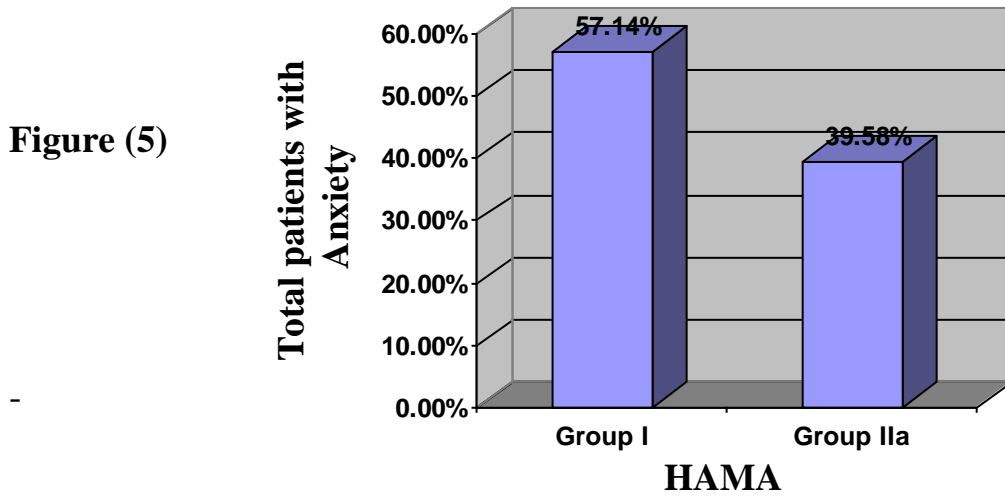


Fig (6): Degree of severity of anxiety symptoms by HAMA in group I pre and post operative.

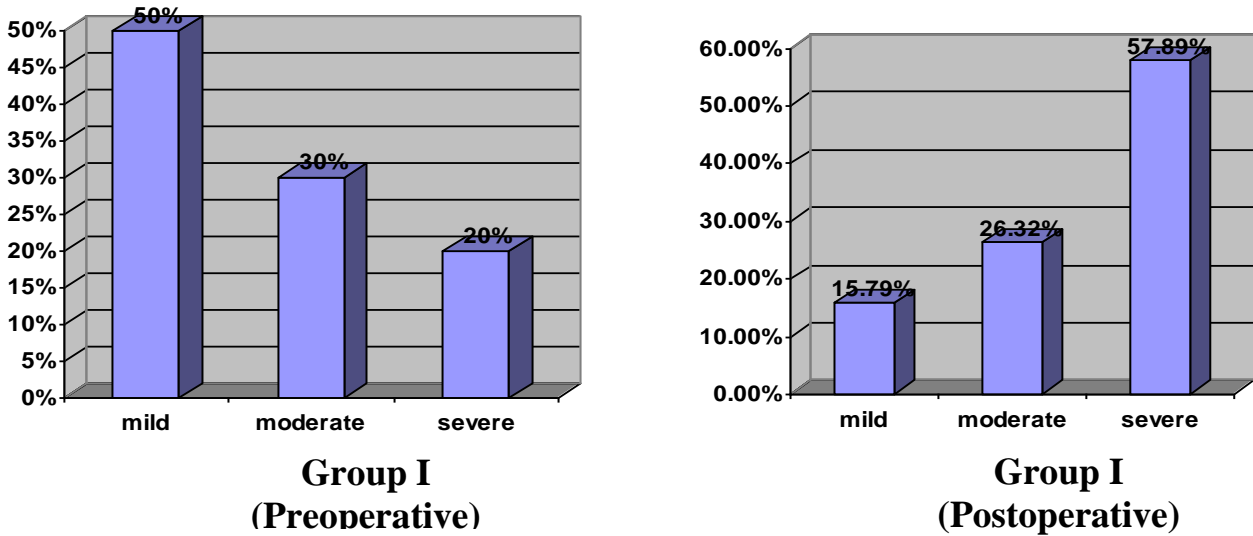


Table (III)

	Pre-operative (N=20)		Post-operative (N=20)	
	N.	%	N.	%
Mild	10	50%	5	25%
Moderate	6	30%	7	35%
Severe	4	20%	8	40%

Table (4): The relation between parity and depression and anxiety after hysterectomy in patient of group II (without psychiatric co-morbidity).

Parity	Total N=61	Depression N (27)	Anxiety N (18)	No psychiatric co-morbidity N=(16)
- Nullipara	11 (18.03%)	7 (63.64%)	3 (27.27%)	1 (9.09%)
- 1- 4	19 (31.15%)	8 (42.1%)	6 (31.6%)	5 (26.3%)
- ≥ 5	31 (50.82%)	12 (38.7%)	9 (29.03%)	10 (32.5%)

All data were presented by number and percentage.

Discussion.

The idea of this research was stemmed after observation great individual psychological variation response after hysterectomy in one hand and in the other hand the wide indication of this operation for benign and malignant indication. In this study we try to evaluate the effect of hysterectomy for benign indication in patient with psychological co-morbidity before the operation and women free from psychological morbidity. Some investigators such, Flory et al, (2005), who reported that hysterectomy has short and long term negative psychological consequences so that this line of treatment should be critically and comprehensively re-evaluated. Also CeausuI et al, (2006), reported that after hysterectomy several psychological symptoms were still more common in hysterectomized women. In the contrary, Donoghue et al, (2003), concluded in their study that many women with preoperative depression improved after hysterectomy.

In the present study, depressive symptoms were present in 15(42.86%) women before operation and 29(60.42%) women postoperatively with significant increase in the frequency of depression after hysterectomy which is consistent with the study of (Flory et al 2005), who stated that 10-20 % of women who undergone hysterectomy reported negative psychological outcomes such as elevated depressive symptoms and impaired body image, but in the contrary to the study of (Donoghue et al, 2003) who found that preoperative depression was 34% fall to 8% after operation.

As regard the age and duration of marriage, there was no significant difference between group I and II, and this agreed with the study of (Gath D. et al, 1982) who noted that no association between psychiatric outcome after hysterectomy and demographic variables.

Also there was no significant difference in the level of education between group I and II and this in contrary to the study of (Yang et al, 2006), who reported that being educated was positively associated with psychological outcome after hysterectomy which may be interpreted by cultural difference as agreed by (Lalinec Michaud and Engelsmannf, 1989) who suggest that cultural factors (e.g. education and type of

society) may contribute to the reaction to hysterectomy in women of different ethnic backgrounds.

The present study shows significant increase in the prevalence of severe depression in group I after operation (46.67%) than before operation (20%), and the prevalence of mild depression is more common in group I before operation (46.67%) than after operation (13.33%), but no significant difference in prevalence of moderate depression before (33.33%) and after (40%) operation and this matched with the study of Vomvolaki et al, (2006), who observed that after hysterectomy signs of depression were severe and prolonged which may include thoughts of death or suicide. Anxiety symptoms were significantly more prevalent in group I (57.14%) than group IIa (39.58%), which is matched with the study of JThomas et al, (1987), who noticed that anxiety symptoms were increased obviously in women subjected to hysterectomy.

In the current study, we observe significant increase in the prevalence of severe anxiety in group I after operation 40% than before operation 20% which highlights the view of common sequelae of severe anxiety after hysterectomy, matched with the results of Jawor et al, (2001), who reported that women undergone hysterectomy developed postoperative high levels of anxiety. There was no significant difference in the prevalence of moderate anxiety in group I preoperatively (30%) and postoperatively (35%), which agreed with the result of Mareh et al, (2001), who stated that intermediate anxiety symptoms were similar before and after hysterectomy. Mild anxiety was significantly more prevalent in group I before operation 50% than after operation 25%, which agreed with study of Umegaki et al, (1993) who found that the psychological status of hysterectomy patients disclosed lower postoperative anxiety symptoms.

In this study there was significant increase in the prevalence of depression in nulliparous women (63.64%) but prevalence of depression decreased while the parity increased, as (47.37%) of women had depression in the group of parity 1-4 children, and 41.94% of women had depression in the group of parity more than 5 children, and this may be explained by decreased need for children with the increase of parity, contrary to the strongest motive and deep wish for even one child in nulliparous women, and this is matched with the result of Ewalds-Kvist, (2006), who mentioned that married nulliparas suffered from more exaggerated depression after hysterectomy.

Conclusion and recommendation.

It was clear that there was a definite significant relation between hysterectomized women and psychiatric morbidity of a depressive and anxiety nature. So we recommend that before hysterectomy in benign conditions, gynecologists should exhaust great effort of using the available recent less invasive modalities of treatment as a first option.

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