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Postpartum-onset major depression is associated with personality disorders

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Abstract

Objectives: The objective of the study was to investigate the incidence rate of postpartum-onset major depression (PPMD) and to examine associated sociodemographic characteristics, obstetric factors, and personality disorders.

Method: The study data were obtained from 302 women who delivered at a child and maternity hospital. We interviewed the new mothers on the first day of their childbirth and at 6 weeks postpartum. Major depression and axis II diagnoses were determined by means of the Structured Clinical Interview for the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*, and the Structured Clinical Interview for the *Diagnostic and Statistical Manual of Mental Disorders, Revised Third Edition*, Personality Disorders, respectively.

Results: Nineteen (6.3%) women had new-onset major depression during 6 weeks postpartum. Postpartum-onset major depression was unrelated to age, educational level, employment status, planned or unplanned pregnancy, history of abortion and gestational complications, term of delivery, type of delivery, sex of the baby, and mother's breast-feeding. Frequency of primiparity and of avoidant, dependent, and obsessive-compulsive personality disorders was higher in women with PPMD than that in women without PPMD. As a result of logistic regression analysis, the independent predictor of PPMD was the presence of avoidant, dependent, and obsessive-compulsive personality disorders.

Conclusion: Our results suggest that childbearing women with avoidant, dependent, and obsessive-compulsive personality disorders have increased risk of new-onset major depression during the postpartum period.

1. Introduction

Childbirth is one of the most important life events not only in the social context but also in the psychological and biological perspective. In puerperium, dramatic alterations occur [1] in gonadal steroids influencing central neurotransmitter functions associated with mood [2]. Moreover, during this time, the risk of higher frequency of depressive symptoms or recurrence of mood episodes increases [3,4].

Although the prevalence rate of depression at the postnatal period has been reported within a large range due probably to methodological and population differences in studies, this rate has been found to be 8% to 20% in most of studies [4-15]. Some investigators have suggested that postpartum women have a higher prevalence of depression than nonpostpartum matched controls [4]. The incidence of postpartum depression has been less studied compared with its prevalence. Several studies reported the incidence rate of postpartum depression as 3.4% to 11% [14-17]. Furthermore, to the best of our knowledge, there is no study examining the incidence of postpartum depression based on a prospective design by means of a structural clinical interview in the Turkish population.

Maternal depression has negative effects on mother-child relationship, and it is associated with more functional disorders and socioemotional difficulties in the infant [18,19]. Therefore, detection of women under risk of postpartum depression, early diagnosis of postpartum depression, and appropriate preventive measures and treatments are considerably important to decrease the risk of later psychological, behavioral, and personality disturbances in children. Various risk factors associated with postpartum depression have been widely explored. Depression and anxiety during pregnancy and history of depression seem to be the strongest predictors of postpartum depression. Recent stressful life events and perceived low levels of social support have been identified as other notable risk factors for postpartum depression [20].

Some authors reported that women with postpartum depression had higher vulnerability subscale score, which includes the items worrier, sensitive, timid, nervy, volatil-

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ity, and obsessive, in the Vulnerable Personality Style Questionnaire compared with women without postpartum depression [13,21]. However, there are no adequate published data regarding whether premorbid axis II disorders are predictors for the development of depression after childbirth. The aims of this study were to investigate the incidence rate of postpartum-onset major depression (PPMD) and to examine associated sociodemographic characteristics, obstetric factors, and particularly personality disorders.

2. Method

This study was carried out at the same time as the study of postpartum-onset obsessive-compulsive disorder [22] at the Faruk Sukan Child and Maternity Hospital, where approximately 75% of the annual deliveries in the Konya metropole, Turkey, occur. We contacted 580 childbearing women in this hospital on the first day of their childbirth between August 2005 and November 2005. The aims and procedures of the study were explained. One hundred twenty-seven women were unwilling to participate in the study. In addition, women with mental incompetence for psychiatric interview (n = 4), any current mood disorder (n = 27), history or presence of any psychotic disorder (n = 1), current clinical or subclinical obsessive-compulsive disorder (n = 15), serious health problems of her baby (n = 9), or history of neurological disorder (n = 1) were excluded from the study. A written voluntary informed consent form was obtained from all of the remaining 396 subjects. Ninety-four of these 396 participants refused the second interview without any reason. Thereby, the final study sample was composed of 302 women.

The first and the second interviews were performed on the first day of childbirth and 6 weeks after childbirth, respectively. Both interviews were conducted face-to-face by the same psychiatrists experienced in the Structured Clinical Interview for the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (SCID-I) and the Structured Clinical Interview for the *Diagnostic and Statistical Manual of Mental Disorders, Revised Third Edition* (SCID-II) and at the same hospital. In the first interview, all participants were screened in terms of previous and obsessive-compulsive disorder, mood and psychotic disorders by means of the SCID-I [23,24]. Furthermore, the sociodemographic characteristics and obstetrical history provided by the participants were included in the study. The participants were assessed with regard to axis II disorders by means of the SCID-II [25,26]. In the second interview, only major depression was screened by means of SCID-I.

All statistical analyses were carried out using the Statistical Package for the Social Sciences (SPSS), version 12.0 for Windows (SPSS, Chicago, IL). In comparisons between the groups with and without PPMD, t test was used for continuous variables, χ^2 test was used for 3 (or more) × 2 categorical variables, and Fisher exact test was used in 2 × 2 categorical variables. The predictors of PPMD were examined with logistic regression analyses. All statistical significance levels were accepted as $P < .05$ (2-tailed).

3. Results

Demographic features of the final sample are presented in Table 1. All of the participants were married. The frequency of primiparous women was 137 (45.4%). Others had 2 or more children. Seventy-six (25.2%) women had a history of abortion, and 62 (20.5%) women had a history of gestational complications during their last pregnancy. Sixty-three (20.9%) participants reported their pregnancy as unplanned. The type of delivery was surgical in 82 (27.2%) subjects. The childbirth was preterm in 28 (9.3%) women and postterm in 4 (1.3%) women. The percentage of breast-feeding mothers was 94.7%.

Of the 302 women, 39 (12.9%) had at least one axis II diagnosis. Avoidant personality disorder (6.0%) was the most common axis II diagnosis. Dependent (3.0%), obsessive-compulsive (3.3%), passive-aggressive (1.3%), histrionic (1.0%), and borderline (0.7%) personality disorders were less frequent. None of the women met the criteria for paranoid, schizotypal, schizoid, narcissistic, and antisocial personality disorders.

The frequency of new-onset major depression according to SCID-I was 19 (6.3%) during the postnatal 6 weeks. We found no significant association of postpartum major depression with age ($t = 0.571$, $P = .568$), educational level ($\chi^2 = 0.712$, $P = .701$), employment status (Fisher exact test, $P = .610$), planned or unplanned pregnancy (Fisher exact test, $P = .561$), history of abortion (Fisher exact test, $P = .000$) and gestational complications ($\chi^2 = 1.327$, $P = .857$), term of delivery ($\chi^2 = 2.470$, $P = .291$), type of delivery (Fisher exact test, $P = .605$), sex of the baby (Fisher exact test, $P = .344$), and mother's breast-feeding (Fisher exact test, $P = .266$). The rate of primiparity was significantly higher in women with PPMD compared with that in nondepressed women (73.7% vs 43.8%, Fisher exact test, $P = .016$). The incidence rate of postpartum major depression was 10.2% among primiparous women and 3.1% among multiparous women. In addition, avoidant, dependent, and obsessive-compulsive personality disorders were more frequent in women with PPMD compared with those in women without PPMD (Table 2).

Table 1
Demographic characteristics of the study sample

Age (y), mean ± SD	25.25 ± 4.88
Education, n (%)	
Primary school	224 (74.2)
Secondary school	69 (22.8)
University	9 (3.0)
Employment status, n (%)	
Employed	15 (5.0)
Housewife	287 (95.0)