DEPRESSION IN YOUNG WOMEN AFTER HYSTERECTOMY: EMERGENCY OBSTRETIC VERSUS ELECTIVE PROCEDURE – A COMPARATIVE CROSS-SECTIONAL STUDY

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ABSTRACT

Emergency obstetric hysterectomy (EOH) is done during cesarean section or after normal vaginal delivery, or any time during puerperal period. Puerperal period is usually associated with anxiety and depression in most cases, having emergency hysterectomy can potentially trigger it more. Therefore, this study was conducted to compare emergency versus elective hysterectomy to determine the pattern of depression between two groups. During a period of four years (from 1st march 2019 to 28th February 2023), a total of 6658 patients were admitted in obstetrics & gynecology department and 31 underwent emergency obstetric hysterectomies and consented to be part of this study. These females were aged between 18 to 49 years. For comparison 31 married control females were randomly selected and interviewed 3 months after undergoing elective hysterectomy due to gynecological conditions. There was no past family history for any psychiatric illness in both groups. The studied groups were clinically evaluated for major depressive episode according to the American Psychiatric Association diagnostic and statistical Manual of mental disorders, 4th edition text revised (DSM-IV TR) criteria. Beck depression inventory (BDI)18 to assess the severity of major depressive episodes. Out of 31 patients 16 cases were performed after caesarean section, four during laparotomy for ruptured uterus and 11 for uterine atony after normal vaginal delivery. There was significantly higher rate of depression among patients undergoing emergency hysterectomy as compared to those with elective procedure. The frequency of complications was also observed to be higher in emergency cases. Our study concluded that the frequency of complications and severe depression was remarkably higher in the obstetric emergency hysterectomy group as compared to the elective hysterectomy group.

Key Words: Emergency obstetric hysterectomy, Depression, young women

INTRODUCTION

Emergency obstetric hysterectomy (EOH) is the removal of uterus during cesarean section or after normal vaginal delivery any time during puerperium period. In emergency cases it is indicated when there is life-threatening situation such as severe hemorrhage (1). Women undergoing emergency hysterectomy have been reported to be at higher risk of mental health disorders (2). These disorders range from agitation, insomnia (3), non-specific anxiety(4), reduced psycho-sexual functioning(5,6), psycho-somatic disorders(7) to severe depression. European studies have considered depression as the major complication of emergency hysterectomy (8). It was also reported that younger women are at relatively higher risk of developing depressive disorders (9-12). As the younger women (in particular those under 40 years), consider uterus as a sexual organ and relate it to the child bearing capacity, thus post-operative depression is related to their parity (13,14). This has influence of social tabos and pressures from society. Furthermore, in cases of emergency hysterectomy women are not prepared for the loss, which those women undergoing elective procedure made the informed decision for a pre-diagnosis of indication of hysterectomy. Women with poor general health, lack of proper antenatal care and those from lower social-economical group are at higher risk of emergency hysterectomy. However, there is limited literature available studying post-operative depression in these women. Thus this study was conducted to determine the frequency of depression following emergency obstetric hysterectomy and comparing with same age group women undergoing elective hysterectomy.

METHODS

This was a prospective comparative cross-sectional study conducted during a period of four years (from 1st March 2019 to 28th February 2023) at private sector Hospital in Hyderabad, Pakistan. A total of 6658 patients were admitted in Obstetrics & Gynecology Department during the study duration, out of which 32 underwent emergency obstetric hysterectomies and included in this study.

For comparison 31 married women undergoing elective hystrectomy during the same period were recruited. After 3 months of the procedure they were interviewed for evaluation of major depressive episode (MDE). The data of indications and complications was also collected in both groups. These all patients had no personal or family history of any mental health issues in both groups.

The clinical evaluation for MDE was done following the American Psychiatric Association diagnostic and statistical Manual of mental disorders, 4th edition text revised (DSM-IV TR) criteria. Beck depression inventory (BDI)18 was used to assess the severity of MDE. The criteria were comprised of a total of twenty-one questions and the responses were valued from 0 to 3. The interpretation was made according to the cumulative score; where ≤9 was labelled as not depressed, from 10 to 18 was mildly depressed, from 19 to 29 was moderately depressed and ≥30 was severely depressed.

Data were analyzed by using statistical package for social sciences software (SPSS) version 20. Data was presented as frequency and percentages. For comparison Chi-squared test was used and a p-value <0.05 was considered as significant

RESULTS

A total number 6658 women delivered during the study period, including 2338 cesarean sections. Emergency hysterectomies were performed in 31 (0.38%) women, making it 1 in 214 deliveries. A summary is presented in Table 1. There were 16 hysterectomies following a caesarean section, four after ruptured uterus and 11 after normal vaginal delivery due to uterine atony. Morbidly adherent placenta was reported in 11 patients (35.48%), placenta previa in 5(16.1%) patients, 4(12.9%) had ruptured uterus, 7 (22.5%) uterine atony, while 4(12.9%) patients had placental abruption (Table 2). The elective hystrectomies were performed in most cases due to abndomral uterine bleeding and fibroids (Table 2). Major depressive episodes were reported to be positive in 24(77.4%) patients of emergency obstetric hysterectomy. Of which 6(19.3%) has mild,15(48.3%) moderate and 3(9.6%) had severe episodes according to BDI score. As compared to elective hysterectomy 18 (58%) had MDE, of which 10(32.2%) were mild ,7(22.5%) moderate while 1(3.2%) patient experienced severe episodes (Figure 1). The rate of complications was also reported to be higher in emergency groups including one death (Table 3).

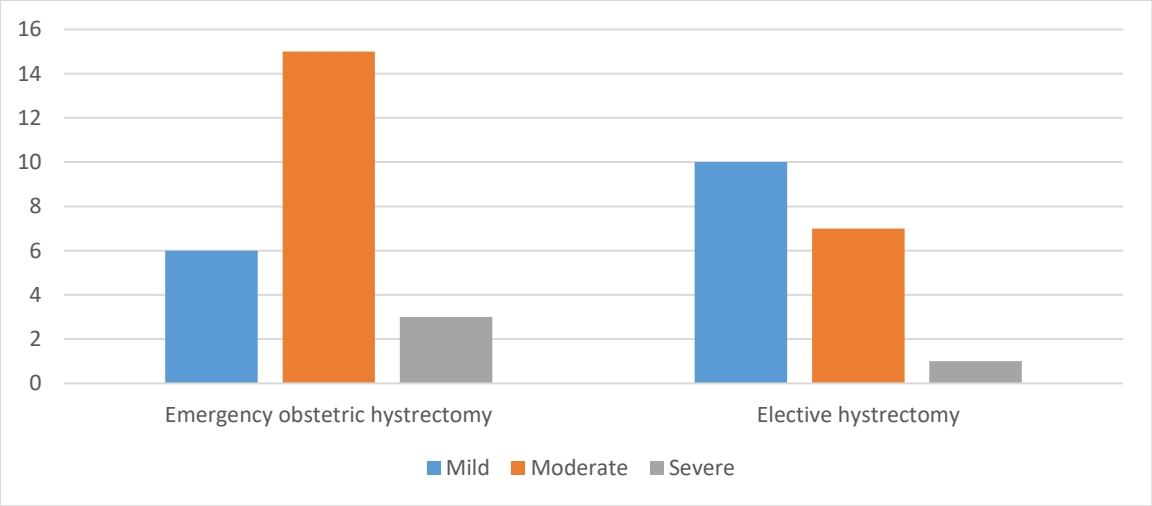

Figure 1. Severity of depression after Hystrectomy: emergency versus elective procedures

Table 1. Demographic characteristics of study population- Emergency Obstetric Hysterectomy versus Elective Hysterectomy

Variables	Emergency Obstetric Hysterectomy (A)	Elective Hysterectomy (B)
• Age groups		
15-25	13(41.9%)	1
26-35	16(51.6%)	04(16.1%)
36-45	2(6.5%)	(32.3%)
46-65	00	16(51.6%)
Total	31(100.0%)	31(100.0%)
• Gestational age		
<34 weeks	19(61.2%)	00
>36weeks	12(38.8%)	00
Total	31(100.0%)	31(100.0%)
• Educational status		
Illiterate	0(0%)	02(6.5%)
Primary	12(38.7%)	08(25.8%)
Metric	15(48.4%)	14(45.2%)
Graduate	4(13.0%)	07(22.6%)
Total	31(100.0%)	31(100.0%)
• Socioeconomic status		
Low	6(19.4%)	0(0%)
Middle	23(74.2%)	28(90.3%)
High	2(6.5%)	03(9.7%)
Total	31(100.0%)	31(100.0%)
• Hemoglobin	6.57±1.20	8.10±0.94
Pre-operative blood transfusions 1 2 >2	 12(38.7%) 13(31.9%) 6(19.4%)	 23(74.2%) 8(25.8%) 0(0%)
Post-operative blood transfusions 1 2 >2	 15(48.8%) 12(38.7%) 4(12.9%)	 27(87.1%) 4(12.9%) 00

Table 2. Indications of Hysterectomy in two groups- Emergency Obstetric Hysterectomy versus Elective Hysterectomy

Emergency Hysterectomy			
S.N0	**Indications**	**frequency**	**percentages**
1	Morbidly adherent placenta	11	35.48%
2	Uterine atony	7	22.5%
3	Placenta Previa without adherence	5	16.1%
4	Couvelaire uterus/Placental abruption	4	12.9%
5	Ruptured uterus	4	12.9%
Elective hysterectomy			
S.N0	**Indications**	**frequency**	**percentages**
1	Abnormal uterine Bleeding	12	38.7%
2	Fibroid uterus	5	16.1%
3	Uterine perforation due to induced abortion & sepsis	2	6.4%
4	Carcinoma of cervix	2	6.4%
5	Carcinoma of uterus	4	12.9%
6	Carcinoma of ovary	3	9.6%
7	Choriocarcinoma	2	6.4%
8	Post menopausal bleeding	1	3.2%

Table 3: Complications of emergency obstetric hysterectomy and elective hysterectomy

Intraoperative	Emergency obstetric hysterectomy	Elective hysterectomy
Bladder injury	13(40.6%)	9(29%)
Bowel injury	3(9.6%)	7(22.5%)
Bleeding	17(54%)	5(16.1%)
Postoperative		
Re-exploration laparotomy	3(9.6%)	2(6.4%)
Urinary tract infection	15(48.3%)	16(51.6%)
Chest infection	13(41.9%)	7(22.5%)
Wound infection	6(19.3%)	4(12.9%)
Acute renal failure	5(16.1%)	1(3.2%)
Disseminated intravascular coagulation	5(16.1%)	0(00%)
Vesico-vaginal fistula	3(9.6%)	2(6.4%)
Maternal death	1(3.2%)	0(00%)

DISCUSSION

Emergency Obstetric hysterectomy is performed in cases of life threatening situation during labor or puerperal period to save mother's life. In women presenting with placental abnormalities including placenta Previa pose a higher risk of emergency hysterectomy even after caesarean sections (15). The elective hysterectomies are on the other hand performed when there are clear indications before the procedure is planned,

where in most cases women are willing to get it done due to bothersome symptoms. While the women who undergoing the removal in emergency cases, they find it difficult to cope with the loss of their uterus and relating it's to their motherhood and sexuality and this makes their decision to consent for surgery challenging. In certain situations, women relate it to the loss of feminity (16). These all factors contribute to the development of depressive disorders of a certain degree. In our study results were suggestive of high tendency of MDE in women underwent emergency obstetric hysterectomy as compared to those undergoing elective hysterectomy. It is in line with previously reported studies where younger women were 4 times more likely to suffer from depression than women whose uterus was saved (17). There is however a variation in the rate of depression in different studies which is likely to be due to the reporting rate, understanding by the patients and statistical power of the analysis. There are also social factors which might influence reporting of the depression. The availability of social support might also play a role in certain situations. However, in all the reported cases the development of depression was post-operative and obviously pointing a relation with hysterectomy (18). As reported depression is the most common psychiatric risk after hysterectomy (19), however in some women depression developed later as during initial period they were not depressed (20). In our study MDE were reported in 77% of patients in emergency obstetric hysterectomy, including 19.3% mild, 48.3% moderate and 9.6% severe episodes according to BDI score. As compared to elective hysterectomy 58% had MDE, of which 32.2% mild, 22.5%, 3.2% moderate while 3.2% patients experienced severe episodes respectively. A previously reported study including 300 patients between 25 to 50 underwent hysterectomy were studied, 37% of women reported to have depression (21). There are also reports of having short term and long term mental health issues (22). The removal of uterus is perceived socially as the loss of ability to produce children, and women take it as loss of feminity and attractiveness. Thus contributing a great deal to the development of anxiety and results in depression. The loss of ability to produce children is reported to be seen in women who are multiparous so it's not limited to having less children (23). In majority of cases these women are less than 40 years of age, thus the risk of depression is negatively proportional to the advancing age (17) . In addition, the risk of psycho-social factors, poverty, poor general health conditions contributing to the cause for hysterectomy also contribute to the development of mental health issues (24,25, 26). This study has strength of being a large scale study to look at the rate of emergency hysterectomies in a hospital setting where a consecutive series of patients were included. Thus the rate of the reported emergency hysterectomies was very low. The interviews taken might have some influence of the interviewer assisted mode of the data collection. This study has strength of comparing it with non-emergency hysterectomy patients so that the findings can be validated. Though the coping strategies and the long term follow-up were not included in this study, thus considered as the limitations of the study.

CONCLUSION

The rate of complications and severe depression was remarkably higher in the obstetric emergency hysterectomy group. Patients after emergency hysterectomy must be followed-up for symptoms of depression so that early management can be offered.

Conflict of interest:
Authors declare no conflict of interest
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This study was approved by Local Ethics Committee.

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