THE INFLUENCE OF CONSTELLATION FACTORS IN WOMEN WHO HAVE JUST GIVEN BIRTH ON THE OCCURRENCE AND CHARACTERISTICS OF POSTPARTUM DEPRESSION

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Postpartum depression presents a significant problem for public health care, and the frequency of occurrence is 10-15% in women who have given birth. There are still no unified attitudes on the definition and classification of this disturbance as an individual entity.

The aim of this study was to research the influence of constellation factors in women who have just given birth on the occurrence of postpartum depression and to determine the association of individual factors with seriousness of depression calculated by the Edinburgh Postnatal Depression Scale.

The research presents a prospective study that included 63 persons from Nis and the surrounding, which gave birth at the Gynecology-Obstetrics Clinic of the Clinical Center Nis. The study was conducted in the period from June 2006 - June 2007.

The results have shown that the constellation factors in women who have just given birth do not have any influence on the occurrence and characteristics of postpartum depression. *Acta Medica Medianae 2007;46(4):44-47.*

Key words: postpartum depression, constellation factors, characteristics of women who have just given birth

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Introduction

According to the definition of the fourth edition of Diagnostic and Statistical Manual of Mental Disorders (DSM–IV), postpartum depression includes every non-psychotic depressive disturbance during the first four weeks of postpartum, and according to the research criteria during the first year after giving birth. The disturbance can begin during pregnancy period as well. The existence of antepartal depression is almost a positive prognosis sing for the occurrence of postpartum depression (1).

No matter of the bigger publicity that has been attached to it recently, postpartum depression is still a disturbance that is often not recognized and without enough attention in modern medical literature and clinical practice (2). Numerous researches point to the frequency and seriousness of this disturbance that presents the risk factor for both mother and child, especially in terms of increased morbidity and mortality of new borns and which require medical intervention (3). It is estimated that per every 1000 deliveries, 100-150 mothers (10-15%) develop the symptoms of depression (4). On average, less than 25% of depressed mothers in postpartal period seek professional help, which is caused by culture differences (5).

Early identification of postpartum depression can be the first step in preventing family morbidity and mortality. This early identification requires basic information share and the competence of doctors and associates to who psychiatric disturbances are not the primary field of clinical work. As an efficient and sensitive screening instrument for the identification of postpartum depression, we can use the Edinburgh Postnatal Depression Scale (EPDS) (6). It should be known that EPDS is a supportive diagnostics instrument, which helps, but does not replace the clinical observation necessary for mking the diagnosis of postpartum depression.

Aims

Research of the influence of constellation factors in women who have just given birth on the occurrence of postpartum depression and determining on the relation of individual factors to the seriousness of the depression calculated by the Edinburgh Postnatal Depression Scale.

Material and methods

The research presents a prospective study that included 63 persons from Nis and the area, which gave birth at the Gynecology-Obstetrics Clinic of the Clinical Center Nis. The study was conducted in the period from June 2006- June 2007. All the persons studied were processed in terms of history of illnesses by the research protocol in order to determine the constellation factors of a mother. The presence of postpartum depression and determination of its seriousness was done by the Edinburgh Postnatal Depression Scale at the Clinic for Mental Health Protection and Neuropsychiatry, Clinical Center Nis. All the persons studied were divided into two groups:

I group- 30 women who have just given birth with postpartum depression diagnosis;

II control group- 33 healthy women who have just given birth.

Of the general characteristics we analyzed: age, height, weight before pregnancy and weight after delivery.

Of the constellation factors of women who have just given birth we analyzed: previous sterility treatment, the way of conception (natural, artificial), risky pregnancy, the way of delivery (natural-partus or operational- sectio cesare), the difficulty of delivery (easy, medium, and difficult), transfusion and the date of delivery.

The data were processed using standard descriptive statistical methods (average value, standard deviation and percentage of occurrence). The results were analyzed by use of adequate tests, depending on the group size, type of trait and distribution. Statistical processing was done inside and among the defined groups.

During the work, a number of tests were used:

-Student's t test for pared and non-pared samples,

-χ^2 test

-Fisher test of exact possibility

-Pearson's ratio of linear co-relation

-Model of binary logistic regression

Statistical processing was done in programmes Excel 7.0 and SPSS 11.0 in Windows 98 surrounding, and the results were presented in tables and graphs.

Results

General characteristics of the examinees are shown in Table 1.

Average age of women studied was 27,67±4,8 years with no significant differences in the age between the studied groups. The weight after the delivery and height were similar in both studied groups. The women who developed post-partum depression were significantly less in weight before pregnancy compared to healthy women who have just given birth (p<0.05) (Table 1).

All the women studied had natural conception and none of them was treated against sterility. The percentage of risky pregnancies was somewhat larger with the healthy women who have just given birth, but the Fisher's test of

exact probability was done, and it did not show any significance of this difference (Table 2).

Table 1. General characteristics of studied women

	Postpartum depression	Healthy women who have just given birth	Total
Number(n %)	30 47,6	33 52,4	63 100
Age t	27.5±3.66	27.81±5.3	27.67±4.8
Height	169±5.85	167.6±6.98	168.02±6.68
Weight before pregnancy	62.5±6.55	**69.1±11.8**	67.38±10.88
Weight after pregnancy	56.2±4.64	59.1±9.63	58.33±8.53

*p<0.05

Table 2. Constellation factors of women who have just given birth

	Sterility treatment	Natural conception	Risky pregnancy
Postpartum depression	0%	100%	7,6%
Healthy women who have just given birth	0%	100%	15,1%
Total	0%	100%	13,02%

NS for all the parameters

Table 3. Constellation factors of women who have just given birth

	The difficulty of delivery			The way of delivery	
	easy	medium	difficult	partus	sectio cesare
Postpartum depression	19	9	2	21	9
Healthy women who have just given birth	20	10	3	22	11
Total	39	19	5	43	20

NS for all the parameters

Of studied constellation factors, Fisher's test did not show significant difference in the way of delivery between the two groups studied. The frequency of easy, medium, and difficult deliveries was approximately the same with the groups studied, where the Fisher's test did not show any significant difference in the distribution (Table 3).

Table 4. Constellation factors of women who have just given birth

	Transfusion	The date of delivery	
		spring-summer	autumn-winter
Postpartum depression	0%	14	16
Healthy women who have just given birth	0%	15	18
Total	0%	29	34

NS for all the parameters

There was no registered need for the transfusion with the studied women who have just given birth during or after the delivery, while the frequency of deliveries in the period spring-summer and autumn-winter was approximately the same, without any significant statistical differences among the groups (Table 4).

The significance of all studied constellation factors of the mother for the occurrence of postpartal depression was determined by using binary logistic regression model, and the results are shown in Figure 1.
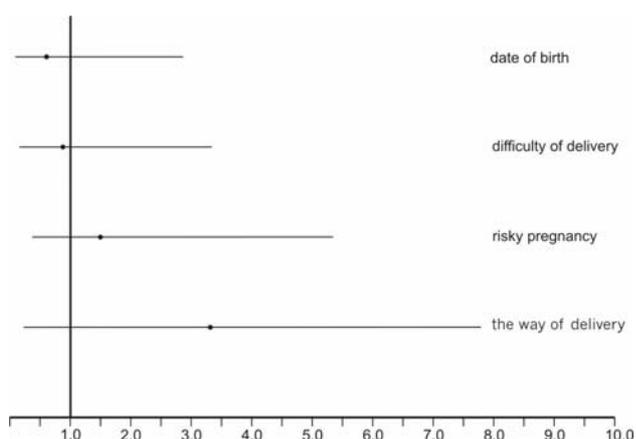

Figure 1. The significance of studied constellation factors of the mother for the occurrence of postpartal depression

Group significance of the model was Cox&Snell R2=0.25. Conveyed binary logistic regression did not show independent prediction significance of either of factors mentioned. (Figure 1).

The significance of general characteristics of women who have just given birth for the occurence of postpartum depression was determined using binary logistic regression model, with the results shown in Figure 2.
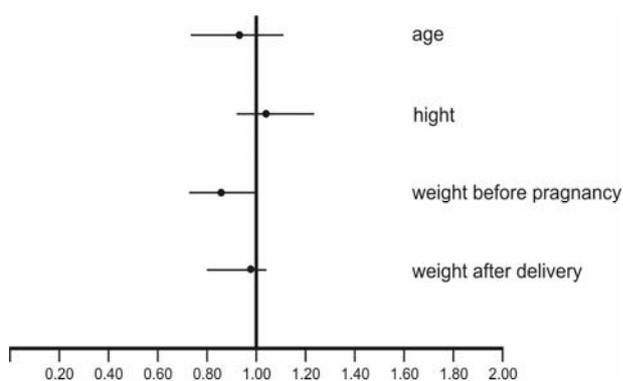

Figure 2. The significance of general characteristics of women who have just given birth for the occurence of postpartal depression

Group significance of the model was Cox&Snell R2=0.15. The conveyed binary logistic regression did not show independent predictive significance of either of the factors mentioned, except the insignificant influence of greater weight before pregency as a protective factor for the occurence of postpartal depression (Figure 2).

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Discussion

The exact cause of postpartum depression is unknown and is still being debated upon among scientists. However, there are many factors that increase the risk of incurring this disturbance (7).

So far, the researches have shown that depressed patients especially have higher frequency of stressful life experience compared to general population (8). In our case, sterility treatment, artificial insemination, risky pregnancy could be included in the group of life stressful events that significantly influence the quality of mental life and emotional vulnerability of a mother consequently causing the development of this disturbance.

Constellation factors of women who have just given birth (sterility treatment, the way of conception, risky pregnancy, the way of delivery, the difficulty of delivery, transfusion, and the term of delivery) in our research were not significantly related to the occurrence and characteristics of postpartum depression. However, some authors have found a relation between constellation factors and this disturbance which does not match with our results. They point to the relation of the obstetrics complication (way of delivery- an urgent caesarean section, the difficulty of delivery-traumatic and difficult delivery) to the occurrence of postpartum depression (7,9,10). It has been shown that obstetric complications can be of significance in the increased frequency of the disturbance i women with the history of depressive disturbance (11). The frequency of risky pregnancies in this paper is in line with results of other centers (12). Risky pregnancy which was registered in 13% of pregnant women is in accordance with the rate characteristic for the Nis area for a long period of time (13).

It has to be pointed out that of general characteristics of women studied included in this study, their weight before pregnancy presents a risk factor for the development of postpartum depression. The results show that the women with significantly smaller weight before pregnancy compared to healthy women who have just given birth, have developed the symptoms of the depression after the delivery.

The relations that this research has studied are not causative. It is the matter of determining general relations between depression as dependant variable and constellation factors as independent variable.

Conclusion

According to the results obtained of the prospective study, it can be concluded that:

• constellation factors have no influence on the occurrence of postpartal depression

• small weight before pregnancy presents a risk factor for the occurrence of postpartal depression.

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UTICAJ KONSTELATIVNIH FAKTORA PORODILJE NA POJAVU I KARAKTERISTIKE POSTPARTALNE DEPRESIJE

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Postpartalna depresija predstavlja značajan javnozdravstveni problem, a učestalost javljanja iznosi 10-15% žena koje su rodile. Još uvek ne postoje ujednačeni stavovi u pogledu definicije i klasifikacije ovog poremećaja kao zasebnog entiteta.

Cil ovog rada bio je da se ispita uticaj konstelativnih faktora porodilje na pojavu postpartalne depresije i određivanje povezanosti pojedinih faktora sa težinom depresije izračunate Edinburškom skalom postnatalne depresivnosti (EPDS).

Istraživanje predstavlja prospektivnu studiju koja je obuhvatila 46 ispitanica iz Niša i okoline, koje su se porodile u Ginekološko akušerskoj klinici Kliničkog centra u Nišu. Studija je sprovedena u periodu jun 2006 - jun 2007. godine.

Rezultati ukazuju da konstelativni faktori porodilje nemaju uticaja na pojavu i karakteristike postpartalne depresije. *Acta Medica Medianae 2007;46(4):44-47.*

Ključne reči: *postpartalna depresija, konstelativni faktori, karakteristike porodilje*