Associated Risk Factors for Postpartum Depression Presenting at a Teaching Hospital

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Introduction: Post partum depression is defined as occurrence of at least five of the following symptoms for at least two weeks during the peurperium.

Objectives: To determine the frequency and associated sociodemographic and obstetrics factors for postpartum depression (PPD) in an outpatient sample in rural areas of Mirpurkhas, Sindh, Pakistan.

Study Design: This is a descriptive cross-sectional study.

Materials and Methods: The study was conducted in the outpatient department (OPD) at 6 – 8 weeks postpartum, of Obstetrics and Gynecology (OBG) unit-I from 1st January 2008 to 31st December 2009 at Muhammad Medical College Mirpurkhas. They were screened for PPD with the help of Edinburgh Postnatal Depression Scale (EPDS).

Inclusion Criteria: All patients presenting in OPD at 6 – 8 weeks post partum.

Exclusion Criteria: Patients with severe medical disorders.

Result: A total of 41.0 participants, or 41.0% of a sample of 100 women suffered from PPD. The demographic profile of depressed patients showed that they were young (mean age 26.22 ± 4.31 years). Previous PPD, marital dissatisfaction; joint family structure, domestic violence, lower socioeconomical and house wives were significantly higher ($p < 0.05$) among women with high score on the EPDS.

Discussion: Women with positive test who have risk factors may need more detailed assessment program. Since PPD had adverse consequences for the mother and her new born baby, there was an urgent need to direct more attention to this problem, in particular towards its early detection, so that morbidity could be reduced in this group of women.

Key Words: Postpartum depression, Edinburgh postnatal depression scale, Risk f**act**ors.

Introduction

Post partum depression is defined as occurrence of at least five of the following symptoms for at least two weeks during the peurperium. The symptoms include depressed mood, significance change in weight, insomnia, hypersomnia, psychomotor agitation, poor concentration, indecisiveness and recurrent thoughts of suicide. Postpartum depression (PPD) is very common among women and is a major health problem.[1] The incidence of women becoming depressed postnatally was first report as 10% by Pitt in 1968.[2]

Since last five years growing attention is paid to mother's depression and impact on their infants.[3] PPD is a mood disorder that can begin during first year after delivery.[4] In the Western countries, the prevalence of postpartum depression is estimated between 10% and 15%.[5] However there is emerging evidence that this condition is much more common in the developing countries including Pakistan.[6]

The reasons cited being economic adversity in the form of poverty, higher number of stressful life events and lack of proper social support.[7] Patients suffering from postpartum depression can have a high degree of functional impairment and consequently have difficulty in properly looking after themselves, as well as their neonates.[8]

Researchers specifically looked at the effect of maternal depression on infant growth, nutrition and convincingly showed that children reared by depressed mothers suffered from poor sustenance and growth retardation as compared to controls.[9] Because of known risks the recently published NICE guidelines for the clinical management of antenatal and postnatal mental health (2007) emphasized the importance of prediction and detection of mental depression in pregnancy and postpartum period.[10] Situation is very different in Pakistan hardly any research of significance has been conducted on this subject.

Consequently, very little is known about the epidemiology and risk factors for this serious disorder in our country. The aim of this study was to assess the frequency and associated risk factor for postpartum depression in the rural areas of Mirpurkhas Sindh. It was hoped that the efforts would stimulate other health care personnel to their own research in this field leading to better standards of care.

Methodology

This descriptive cross-sectional study was conducted at the outpatient department (OPD) of a tertiary care teaching hospital of Muhammad Medical College Mirpurkhas, from 1st January 2008 to 31 December 2009, and the sample size consisted of 100 patients. All the patients attending OPD in the puerperal period 6-8 weeks were participate in the study

Table 1: *Characteristics of women with postpartum depression (n = 100).*

	EPDS ≥ 12 N (%)	EPDS < 12 N (%)	P-value
Gravidity			
Primaparus	11 (61.0)	07 (38.9)	0.213
Multiparus	27 (40.2)	40 (59.7)	
Grandmultiparus	03 (20.0)	12 (80.0)	
Mode of Delivery			
C/S	26 (54.1)	22 (46.8)	0.107
SVD	15 (28.8)	37 (71.2)	
Infant sex dissatisfaction			
Female	25 (46.3)	29 (53.7)	0.200
Male	16 (34.8)	30 (65.2)	
Planning of pregnancy			
Planned	10 (28.6)	25 (71.4)	0.077
Unplanned	31 (47.7)	34 (52.3)	
Depression during pregnancy			
Yes	20 (100.0)	0 (0)	0.000
No	21 (26.3)	59 (73.8)	
Previous postpartum depression			
Yes	7 (100.0)	0 (0)	0.004
No	34 (36.6)	59 (63.4)	
Marital dissatisfaction			
Yes	14 (87.5)	2 (12.5)	0.000
No	27 (32.1)	57 (67.9)	
Premenstural syndrome			
Yes	26 (42.6)	35 (57.4)	0.342
No	15 (38.5)	24 (61.5	
Family structure			
Joint	36 (48.6)	38 (51.4)	0.021
Separate	5 (19.2)	21 (80.7)	
Domestic violence			
Yes	21 (95.5)	1 (4.5)	0.000
No	20 (25.6)	58 (74.4)	
Education level			
Uneducated	28 (59.6)	19 (40.4)	
Elementary	10 (28.5)	25 (71.4)	0.074
High school	1 (50.0)	1 (50.0)	
College	2 (12.5)	14 (87.5)	
Socio-economic status			
Poor	28 (60.9)	18 (39.1)	
Fair	13 (25.0)	39 (75.0)	0.018
Good	0 (0)	1 (100)	
Rich	0 (0)	1 (100)	
Occupation			
House wife	41 (47.1)	46 (52.9)	0.011
Employed	0 (0)	13 (100)	

after informed consent and were able to read Urdu in order to self administer the Edinburgh Postnatal Depression Scale (EPDS), Urdu version.[11] In women who had no school education, the questionnaire was read for the subjects by principal investigators and their answers were recorded by them as well.[12] The EPDS is a ten item self reporting scale that measures the intensity of depressive symptoms experienced within the past seven days. Each statement is rated on a scale from 0 – 3 ("yes, most of the time" to "no, not at all", resulting in a possible total score range from 0-30. Seven of 10 items are reverse scored.[4] It was first designed by Cox et al as a screening instrument for the secondary prevention of PPD[13] with established validity and reliability.[14] A cut of score of 12/13 or greater is used to indicate PPD.[10]

Exclusion Criteria

Patients having severe medical disorders were excluded as physical symptoms (insomnia, anorexia, decreased concentration, pain etc.) could mimic those of depression and bias the sample.[11] for the same reason women with the personal or family history of mood disorder, mental retardation and severely ill baby were also excluded.

Data Collection and Analysis

Obstetrics and demographic data questionnaire were filled. The data were analyzed using software, statistical package for social sciences (SPSS version 10). Simple frequency and proportion was calculated for postpartum depression. Descriptive statistics were applied to socio-demographic, medical and obstetric variables, Chi-square (X^2) test with P-value <0.05 was applied to the study variables.

Results

A total of hundred women participated in the study. Mean age ± SD were 26.22± 4 years. Frequency of positive screen test for depression was 41(41.0%). Previous postpartum depression, marital dissatisfaction; joint family structure, domestic violence, lower socioeconomical and house wives were statistically significant associated factors. For detail see table 1.

Discussion

This research revealed that out of a total of 100 subjects who completed the study, 41 participants or 41.0% of the sample suffered from postpartum depression. When compared with studies conducted in the western countries, this figure is very high, as the average prevalence of postpartum depression in the west was 12%[5] and in neighboring country like Iran was 21.4%[11]. Other studies conducted in Pakistan also reported a very high occurrence of PPD 30-40%.[15,16] This prevalence is within the range of our study but higher than the western countries. A recent review of 143 studies from 40 countries demonstrated that reported prevalence of PPD ranged from almost 0% to 60%.[17] This high prevalence may have several reasons. Obstetric clinicians ignore depression or other psychiatric illness during pregnancy. On other hand women often are hesitant to ask for help because of the shame, cultural expectations or misbelieve that their feelings are normal reaction to this new condition.[18] This was attributed to greater socioeconomic adversity in the form of low education, poverty, unemployment, poor family relations and the scarcity of medical reasons.

Studies conducted in other south Asian countries like Nepal and India also showed similarly high rates of psychiatric morbidity in postpartum women.[19,20] In accordance with other studies we also found that a history of depression is significantly related to PPD.[18] Mood disorders have a multifactorial etiology. Therefore hormonal changes due to delivery can trigger postpartum depression in genetically vulnerable of these psychiatric disorders, other variables that was statistically significant in relation to PPD was low education. This is similar to other studies.[4] Women with higher educational level may have high self esteem, high intellectual function and better coping strategies.[18] As reported in other studies[11,18] we also found that lower socioeconomic status was related to PPD.

Poverty and decreased social support may play role in creation and continuation of depression by limitation of treatment resource. A community study done in a Rawalpindi and published recently in an eminent psychiatry journal highlighted the etiological role of poverty and socioeconomic adversity.[16] We did not find any relationship between parity, type of delivery, complication during pregnancy or delivery and PPD. Castordai found a strong association between multiparity and vulnerability. Results regarding association between complication in pregnancy and PPD are contradictory.[18] A Swedish study with a case-control design examined this issue and found that major medical complications like hyper emesis, pre-eclampsia, un-controlled diabetes etc. predisposed women to depressive disorder postnatally.[21] Furthermore, the relationship between the type of delivery and PPD was not significant while in a study in Lebanon caesarean section was related to PPD.[22]

There are some limitations in this study, as this was descriptive cross-sectional and as such not suitable for detecting risk factors for postpartum depression. It was hospital rather than community-based and not presentative of the general population. Women after delivery especially from rural areas didn't come for postnatal follow-up so sample size is decreased to hundred subjects.

Conclusion

The depressed mothers were young came from poor families most of them were uneducated and housewives and lived in extended families with in-laws.

This study along with other studies on postpartum depression provide evidence that a considerable proportion of women experience a deterioration in their psychological health and social-adjustment during postpartum period. Health care providers need to care about psychological issues when providing care. Women should also be prepared for possible adjustment problems after the birth and should be taught coping strategies to prevent postpartum depression.

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