Screening for Postnatal Depression in a Tertiary Care Hospital in Coastal Karnataka

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1. Introduction

Post partum depression is a term used to describe a heterogeneous group of depressive disorders specific to the postpartum period.Onset is usually within 6 weeks after childbirth and symptoms last from 3 -14 months..In the absence of screening, postpartum depression is under diagnosed by primary care provider, including obstreticians.[1] Theglobal prevalence of postpartum depression has been estimated as 100–150 per 1000 births.[2]

Post partum depression – major or minor- develops in 10 -20 % of parturients(centre for disease control and prevention 2008; mental health America,2013b) in addition postpartum depression has been associated with young maternal age,unmarriedstatus,smoking or drinking, substance abuse, hyperemesisgravidarum ,preterm birth, and high utilisation of sick leave during pregnancy (Endres,2013;Lee2007; Marcus 2009)

Marital relationships are also affected by postnatal depression. Depression in the postnatal period is also associated with malnutrition in the child.

Postpartum depression can predispose to chronic or recurrent depression, which may affect the mother–infant relationship and child growth and development.

Children of mothers with postpartum depression have greater cognitive,behavioural and interpersonal problems compared with the children of non-depressed mothers. ([3,4])

While postpartum depression is a considerable health issue for many women, the disorder often remainsundiagnosed and hence untreated.

Significant number of womenare affected,andthere is a high degree of impairment associated with this disorder. Depression has been identified as a leading cause of disability-adjusted life years (ie, the sum of years of potential life lost due to premature mortality and the years of productive life lost due to disability) for women globally[5]

It is now recognized that hormonal changes associated with the reproductive cycle increase the lifetime risk for affective disorders in a proportion of women.[6]Pregnancy a major life event accompanied by hormonal changes, can represent a time of increased vulnerability for the onset or return of depression.[7]Some women experience their first depressive episode during pregnancy, whereas others with a history of depression are at increased risk for its recurrence, continuation or exacerbation.[8]

The Edinburgh postnatal depression scale (EPDS) was designed by Cox et al. in 1987. A review of 37 validation studies of the EPDS had shown a highly variable sensitivity from 34 to 100 % and a specificity of 44 to 100 % An EPDS score of >13 is strongly suggestive of PPD. [9]

However, with increasing westernization and changing sociocultural pattern, PPD is showing an increasing trend in India as well. Hence, we felt the need toscreen postpartum women for PPD, in our setting.

2. Objective

To evaluate the prevalence of Postpartum depression and associated socio demographic and obstretics factors, using the EPDS**.**

3. Materials and Methods

Setting

This was a prospective study conducted in the Department of Obstetrics &Gynecology, father Mullers medical college and hospital, from May 2019 to August 2019.

Study group

Hundred postpartum women who delivered a live born and gave written informed consent were included in the study, and were assessed within 7 days postpartum, using the EPDS. The risk factor questionare was completed.Women with mental retardation were excluded. Patients with stillbirths were excluded from the study because we sought to examine risk factorsthat correlate with typical PPD, rather than the grief process that accompanies the loss of an infant. In this study, we have screened women at 2–7 dayspostpartum. One of the strongest arguments for earlyscreening of PPD is the possibility of enhancing secondary prevention.

| | | | EPND SCORE <12/ >=13 | | | | | |
| | | | <=12 | | >=13 | | | |
		N	Count	Column N %	Count	Column N %	Chi square	P value
History of Psychiatric Illness	Absent	97	89	100.00%	8	72.70%	25.023	**<0.001**
	Present	3	0	0.00%	3	27.30%		
H/O Domestic Abuse	Absent	91	89	100.00%	2	18.20%	80.02	**<0.001**
	Present	9	0	0.00%	9	81.80%		

Family Nuclear	Absent	96	89	100.00%	7	63.60%		
	Present	4	0	0.00%	4	36.40%	33.712	**<0.001**
Antenatal Complications	Absent	97	89	100.00%	8	72.70%		
	Present	3	0	0.00%	3	27.30%	25.023	**<0.001**
Mode of Delivery NVD	Absent	33	30	33.70%	3	27.30%		
	Present	67	59	66.30%	8	72.70%	0.183	0.668
Mode Of Delivery LSCS	Absent	66	59	66.30%	7	63.60%		
	Present	34	30	33.70%	4	36.40%	0.031	0.861
Breast Feeding Immediate/Delayed	Immediate	89	79	88.80%	10	90.90%		
	Delayed	11	10	11.20%	1	9.10%	0.046	0.83
Parity Primi/Multi	Primi	22	20	22.50%	2	18.20%		
	Multi	78	69	77.50%	9	81.80%	0.105	0.746
Duration Of Marriage < 1 Year/1-3 Years/>3 Years	<1	28	26	29.20%	2	18.20%		
	1-3	36	28	31.50%	8	72.70%		
	>3	36	35	39.30%	1	9.10%	7.543	**0.023**
Education <SSLC/PUC/Degree	<SSLC	41	39	43.80%	2	18.20%		
	PUC	40	35	39.30%	5	45.50%		
	Degree	19	15	16.90%	4	36.40%	3.623	0.163
Occupation Housewife/Working	Housewife	76	70	78.70%	6	54.50%		
	Working	24	19	21.30%	5	45.50%	3.119	0.077
Socio Economic Status Lower/Middle/Upper	Lower	62	54	60.70%	8	72.70%		
	Middle	23	21	23.60%	2	18.20%		
	Upper	15	14	15.70%	1	9.10%	0.642	0.725
Obstretic Outcome Healthy New Born/Nicu Admission	Healthy	81	73	82.00%	8	72.70%		
	NICU	19	16	18.00%	3	27.30%	0.55	0.458
Gender Of Baby Boy/Girl	Boy	42	39	43.80%	3	27.30%		
	Girl	58	50	56.20%	8	72.70%	1.1	0.294

4. Results

Overall incidence of postpartum depression was found to be 11 %.

Incidence of women with history of psychiatric illness was 3 and all of them scored above 13 on EPDS scale. History of domestic abuse, maternal antenatal complications and nuclear families were all found to be significant risk factors for post partum depression.

88% of the women who underwent normal vaginal delivery and 66% who underwent caesarean section had an EPND score <12, emphasizing on the fact that caesarean section is a significant risk factor for development of postpartum depression. EPND score above 13 was found slightly higher in multigravida, but was not statiscally significant.

54 % of the women with EPND score >13 were homemaker by occupation, hence the working class have a slightly lower chancesof development of postpartum depression, but statistically not significant.

Maximum incidence of EPND score >13 was noted in lower socioeconomic class, hence this is one of the risk factors for postpartum depression ,but not statistically significant.

Gender of the baby had no significant impact on EPND score.

Patient who under went LSCS have 1.3 times higher chances of PPD.Out of the 11 cases whose EPND score > 13 , 3 of their babies were admitted to NICU, thereby accounting for 1.7 times greater risk of PPD. Characteristics like duration since marriage and education status had no significant effects on the postpartum depression rate.

The sociodemographic factors have been taken into consideration, in our study, thereby reducing the false positives. Women with an EPDS score of >13, were referred to psychiatry department for further evaluation. In our study, 2 out of the 100 women went on to develop postpartum psychosis.

5. Discussion

In our study, 11 out of 100 women, scored >13 on the EPDS (prevalence= 11 %). This was found to be statistically significant, using the Chi square test for difference between twoproportions. The prevalence in this sample is similar to therates of 7.7–14 % assessed by Lee et al. [10]

Chandran et al reported a prevalence of 11 % for PPD in a cohort ofwomen from rural Tamil Nadu.[11]

Sheela et al in their study concluded the prevalence of an EPDS score of >13 in their study population was 7.5 % (120/1600). Participants with a family history of psychiatric illness, history of domesticabuse, delayed initiation of breastfeeding, and those whogave birth to a female infant were at a significantly higherrisk for an EPDS score of 13 or higher, indicating probablepostnatal depression. The mode of delivery, NICU admissionof the newborn, and history of antenatal complicationswere not significant risk factors.[12]

Ghosh et al evaluated the association of different factors with postpartum depression.They concluded that incidence of PPD was 25%.Significant association of PPD was seen with poor socioeconomic group,literacy ,nuclear family structure , single mother, past history of psychiatric illness , history of abuse , and poor obstetric outcome . Age, parity and method of delivery showed no association. [13]

In our study the incidence was 11% , history of psychiatric illness , domestic abuse, nuclear families, antenatal complications, mode of delivery being LSCS , housewives were found to be high risk factor for development of PPD.

Maximum incidence of EPND score >13 was noted in lower socioeconomic class, hence this is one of the risk factors for postpartum depression.

Gender of the baby had no significant impact on EPND score as parity of women is usually high in our study population. Noted difference in risk factors is because during our ssurvey we found that our population prefer normal vaginal delivery more and preference to male gender was not noted.

6. Conclusion

Postpartum depression in costal population of mangalore and screening using simple measures like EPND score will help i identifying the women, particularly women with high risk factors must be screened .proper counselling and treatement will prevent to progression to severe illness.

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