

Depression in Pregnancy and Postpartum Period

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ABSTRACT

This prospective study was carried out in a service hospital, with the aim to study the prevalence and incidence of depression in pregnancy and postpartum period. Eighty Four consecutive patients attending the antenatal outpatient in the Obstetrics & Gynaecology department in their last trimester of pregnancy were recruited for the study. They were assessed on Beck Depression Inventory thrice viz. during third trimester of pregnancy, within 3 days of delivery (early postpartum period) & within 4-8 weeks of delivery (late postpartum period). The prevalence of depression was 8.3%, 20% and 12.8% respectively at three ratings. The incidence was 16% and 10% in the early & late postpartum period respectively. Further analysis revealed that depression in pregnancy correlated significantly with depression in early postpartum period, but not with late postpartum period. Depression in early postpartum period correlated with depression in late postpartum period. These findings have implications for early detection and care of women at risk for developing depression.

Key Words : Depression, Pregnancy, Postpartum

INTRODUCTION

Depression in postpartum period has been classified into three categories in ascending level of severity viz, maternity blues, postpartum depression and psychotic depression. Because the blues are self limiting and the florid postpartum psychosis obvious, the serious but more often under recognized middle category becomes an important subject of enquiry.

Rates of postpartum depression vary, most studies citing a 10% figure. Although approximately two thirds of major depressive episodes begin within two weeks of delivery, there is a greater range of onset with presentation throughout several months following delivery. The symptoms include tearfulness, despondency, feelings inadequacy, inability to cope, irritability, unusual fatigue, anorexia, sleep disturbance and decreased sexual interest. Management may require an increase in social support system, psychotherapy and treatment with anti-depressant or antianxiety medication (Inwood, 1985).

Once a patient has suffered from postpartum depression, there is a substantial risk of subsequent postpartum depression, reported to be between 30% to well over 50% (Garvey et al, 1983). It is unclear how long postpartum depression lasts; estimates have varied from 3.3 weeks to many months. Though postpartum depression is fairly common, little is known about prolonged changes in health of mothers or impact of maternal depression on the infant and rest of the immediate family. The depressed woman's despondency, withdrawal, irritability, fatigue and inability to cope may limit or distort healthy interaction with newborn and family. The lack of clearly defined clinical criteria for a case of postpartum depression has been compounded by confusion about the time span covered by the term postpartum. The timing of assessment has ranged from 6 weeks to 4 yrs after delivery (Kumar and Robson, 1984; O'Hara et al, 1990). Moreover, some authors include severe disorders. On the other hand, some rates are inflated by

including mothers with varying degree of depressive symptoms (Harding, 1989).

In contrast to plethora of research reported by western investigators, there is relative paucity of literature from developing countries. Gautam et al (1982) reported in analysis of 100 patients with postpartum psychiatric syndromes that 14% and 5% suffered from brief depressive reaction and depressive psychosis, respectively. Patel et al (2002) reported that 23% of the mothers were detected to have depressive disorder at 6-8 weeks after childbirth.

This prospective study was carried out with the aim to study the prevalence and incidence of depression in pregnancy and postpartum period.

MATERIAL AND METHODS

The present study was conducted in a service hospital. The main setting of data collection was outpatient department of Obstetrics & Gynecology unit. The subjects were drawn from pregnant women who routinely booked in at the antenatal clinic. All consecutive pregnant women reporting to the outpatient over a four months period in their third trimester (29-40 Weeks) were recruited for the study. The duration of pregnancy was ascertained from subjects' verbatim and antenatal cards. All the subjects were assessed on Beck Depression Inventory (BDI) (Beck et al, 1961) which has been frequently used as the measure of depressive symptomatology during pregnancy and postpartum period (Curton, 1983; O'Hara et al, 1990). The study had a prospective design and subjects were recruited from pregnancy and were followed up twice so as to use subjects as their own control and also to identify new cases. In total, subjects were contacted at three points of time. First assessment antepartum (AP) was done at outpatient, when subjects were in third trimester of pregnancy. They were assessed on BDI, after explaining about the study and obtaining consent for the same. Second assessment (PPI, early postpartum period) was done in the hospital after delivery. The subjects were rated on BDI within 3 days of vaginal deliveries and within 7 days of deliveries by cesarean

section. Third assessment (PP2, late postpartum period) was done at postnatal clinic within 4-6 wks of delivery, and subjects were rated on BDI.

RESULTS

A total of 84 subjects were studied at first assessment, 75 and 70 subjects were followed up at second and third assessments. The sociodemographic characteristics of all subjects are shown in Table 1.

Mean duration of amenorrhea at first rating was 34.0 weeks with SD of 3.0. Second assessment was done at a mean duration of 2.4 days after delivery with SD of 0.9. Third assessment was done at a mean duration of 5.6 weeks (SD 1.4) after delivery.

Figure 1 shows prevalence and incidence of depression in pregnancy and postpartum period. During pregnancy, 7 (8.3 %) cases of depression were identified. All showed mild level of depression. In early postpartum period, 15 (20%) subjects showed depression. Out of 7 cases during pregnancy, 2 were lost to follow up and 5 were available for second assessment in the early postpartum period. Out of these 5 cases, 3 continued to have depression. Therefore there were 12(16%) new cases of depression. In late postpartum period,

TABLE 1: Sociodemographic characteristics (N=84)

Variable	N=84
Age (yrs) 24(3)*	
Occupation	
House wife	82(98%)
Others	02(2%)
Education	
Illiterate	14(16%)
Matriculate	57(68%)
Graduate	09(11%)
Postgraduate	04(5%)
Family	
Nuclear	51(61%)
Joint	33(39%)

Note: *Mean (SD), Figures in parentheses indicate percentage.

a total of 9(13%) cases were identified, out of which 2 had continued to be depressed from early postpartum period. So, 7(10%) were new cases of depression. None of the patients found depressed during pregnancy were depressed in the late postpartum period.

Mean BDI scores of entire sample at three ratings were 8, 10 & 6 respectively as shown in Table 2. Lowest level of depression was seen in 77, 60 and 61 subjects and mild level of depression was found in 7, 14 and 8 subjects at three ratings respectively. Moderate level of depression was present in one subject each at second and third ratings. Severe

level of depression was not found in any of the subjects at any of the ratings. Correlation between BDI scores at different ratings is shown in Table 3.

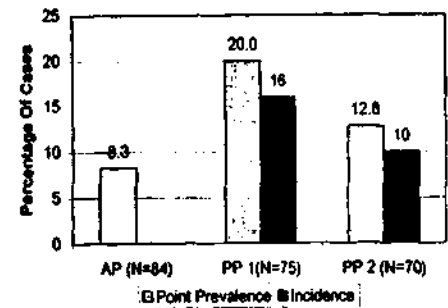


Fig 1: Prevalence and incidence of depression (BDI)

TABLE 2: Mean BDI score for the entire sample and its subgroups

		AP	PP1	PP2
Entire sample	Mean	8	10	6
	SD	5	7	9
	n	84	75	70
Lowest (BDI 0-16)	Mean	7	8	2
	SD	4	3	2
	n	77	60	61
Mild (BDI 17-32)	Mean	21	20	25
	SD	3	4	5
	n	7	14	8
Moderate (BDI 33-48)	Mean	0	43	47
	SD	0	0	0
	n	0	1	1

TABLE 3: Correlation analysis

BDI Score	Sample	DF	Coefficient of correlation
AP Versus PP1 Rating	75	73	0.24#
AP Versus PP2 Rating	70	68	0.14 NS
PP 1 Versus PP2 Rating	70	68	0.56*

Note: # Significant at 0.05 level, * Significant at 0.01 level, NS not significant.

DISCUSSION

The present investigation was undertaken to study depression in pregnancy and postpartum period. All subjects were assessed thrice, once in pregnancy and twice in postpartum period thus enabling the same subject to act as control for the next assessment. This method has been used in various studies. The period of assessment has ranged from first to third trimester in pregnancy and 4 weeks to 4 years in postpartum period (Cox et al 1982; Kumar and Robson, 1984; Posner et al, 1985; O'Hara et al, 1990; Josefsson et al 2001; Patel et al., 2002).

A total of 9 (11%) and 5 (6%) subjects defaulted at early and late postpartum ratings. Kumar and Robson (1984) have reported that defaulters are usually single women or women who have other young children at home, lacking the resources to obtain proper care. In the present study, this could be due to the various reasons peculiar to armed forces families population, such as delivery at some other service hospital because of husband's transfer or at native place because of non availability of social/parental support at the place where husband was serving.

The prevalence of depression was 8%, 20% and 13% respectively at three ratings and the incidence was 16% and 10% in the early and late postpartum period. As the present study was prospective, same subjects were assessed thrice, the total and new number of depressed subjects are prevalence and incidence respectively.

At the time of pregnancy, the prevalence rates are reported because number of new cases could not be ascertained, as state of mental health of subjects prior to inclusion in study was not assessed; 8% of subjects reported depressive symptoms during pregnancy. 6-17% of pregnant women have been reported to be depressed in literature (Cox et al, 1982; Kumar and Robson, 1984; Josefsson et al 2001). It is now accepted that most women do not conform to the stereotype of the woman who "blooms" with health in pregnancy (Kumar and Robson, 1984).

The rates at second assessment can more aptly be called maternity blues. In

the literature, 39-85% of new mothers have been reported to have postpartum blues (O' Hara et al, 1990). Moreover, it is reported that the blues are more common in western societies where traditional support systems, transitional and prescribed rituals associated with childbirth are virtually lacking. Kumar et al (1994) have reported that the prevalence of the blues, which are mild, transient and very common disturbances of postnatal mood, does not appear in a major way to be related to environmental, social or cultural factors. Lesser rates in this study could be attributed to early assessment of subject as the patients were assessed maximum on first and second day of delivery and the syndrome characteristically peaks at third day of delivery. As per discharge policy in the maternity ward normal delivery cases were discharged on the third day and cesarean cases on seventh day.

The rates reported at third assessment can be more aptly called postpartum depression. Prevalence rate of 13% found in the present study was similar to rates reported (Cox et al, 1982; O'Hara et al, 1990; Josefsson et al, 2001; Patel et al, 2002; Regmi et al, 2002). However Paykel et al (1980) and Kumar and Robson (1984) have reported higher rates.

BDI scores on first and second, and third assessment were significantly correlated. However there was no significant correlation between BDI scores on first and third assessment. Thus depression in pregnancy was correlated with postpartum blues and presence of postpartum blues was correlated with postpartum depression. Dennerstein et al (1989) have reported association between in pregnancy and postnatal depression. Kumar and Robson (1984) found that only 4 of 22 prepartum depressive subjects were depressed in postpartum. They proposed that pre and postpartum depression were different. In the present study there was no significant correlation between depression in pregnancy and postpartum depression. Paykel et al (1980) and Hannah et al (1992) found that 36-85% of women with moderate clinical depression in postpartum period had earlier suffered from postpartum blues. However O'Hara et al (1990) reported that in pregnancy the depression was more

determined by somatic signs and symptoms arising out of discomfort as compared to that in the postpartum period.

CONCLUSION

The present study was conducted with the aim to find the prevalence and incidence of depression in pregnancy and postpartum period using material and method as reported in contemporary studies. The depression rates in pregnancy and late postpartum period were similar to those reported in literature while the rates were lower for depression in early postpartum period. There was significant correlation between depression in pregnancy and early postpartum period; and between depression in early and late postpartum period. Future studies need to address the issues of differentiating characteristics of postpartum depression from nonpostpartum depression, various predictive factors and its impact on infant and family. Future studies are needed from larger community with samples from the beginning of pregnancy to at least 1 year postpartum and comparing these with nonpregnant controls to highlight characteristics of depression in postpartum period.

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