

Sociodemographic Characteristics and Clinical Follow-Up Results of Pregnant Patients Hospitalized for Psychiatric Disorders

Feridun Bulbul¹,
Umit Sertan Copoglu²,
Bahadır Demir³, Mahmut Bulut⁴,
Gokay Alpak¹, Ahmet Unal¹,
Haluk Savas⁵

¹Assoc. Prof. Dr., ³Research Assistant,
⁵Prof. Dr., PhD, Gaziantep University,
Faculty of Medicine, Department of Psychiatry,
Gaziantep - Turkey

²Psychiatrist, Ceylanpinar State Hospital,
Psychiatry Clinic, Sanliurfa - Turkey

⁴Assoc. Prof. Dr., Dicle University, Faculty of Medicine,
Department of Psychiatry, Diyarbakir - Turkey

ABSTRACT

Sociodemographic characteristics and clinical follow-up results of pregnant patients hospitalized for psychiatric disorders

Objective: Important psychosocial changes occur in pregnancy. During pregnancy exacerbation of existing psychiatric symptoms may be seen or psychiatric symptoms may be experienced for the first time. In this study, clinical and sociodemographic data of pregnant patients, who were hospitalized in our clinic, their follow-up results and potential effects of psychiatric disorders on newborns and course of pregnancy were investigated.

Method: Clinical and sociodemographic data of 68 pregnant women, who were treated as in-patient for psychiatric disorders were analyzed retrospectively.

Results: Most of the psychiatric disorders were found to occur at 2nd trimester. While 23.5% of the patients (n=16) had a diagnosis of psychiatric disorder for the first time during their pregnancy, 76.5% of them (n=52) had already a psychiatric disorder prior to pregnancy. Preterm birth was not observed in any of the 47 patients, who had available information. Based on birth information gathered from 52 infants; there were no disease detected in 50 of them whereas congenital hip dislocation in one of them and temporary heart problem were detected in another.

Conclusion: Preterm birth was not associated with psychiatric treatment during pregnancy. Most of the psychiatric disorders were seen at 2nd trimester. Therefore follow-ups of pregnant patients should be held more carefully at 2nd trimester. And those who had a previous psychiatric treatment history should be monitored in terms of psychiatric disorders carefully during pregnancy.

Key words: Courses of treatment, follow-up, pregnancy, psychiatric disorders

ÖZET

Psikiyatrik hastalığı nedeniyle yatarak tedavi gören gebe hastaların klinik ve sosyodemografik özellikleri ve izlem sonuçları

Amaç: Gebelikte önemli psikososyal değişimler yaşanmaktadır. Gebelik döneminde, var olan psikiyatrik belirtiler alevlenebilmekte veya psikiyatrik belirtiler ilk kez ortaya çıkabilmektedir. Bu çalışmada, kliniğimizde yatarak tedavi edilen gebe hastaların klinik, sosyodemografik verileri, izlem sonuçları, psikiyatrik hastalıkların gebelik süreci ve bebekler üzerindeki olası etkileri incelenmiştir.

Yöntem: Gebelik ve eşzamanlı psikiyatrik hastalığı nedeniyle yatarak tedavi gören 68 hastanın klinik ve sosyodemografik verileri retrospektif olarak incelendi.

Bulgular: Gebelikte psikiyatrik açıdan en çok hastalanmanın 2. trimesterde olduğu saptandı. Hastaların %23.5'si (n=16) mevcut gebeliği esnasında ilk kez psikiyatrik tanı alırken, %76.5'inin (n=52) gebelik öncesinde de psikiyatrik hastalık tanısı vardı. Bilgisine ulaşılan 47 hastanın hiçbirinde erken doğum saptanmadı. Doğum bilgisine ulaşılan 52 bebekten 50'sinde doğum sonrasında herhangi bir hastalık saptanmadı. Hastalık bulunan 2 bebekten birinde doğumsal kalça çıkığı, diğerinde de geçici kalp sorunu saptandı.

Sonuç: Gebelikte psikiyatrik tedavi görüyor olmak erken doğum riski ile ilişkilendirilmemiştir. Gebelikte meydana gelen psikiyatrik hastalıklar en çok 2. trimesterde gözlenmiştir. Bu nedenle gebe hasta takiplerinde 2. trimesterde dikkatli olunmalıdır. Daha önce psikiyatrik tedavi gören gebeler, psikiyatrik hastalık açısından gebelik döneminde dikkatli bir şekilde takip edilmelidir.

Anahtar kelimeler: Tedavi süreçleri, takip, gebelik, psikiyatrik hastalıklar



Address reprint requests to / Yazışma adresi:

Assoc. Prof. Dr. Feridun Bulbul,
Gaziantep University, Faculty of Medicine,
Department of Psychiatry, Sehitkamil
Gaziantep - Turkey

Phone / Telefon: +90-342-360-6060/76362

E-mail address / Elektronik posta adresi:
frdnblbl@yahoo.com

Date of receipt / Geliş tarihi:
March 7, 2013 / 7 Mart 2013

Date of acceptance / Kabul tarihi:
April 3, 2013 / 3 Nisan 2013

INTRODUCTION

Pregnancy is a period in which there are important biological and psychosocial changes in woman's life and where the risk for experiencing many factors that can create anxiety and stress is high (1). During pregnancy, while exacerbation in existing psychiatric symptoms can be seen, psychiatric symptoms encountered for the first time may also occur (2).

In studies conducted in our country, prevalence of depressive symptoms during pregnancy was reported to be between 27.3% and 36.3% (3). While 10% of the pregnant women met criteria for unipolar depression, increased depressive symptoms were seen in 18% (4). However, in pregnancy and postpartum period, only 18% of women, who meet the criteria for unipolar depression is admitted for treatment (4). Clinically significant anxiety disorders have been identified in 60% of women in prenatal period and in 70% of women in postnatal period (5).

During pregnancy, prevalence of bipolar disorder and psychotic disorders are not known exactly (6). In prospective studies which female patients with bipolar disorder were followed throughout their pregnancy, it has been shown that 70% of these women have at least one mood episode and ratio of having new episode raised to %85-100 in women who stopped taking their mood-stabilizers (7). Nearly half of pregnancies in patients with schizophrenia are unwanted and unplanned and discontinuation of medicaments also increases the risk of relapse (8).

Psychiatric disorders that are not treated adequately in pregnancy period lead to maternal malnutrition, decreased prenatal medical care, smoking, alcohol and other substance abuse, self-destructive behaviors and increase in obstetric complications (9,10). In fetal period, this situation may cause baby's exposure to the harmful effects of the disorders and in postpartum period it may cause some unwanted short and long term consequences by effecting the interaction and binding between mother and baby (9,10).

In this study, clinical and sociodemographic data of pregnant patients, who were hospitalized in our clinic between 2004-2012, their follow-up results and

potential effects of psychiatric disorders on newborns and course of pregnancy were investigated.

METHOD

In this study, clinical and sociodemographic data of 68 pregnant women, who were treated as in-patient for a psychiatric disorder in the Department of Psychiatry of Gaziantep University Faculty of Medicine between 2004-2012 were analyzed retrospectively. Sociodemographic data, complaints, personal and family history characteristics, mental status examination, Axis I diagnoses according to the DSM-IV-TR criteria, applied scales and laboratory information of patients were obtained from the archived files in the clinic and the hospital. Information of patients such as duration of birth, mode of delivery and the baby's health condition was recorded via phone calls. The study was approved by the Medical Ethics Committee of Gaziantep University Faculty of Medicine. Data were analyzed with SPSS 18.0 software, descriptive analysis was performed and results were expressed as percentages.

RESULTS

Of the 68 patients enrolled in the study, 43 patients (63.3%) had unipolar depression, 20 patients (29.4%) had bipolar disorder, 3 patients (4.4%) had obsessive-compulsive disorder (OCD) and 2 patients (2.9%) had schizophrenia. The mean age of the patients was 29.6 ± 5.1 (range between 18 and 43). While 23.5% of the patients (n=16) had a diagnosis of psychiatric disorder for the first time during their pregnancy, 76.5% of them (n=52) had already a psychiatric disorder prior to pregnancy. Electroconvulsive therapy (ECT) was used alone in 33.8% of the patients (n=23); 36.8% of the patients (n=25) were given only drug treatment and 29.4% (n=20) of the patients were treated both with the medication and ECT. Some of the socio-demographic and clinical data of the patients are shown in Table 1.

37.2% of the patients (n=16) with unipolar depression were treated with ECT alone, 39.5% of the patients (n=17) were only treated with drugs and in 23.2% (n=10) of the patients ECT and drug therapy

Table 1: Sociodemographic and clinical characteristics of patients

	UD (n=43)		BD (n=20)		SCH (n=2)		OCD (n=2)	
Total duration of disease (Years, mean±SD)	3.3±2.2		4.4±3.6		3.0±1.4		2.6±1.5	
	n	%	n	%	n		n	%
History of psychiatric disease								
Yes	33	76.7	14	70.0	2	100	3	100
No	10	23.3	6	30.0	--	--	--	--
Type of treatment								
ECT only	16	37.2	6	30.0	1	50	--	--
ECT and drug	10	23.2	9	45.0	1	50	--	--
Drug only	17	39.5	5	25.0	--	--	3	100
Comorbid Psychiatric Disorder								
Generalized Anxiety Disorder	5	11.6	1	5.0	--	--	--	--
Panic Disorder	5	11.6	--	--	--	--	--	--
OCD	4	9.3	--	--	--	--	--	--
Conversion disorder	1	2.3	--	--	--	--	--	--
Trimester disorder started								
1st Trimester	17	39.5	5	25.0	1	50	1	25.0
2nd Trimester	22	51.1	9	45.0	--	--	2	75.0
3rd Trimester	4	9.3	6	30.0	1	50	--	--
Time of birth								
37 Weeks	1	2.3	--	--	--	--	--	--
38 Weeks	13	30.2	2	10.0	--	--	1	33.3
39 Weeks	11	25.6	11	55.5	2	100	1	33.3
40 Weeks	1	2.3	3	15.0	--	--	1	33.3
Type of delivery								
Normal vaginal	18	41.9	7	35.0	1	50	2	66.7
Vaginal with intervention	1	2.3	--	--	--	--	--	--
C/S	10	23.3	7	35.0	1	50	--	--
Disease of baby								
Yes	--	--	1	5.0	--	--	1	33.3
No	30	69.8	16	70.0	2	100.0	2	66.7

UD: Unipolar Depression, BD: Bipolar Disorder, SCH: Schizophrenia, OCD: Obsessive Compulsive Disorder

were administered together. Preterm birth was not detected in 26 women, whose birth information were accessed. While there were not any medical problems in 30 infants, whose postpartum information were available, 13 infants' postpartum period information were not obtained. Given the clinical global impression-severity (CGI-S) score of ≤ 2 and the Hamilton Depression Scale (Ham-D) score < 7 is considered to be complete treatment response, 93% of patients with unipolar depression in our study have fully benefited from treatments applied. The reason for the high treatment response in patients with unipolar depression may be that 60.5% of them were treated with ECT alone or ECT and medication together.

Of the patients treated with a diagnosis of bipolar disorder, 10 (50%) were in manic episode, 5 (25%) were in depressive episode and 5 (25%) were in mixed episode. While recurrence was seen in 14 patients (70%), 6 of them (30%) were diagnosed for the first time. 30% of patients (n=6) were treated only with ECT, 45% (n=9) were treated with ECT and drug treatment and 25% (n=5) were treated with drugs alone. Treatment with mood stabilizers had been discontinued due to pregnancy. While there was not any medical problem in 16 of 17 infants whose postpartum information is available, a cardiac disease was detected in an infant who has healed with treatment for 3 months. Postpartum information of 3 infants was not available. 70% of

Table 2: Pre and Post-treatment Scale Scores

	UD	BD	SCH	OCD
CGI-S-PRE	5.9±0.7	6.15±0.6	6.0±0	6.3±0.6
CGI-S-POST	1.5±0.6	2.1±1.0	2.0±0	4.3±0.6
	Ham-D	YMRS	PANNS	YBOCS
TEST-PRE	29.4±3.9	30.1±8	89.5±2.1	36.7±3
TEST-POST	5.2±3.4	6.0±3.6	36.4±3.7	25.7±4

UD: Unipolar Depression, BD: Bipolar Disorder, SCH: Schizophrenia, OCD: Obsessive Compulsive Disorder, CGI-S: Clinical Global Impression Scale-Severity, Ham-D: Hamilton Depression Inventory, YMRS: Young Mania Rating Scale, PANSS: Positive and Negative Syndromes Scales, YBOCS: Yale-Brown Obsession and Compulsion Scale

patients with bipolar disorder have benefited from treatments applied.

One of the patients with schizophrenia was treated with ECT alone whereas the other was treated with ECT and drug together. There were not any medical problems in both of the infants whose postpartum information were available.

However, patients with OCD have benefited partially. While there was not any medical problem in 2 of 3 infants, congenital hip dislocation were identified in one of them.

Test values of the scales administered to patients before and after treatment were demonstrated in Table 2. Of the patients with unipolar depression, 9 of them were given sertraline, 6 of them were given fluoxetine, 2 of them were given escitalopram, 1 of them was given paroxetine, 4 of them were given clonazepam and 1 of them was given lorazepam treatment during pregnancy. Of the patients with bipolar disorder, 4 of them were given amisulpride, 3 of them were given olanzapine, 2 of them were given haloperidol, 1 of them was given risperidone and 3 of them were given clonazepam treatment. Among the schizophrenia patients, one of them was given amisulpride. 2 of the patients with OCD were given fluoxetine and 1 of them was given citalopram.

DISCUSSION

In a naturalistic prospective study, which investigated women with unipolar depressive disorder who became pregnant in euthymic period, it has been shown that unipolar depression relapsed in 43% of patients during pregnancy (11). In our study, the diagnosis of unipolar

depression was present before pregnancy in 76.7% of patients, who also had the diagnosis of unipolar depression during pregnancy. 23.3% of patients with unipolar depression have got the diagnosis for the first time.

In a study which compared the course of bipolar disorder in patients whom had given up taking mood stabilizers early in pregnancy or before pregnancy with those who continued taking their treatment, the risk of recurrence was found to be 71% throughout pregnancy period (12). In our study, 70% of patients with bipolar disorder had psychiatric diagnosis before pregnancy.

Although there is limited data on schizophrenia during pregnancy, it has been reported that patients, who stopped treatment have 2-3 fold increased risk of becoming ill compared to the patients, who continued their treatment (8). In a study which OCD patients were examined during pregnancy, it has been shown that 34.1% of patients had exacerbation and 22% of them had improvement of OCD symptoms and as a result of this study, it has been reported that the pregnancy is associated with the beginning and/or exacerbation of OCD (13). In our study, it may not be appropriate to comment due to the small number of patients with schizophrenia and OCD.

When the trimesters in which the illness has begun were examined in our study, it was identified that the most of the patients with unipolar depression (51.1%) had become ill in the second trimester. However, in a study which evaluates the relapse rates and trimesters of women with depression during pregnancy, it has been shown that depression relapses mostly in the first trimester (51.2%) (11). In contrast to this study, our study demonstrated that risk of becoming ill was the

highest in second trimester. This may be due to most of our patients have unplanned pregnancies and in accordance with this that they might not have any preperation period. Thus the drugs have been used until pregnancy and they stop using their medication as they learned they were pregnant. This may shift the onset of disorder to the second trimester.

In another study, it has been reported that most of relapses of bipolar disorder were in the first trimester during pregnancy (47.2%) (12). In our study, we detected that the most of the patients with bipolar disorder (45%) had become ill in the second trimester. This data do not support our study completely and our data shows that the second trimester has a higher risk for recurrence of bipolar disorder.

According to data in our study, manic episodes are more commonly seen than depressive or mixed episodes whether as a first episode or recurrence in bipolar disorder. Although there are not sufficient data for the episode subtypes of bipolar disorder during pregnancy, Viguera et al. (12) showed in a study that 74% of patients who relapsed during pregnancy had had depression or mixed episodes. On the contrary, our study showed that there were more manic episodes. Difference from the current literature may stem from the insufficient number of patients with bipolar disorder in our study.

Given complete response to treatment is considered to be CGI-S ≤ 2 after treatment, complete treatment response were obtained in the 89.4% of patients who received ECT. This ratio was 72% in those who did not receive ECT. This shows that ECT was more effective than pharmacological treatment in pregnancy.

In a review of studies published between 1942 and 1991, 300 patients, who underwent ECT during pregnancy were examined in terms of maternal and fetal complications and there were complications associated with ECT in 28 of these 300 cases (14). These complications have been reported to be temporary and benign fetal arrhythmias, light vaginal bleeding,

abdominal pain and self-limiting uterine contractions (15). In our study, three patients were identified to have temporary uterine contractions. Given the available data in the literature, it has been remarked that ECT was an effective treatment for severe mental disorders during pregnancy and has low risk for the mother and the baby (14). Data of our study show that psychiatric patients could be treated safely and effectively with ECT during pregnancy.

In patients under treatment with SSRIs, SNRIs and/or benzodiazepines during pregnancy, preterm birth rate has been found to be significantly increased (16). In our study, none of 47 patients, whose birth information was available had a preterm birth. Our study was not compatible with the current literature.

Atypical antipsychotics are more frequently used in the treatment of both schizophrenia and bipolar disorder (17,18). Although in two studies which are prospective and retrospective, there were congenital defects caused by atypical antipsychotics in level of case reports, these cases had not directly been associated with the use of atypical antipsychotics (18-20). In our study, of 11 patients on antipsychotic treatment 9 were using atypical antipsychotics during pregnancy. No pathology was detected in infants of these patients.

The strength of our study comes from that it determined the trimester at which the psychiatric disorders are mostly seen, demonstrated that preterm birth is not associated with psychiatric treatment and it is the most extensive series of pregnant patients with psychiatric disorders in Turkey. Unavailability of some patients' information and insufficient number of patients may be accounted for the limitations of our study.

Having a psychiatric disorder during pregnancy was found to be highest in the second trimester. Premature birth was not detected in any patients, whose birth information was available and it has been shown that the most important risk factor for psychiatric disorders in pregnancy was the history of having a prior psychiatric disorder.

REFERENCES

1. Da Costa D, Larouche J, Dritsa M, Brender W. Variations in stress levels over the course of pregnancy: factors associated with elevated hassles, state anxiety and pregnancy-specific stress. *J Psychosom Res* 1999; 47:609-621.
2. Saracli O, Atasoy N, Kardes VC, Karaahmet E, Atik L. The clinical, sociodemographic features and follow-up outcomes of the pregnant women treated in the psychiatry clinic of a university hospital. *Current Psychiatry and Psychopharmacology* 2011; 1:22-29. (Turkish)
3. Calik KY, Aktas S. Depression in pregnancy: prevalence, risk factors and treatment. *Current Approaches in Psychiatry* 2011; 3:142-162.
4. Marcus SM. Depression during pregnancy: rates, risks and consequences--Motherisk Update 2008. *Can J Clin Pharmacol* 2009; 16:15-22.
5. Brockington IF, Macdonald E, Wainscott G. Anxiety, obsessions and morbid preoccupations in pregnancy and the puerperium. *Arch Womens Ment Health* 2006; 9:253-263.
6. Gold KJ, Marcus SM. Effect of maternal mental illness on pregnancy outcomes. *Expert Rev Obstet Gynecol* 2008; 3:391-401.
7. Marsh W, Viguera A. Bipolar disorder through pregnancy and postpartum. *Psychiatr Ann* 2012; 42:184-189.
8. Robinson GE. Treatment of schizophrenia in pregnancy and postpartum. *J Popul Ther Clin Pharmacol* 2012; 19:380-386.
9. Misri S, Kendrick K. Treatment of perinatal mood and anxiety disorders: a review. *Can J Psychiatry* 2007; 52:489-498.
10. Pearlstein T. Perinatal depression: treatment options and dilemmas. *J Psychiatry Neurosci* 2008; 33:302-318.
11. Cohen LS, Altshuler LL, Harlow BL, Nonacs R, Newport DJ, Viguera AC, Suri R, Burt VK, Hendrick V, Reminick AM. Relapse of major depression during pregnancy in women who maintain or discontinue antidepressant treatment. *JAMA* 2006; 295:499-507.
12. Viguera AC, Whitfield T, Baldessarini RJ, Newport DJ, Stowe Z, Reminick A, Zurick A, Cohen LS. Risk of recurrence in women with bipolar disorder during pregnancy: prospective study of mood stabilizer discontinuation. *Am J Psychiatry* 2007; 164:1817-1824.
13. Forray A, Focseneanu M, Pittman B, McDougale CJ, Epperson CN. Onset and exacerbation of obsessive-compulsive disorder in pregnancy and the postpartum period. *J Clin Psychiatry* 2010; 71:1061-1068.
14. Anderson EL, Reti IM. ECT in pregnancy: a review of the literature from 1941 to 2007. *Psychosom Med* 2009; 7:235-242.
15. Miller LJ. Use of electroconvulsive therapy during pregnancy. *Hosp Community Psychiatry* 1994; 45:444-450.
16. Lennestål R, Kallen B. Delivery outcome in relation to maternal use of some recently introduced antidepressants. *J Clin Psychopharmacol* 2007; 27:607-613.
17. Ebrinc S, Cetin M, Oner O. Atypical antipsychotics in treatment of bipolar disorders in special populations. *Bulletin of Clinical Psychopharmacology* 2004; 14:236-250. (Turkish)
18. Cetin M. Psychotropic drug use in pregnancy: an update. *Bulletin of Clinical Psychopharmacology* 2011; 21:161-173. (Turkish)
19. Reis M, Kallen B. Maternal use of antipsychotics in early pregnancy and delivery outcome. *J Clin Psychopharmacol* 2008; 28:279-288.
20. McKenna K, Koren G, Tetelbaum M, Wilton L, Shakir S, Diav-Citrin O, Levinson A, Zipursky RB, Einarson A. Pregnancy outcome of women using atypical antipsychotic drugs: a prospective comparative study. *J Clin Psychiatry* 2005; 66:444-449.