

COMPARISON OF POSTNATAL DEPRESSION IN WOMEN FOLLOWING NORMAL VAGINAL DELIVERY AND CAESAREAN SECTION: A PILOT STUDY

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ABSTRACT

Objective: To compare the frequency of postnatal depression in women following Normal Vaginal Delivery and Caesarian Section.

Methodology: A comparative study was conducted in Departments of Obstetrics & Gynecology of Lady Reading Hospital, Khyber Teaching Hospital and Hayatabad Medical Complex, Peshawar from November 2009 to January 2010. A total of 100 women; 50 cases of Normal Vaginal Delivery and 50 cases of Caesarian Sections were included in the study through purposive, non-probability sampling technique. A semi-structured demographic proforma and Edinburg Post-Natal Depression Scale (EPNDS) were used for data collection by interviewing the cases between 1st and 8th post partum weeks. All findings were recorded in SPSS and excel sheets. Chi square test was applied as the test of significance and P- value of less than 0.05 was considered significant.

Results: The mean age of the sample was 29.68± 6.8 years (Range 15-52 years). In women that underwent Caesarean Section (n=50), 29 (58%) were found as having depressive illness while in the group of women that gave birth through Normal Vaginal delivery (n=50), 12 (24%) were having depression (p- value < 0.001).

Conclusion: The study concluded that postnatal depression is significantly more common in the females undergoing caesarian sections as compared to the normal vaginal deliveries.

Key Words: Postnatal Depression (PND), Edinburg Post-Natal Depression Scale (EPNDS), Normal Vaginal Delivery, Caesarian Section.

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INTRODUCTION

World Health organization ranked depressive disorders 4th regarding their global burden of disease. It is expected to be 2nd in the year 2020¹. Women are vulnerable to depression during postnatal period². However, Post natal depression (PND) is diagnosed in only 50% of the women with prominent symptoms during first year after delivery³. On the contrary, untreated PND can cause chronic depression and interferes in mother child bonding and even to the extent of suicide as well as infanticide in rare cases³. However, it is important to distinguish PND from the "baby blues" that occurs between three and 10 days after giving birth; and "Postnatal psychosis" which affects one in 500 women in the

first week or so after child birth⁴.

Like depression, PND doesn't have any definite cause but is likely to result from a mixture of physical, biological and hormonal factors⁵. Similarly social and psychological risk factors may also play a role in contributing to cause depression⁵. It is estimated that overall 10 to 15% women experience PND while it ranges from 3.5 to 63.3% in Asian countries, where Malaysia has the lowest and Pakistan has the highest percentages, respectively^{2,5,7}.

Some researchers have suggested that there is no reason for women at risk of postnatal depression to be managed differently with regard to mode of delivery⁸. Women can be reassured not to believe that they are at

risk of PND whether they require caesarean sections or plan for vaginal delivery⁸.

A study from Japan shows that the onset of PND can be seen within the first week after delivery⁹. Maternal complications and related medical factors might serve as risk factors⁹. Findings of an Iranian study show that PND has been twice as much prevalent in Caesarean Section group compared to that of Normal Vaginal Delivery group¹⁰. A retrospective comparison study conducted in 1994, shows higher incidence of PND among subjects undergoing Caesarean Section than those who have Normal Vaginal Delivery¹¹. A review taking in account 24 studies to find out the evidence for an association between Caesarean Section and PND revealed that 5 studies were having significant adverse association, 15 were having no significant adverse association and 4 studies were having mixed results¹².

We undertook this study this to compare frequency of PND in women undergoing Normal Vaginal Delivery & Caesarian sections. This comparison will help in determining the potential group which is prone to depression so that they may be timely referred to Psychiatry Department and start their treatment accordingly.

METHODOLOGY

This comparative study was conducted in out-patient department and wards of Obstetrics & Gynecology, Lady Reading Hospital, Khyber Teaching Hospital and Hayatabad Medical Complex, Peshawar from November 2009 to January 2010. All the women who attended the hospitals during the study duration were included in the study except those who had psychiatric, psychological and general medical conditions. A total of 100 women; 50 cases of Normal Vaginal Delivery and 50 cases of Caesarian Sections were included in the study through purposive, non-probability sampling technique. A designed consent form was signed by the patients prior to enrollment in the study.

Data was collected by interviewing the participants between 1st and 8th post partum weeks on a semi structured demographic Performa. This proforma included variables like age, number of children, history of still births & miscarriages along with mode of delivery in current pregnancy.

Edinburg Post-Natal Depression Scale (EPNDS) was used to screen these women for depression¹³. Scores

less than 10 are considered normal. Scores of 10 or more suggest depression. It should be confirmed by interview and mental state examination^{4, 13, 14}.

All the data was recorded and analyzed in SPSS version 19. The comparison between depressive mothers that underwent Caesarean Section and those delivering through Normal Vaginal Delivery was calculated by using chi-square test p-value of less than 0.05 was considered significant.

RESULTS

The mean age of the sample was 29.68± 6.8 years (Range: 15-52 years). The mean age of the women that underwent normal vaginal delivery was 28.42+5.3 years (Range: 17-45 years) and that of those who underwent Caesarean Sections was 30.94+7.8 years (15-52 years).

The details of women from both the groups having PND are described in Table 1.

We found no association between variables like age; number of children; history of still births & miscarriage; with PND.

DISCUSSION

Studies previously conducted have found that PND was more common in women who have undergone Caesarean Section as compared to those having Normal Vaginal Delivery^{10, 12}, which is in accordance with our study.

A retrospective comparison study showed a higher incidence of PND among subjects undergone Caesarean Section than those who have Normal Vaginal Delivery¹¹. These results are in accordance with our study clearly indicating that going through major operation is itself a trigger for depression, and our higher percentage for depression was considered an alarming situation. Another study conducted in Australia showed that women having an emergency Caesarean Section had more than 6 times risk of having PND within 3 months of the delivery¹⁵, which is in accordance with our study, but we did not further elaborated regarding emergency and elective caesarian sections.

A study conducted in postnatal Iranian women found no relation between mode of delivery and PND at 2 and 4 months after delivery, however, women with PND in vaginal delivery group showed a greater decrease in

Table 1: Patients with Post Natal Depression

Normal Vaginal Delivery Group (n=50)	Caesarean Section Group (n=50)	p- value
12	29	0.001
24%	58%	

Edinburg Post Natal Depression Scale score, suggesting that vaginal delivery lead to a better physical health at 2 months after delivery and physical and mental health at 4 months after delivery¹⁶.

Another study also showed no correlation between Post Partum Depression and Caesarean Section and concluded that mode of delivery does not have an impact on the development of postpartum depression but caesarean section may have negative impact on maternal attachment¹⁷. Similarly, a Canadian prospective cohort study concluded that although mode of delivery has no significant impact on PND; place of birth and other unmeasured factors may be considered in creating a risk of depression¹⁸. These results are not in accordance with our findings.

Maryam and colleagues in their study conducted in Isfahani postnatal mother's, concluded that factors such as mother age, birth gender, and abortion had no significant relationship with PND¹⁹. These results are similar to ours, as we did not find any association regarding age, gender of the existing children and history of abortions and miscarriages with PND.

Smaller sample size was the major limitation of the study and further research can be conducted on a large sample along with inclusion of public as well as private hospitals to look into the depth of this issue. Further researches can be conducted to identify risk factors and their impacts during pregnancy.

CONCLUSIONS

Post-Natal Depression is highly significant in women undergoing Caesarean Section as compared to those having Normal Vaginal Delivery, suggesting a strong association between Caesarean Section and depression in the females in their postnatal periods. We recommend that females undergoing caesarian sections be specially looked after and arrangements should be made for their special care so that they are counseled early, thereby preventing them from future complications and depressive states. Future research should focus on studies examining the efficacy of interventions delivered for prevention of PND in the postnatal period.

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CONTRIBUTORS

FRM conceived the idea, planned and wrote the manuscript of the study. BBM wrote the introduction, collected the data, filled EPNDS forms and entered the data in excel sheets. MI helped throughout in the write-up of the manuscript and supervised the study. All the authors contributed significantly to the research that resulted in the submitted manuscript.