International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Foumane P et al. Int J Reprod Contracept Obstet Gynecol. 2016 Dec;5(12):4424-4427
www.ijrcog.org

pISSN 2320-1770 | eISSN 2320-1789

DOI: http://dx.doi.org/10.18203/2320-1770.ijrcog20164357

Original Research Article

Risk factors of maternity blues after caesarean section in Yaoundé, Cameroon: a case-control analysis

Pascal Foumane[1], Jean Pierre Kamga Olen[2], Jeanne Hortense Fouedjio[1], Georges Pius Kamsu Moyo[1], Christiane Nsahlai[1], Emile Mboudou[1]

[1]Department of Obstetrics and Gynecology, Faculty of Medicine and Biomedical Sciences (FMBS), The University of Yaoundé 1, Cameroon
[2]Department of Internal Medicine, Faculty of Medicine and Biomedical Sciences (FMBS), The University of Yaoundé 1, Cameroon

Received: 10 October 2016
Revised: 12 October 2016
Accepted: 03 November 2016

***Correspondence:**
Dr. Pascal Foumane,
E-mail: pfoumane2004@yahoo.fr

ABSTRACT

Background: Maternity blues is the most precocious and common mental derangement of the puerperium. Our objective was to identify its risk factors in women delivered by cesarean section.
Methods: This was a case-control study carried out from January 10th to April 10th 2015 in two referral hospitals of Yaoundé, Cameroon, involving 321 women delivered by cesarean section, 107 of which presented maternity blues.
Results: After multivariate analysis, independent risk factors for maternity blues after cesarean section were: low socio-economic level (OR=3.62; CI=1.35-9.70), personal history of depression (OR=4.36; CI=1.13-16.81), difficulties caring for the baby (OR=3.40; CI=1.12-10.27) and having felt depressed or anxious during pregnancy (OR=6.61; CI=3.05-14.31).
Conclusions: Women with identifiable risk factors for maternity blues should be followed up closely after cesarean deliveries.

Keywords: Cameroon, Depression, Maternity blues, Postpartum, Risk factors

INTRODUCTION

Maternity blues occurs in 50% of women during the postpartum, a period of emotional and psychological upset in a woman's life.[1-4,6] This is a well-documented risk factor for postpartum depression. It has been shown that maternity blues multiply by 5 the risk of developing postpartum depression and an abnormal maternity blues scale has been reported to be a strong predictor of postpartum depression.[5,8,10,12] To date and according to the literature available, maternity blues is sparsely reported in sub-Saharan Africa. The objective of this study was therefore to identify the risk factors of maternity blues in a sub-Sahara African setting.

METHODS

This was a case-control study involving 321 women who underwent a cesarean delivery, among which 107 presented maternity blues within the first ten post-operative days (case group) and 214 who did not (control group). The study was carried out from January 10th to April 10th 2015 in two referral hospitals of Yaoundé, Cameroon. The hospitals where the patients were enrolled included the Yaoundé Gynaeco-Obstetric and Pediatric Hospital and the Yaoundé Central Hospital. After approval of the protocol by the ethical committee, women who delivered by cesarean section at 28 weeks or more of pregnancy were recruited. Each woman was counseled about the study and her consent was obtained prior to recruitment. A pretested questionnaire was

administered by an investigator and information was retrieved from the patients' files. Data collected included: socio-demographic characteristics, obstetrical history, personal and family history, couple relationship, social support, stressful environmental factors, conception context, course of the pregnancy, new-born parameters and the Kennerley and Gath maternity blues questionnaire. The Kennerley and Gath blues questionnaire is a validated self rating scale consisting of 28 items concerning the emotional state of a newly delivered woman. The available answers are "yes" or "no" corresponding respectively to the marks of 1 and 0, with a maximum possible score of 28 and a minimum of 0. This score served as a diagnostic and explorative tool. Women who had an overall score greater than the mean peak score of the sample were considered positive for the condition.[5]

The calculated minimal sample size was 41 cases for 82 controls based on the 31.3% maternity blues rate among Nigerian postpartum women reported by Adewuya and using the formula proposed by Schlesselman, with a standardized power of 84%. Statistical analyses were done using CSPro version 4.1 and SPSS version 22.0 software.[1,7] The difference was statistically significant for P-value<0.05. The Pearson's Chi square and the Fisher's exact test were used to compare proportions. Odds ratio (OR) and its 95% Confidence Interval (CI) were calculated to assess the association between the variables and maternity blues. Multivariate analysis was performed to identify independent risk factors.

RESULTS

One hundred and seven women who experienced maternity blues (case group) according to Kennerley and Gath score were recruited and compared to 214 women without maternity blues (control group).

The most common symptoms in women affected with maternity blues after caesarean section were (Table 1): being tearful (91/107; 85.0%), mood swings (89/107; 83.2%), changeable in mood (84/107; 78.5%), being mentally tense (70/107; 65.4%), feeling depressed (69/107; 64.5%) or anxious (65/107; 60.7%).

A comparison of the variables between the two groups at bivariate analysis found 45 significant variables (Table 1) related to low socio-economic level, poor relationship in the couple, poor social support system (partner, family or friends), personal history of psychiatric illness or chronic disease, family history of psychiatric illness, the course of pregnancy (unplanned, depression, anxiety or physical illness) and parameters linked to the newborn health or wellbeing.

Independent risk factors of maternity blues after cesarean section following multivariate analysis were (table 3): low socio-economic level (OR=3.62; CI=1.35-9.70), personal history of depression (OR=4.36; CI=1.13-16.81), having difficulties caring for the baby (OR=3.40; CI=1.12-10.27) and having felt depressed or anxious during pregnancy (OR=6.61; CI=3.05-14.31).

Table 1: Clinical characteristics of maternity blues in the case group (n=107).

Symptoms	n (%)
Tearful	91 (85.0)
Mood swings	89 (83.2)
Changeable in mood	84 (78.5)
Mentally tense	70 (65.4)
Feeling depressed	69 (64.5)
Anxious	65 (60.7)
Overemotional	60 (56.1)
Low spirited	51 (47.7)
Crying, unable to stop	46 (43.3)
Concentrating poorly	45 (42.1)
Oversentive	42 (39.3)
Tired	41 (38.3)
Helpless	41 (38.3)
Emotionally reserved	38 (35.5)
Happy	37 (34.6)
Brooding	34 (31.8)
Forgetful/muddled thinking	33 (30.8)
Confident	33 (30.8)
Lively	33 (30.8)
Socially withdrawn	32 (29.9)
Self -pitying	31 (29.0)
Alert	31 (29.0)
Restless	30 (28.0)
Calm, tranquil	26 (24.3)
Mentally relaxed	25 (23.4)
Elated	21 (19.6)
Irritable	18 (16.8)
Emotionally numb, without feelings	16 (15.0)

DISCUSSION

Low socio-economic level is identified as an independent risk factor for maternity blues in this study. Although an association was not found between socio-economic level and maternity blues in Poland or Nigeria, Masmoudi et al. have identified low socio-economic level as a risk factor for maternity blues as well as post-partum depression in Tunisian women.[7,9,13] In fact, low socio-economic level could influence social support and care of the baby, which are known risk factors for sad mood in the postpartum period.[9,13]

A personal history of depression is also significantly and independently associated with maternity blues after cesarean section. This is a commonly reported finding , as physiological hormone variations following parturition are known to imbalance previous fixed psychiatric conditions.[3,9,11]

Table 2: Significant variables found between the group with maternity blues (n=107) and the group without maternity blues (n=214) at bivariate analysis.

Variables	Cases n (%)	Controls n (%)	Odds ratio (95% CI*)	P
Low socio-economic level	37 (34.6)	49 (22.9)	1.78 [1.04-3.05]	0,026
The couple relationship				
No satisfaction	45 (42.1)	43 (20.1)	2.88 [1.7-4.9]	<0.001
Trouble or conflict	36 (33.6)	34 (15.9	2,68 [1.56-4.62]	<0.001
Having problems	41 (38.3)	30 (14.0)	3.81 [2.2-6.59]	<0.001
The partner				
No adequate emotional support	33 (30.8)	25 (11.7)	3.37 [1.88-5.87]	<0.001
No adequate financial support	34 (31,8)	23 (10,7)	3.87 [2.16-6.9]	<0.001
Can't trust the partner	36 (33.6)	26 (12.1)	3.6 [2.03-6.33]	<0.001
The family				
No adequate emotional support	16 (15.0)	3 (1.4)	12.3 [2.5-42.5]	<0.001
No adequate financial support	43 (40.2)	56 (26.2)	1.9 [1.15-3.13]	0.010
Conflicts in the family	19 (17.8)	8 (3.7)	5.56 [2.35-13.18]	<0,001
Can't trust the family	13 (12.1)	7 (3.27)	4 [1.56-10.49]	0.002
Friends				
No adequate emotional support	28 (26.2)	26 (12.1)	2.5 [1.4-4.6]	0.002
No adequate financial support	59 (55.1)	82 (38.3)	1.98 [1.24-3.14]	0.004
Recent conflicts with friends	9 (8.4)	7 (3.3)	2.72 [0.98-7.51]	0.046
Can't trust friends	62 (57.9)	77 (36.0)	2.45 [1.52-3.9]	<0.001
Personal history of				
Depression	20 (18.7)	7 (3.3)	6.8 [2.72-16.97]	<0.001
Maternity blues	37 (34.6)	40 (18.7)	2.3 [1.36-3.89]	0.002
Other psychiatric illness	77 (72.0	43 (20.1)	10.21 [5.06-17.49]	<0.001
Chronic disease	12 (11.2)	11 (5.1)	2.33 [0.99-5.47]	0.047
Family history of				
Depression	24 (22.4)	16 (7.5)	3.58 [1.81-7.08]	<0.001
Other psychiatric illness	28 (26.2)	16 (7.5)	4.39 [2.25-8.55]	<0.001
Pregnancy course				
Unplanned pregnancy	56 (52.3)	82 (38.3)	1.77 [1.1-2.8]	0.017
Undesired pregnancy	23 (21.5)	14 (6.5)	3.9 [1.36-0.7]	<0.001
Depression or anxiety	37 (34.6)	168 (78.5)	0.14 [0.09-0.24]	<0.001
Complication or sickness	14 (13.1)	12 (5.6)	2.53 [1.13-5.69]	0.021
Newborn's parameters				
Female sex	63 (58.9)	99 (46.3)	1.66 [1.04-2.66]	0.033
Health problems with the baby	33 (30.8)	20 (9.3)	4.33 [2.33-8.01]	<0.001
No baby afterbirth cry	33 (30.8)	30 (14.0)	2.7 [0.12-0.43]	<0.001
Resuscitation of the baby	33 (30.8)	33 (15.4)	2.45 [1.41-4.25]	0.001
Difficulties caring for	12 (11.2	11 (5.1)	7.65 [3,15-18,59]	<0.001
Difficulties with baby's sleep	32 (29.9)	10 (4.7)	8.7 [4.08-18.57]	<0.001
Difficulties feeding the baby	72 (67.3)	35 (16.4)	10.52 [6.12-18.1]	<0.001
Baby irritable	39 (36.4)	10 (4.7)	11.70 [5.54-24.69]	<0.001
Baby crying a lot	43 (40.2)	14 (13.1)	9.60 [4.93-18.67]	<0.001
No breastfeeding	67 (62.6)	34 (15.9)	8.87 [5.16-15.15]	<0.001
***CI= Confidence Interval**				

Difficulties caring for the baby are found in this study to be a risk factor of maternity blues after operative delivery. Although this finding is not commonly reported in the available literature, impaired newborn health or wellbeing is a well-documented risk factor for post-partum sad mood and depression through induced anxiety.[12,13]

Having felt depressed or anxious during pregnancy is another independent risk factor for maternity blues

identified in this series of post-cesarean women. Romero-Gutiérrez et al. have found a strong association between maternal sadness and history of depressive episodes in Mexico, while Adewuya reported in Nigeria that the risk of maternity blues was multiplied by three in the presence of mood change during pregnancy.[7,11]

Table 3: Independent risk factors of maternity blues found after multivariate analysis.

Variable	Adjusted odds ratio	95% CI*	P
Low socio-economic level	3.62	1.35-9.70	0.010
Personal history of depression	4.36	1.13-16.81	0.033
Difficulties caring for the baby	3.40	1.12-10.27	0.030
Having felt depressed or anxious during pregnancy	6.61	3.05-14.31	0.000
***CI= Confidence Interval**			

However, our results must be considered with some limitations considering women could have given wrong answers to our questions. This might have given some bias to our results.

CONCLUSION

Low socio-economic level, personal history of depression, difficulties caring for the baby and having felt depressed or anxious during pregnancy are independent risk factors of maternity blues after cesarean section in this study.

Women with identifiable risk factors for maternity blues should be followed up closely after cesarean section.

ACKNOWLEDGEMENTS

We acknowledge the authorities of the Yaoundé Gyneco-Obstetric and Pediatric Hospital and the Yaoundé Central Hospital who gave us permission to carry out the study at their institutions.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Schlesselman J. Sample size requirements in case-control studies of disease. Am J Epidemiol. 1974;99(6): 381-4.
2. Oates M. Major mental illness in pregnancy and puerperium. Baillières Clin Obstet Gynaecol. 1987;3(4):905-20.
3. Oates M. Normal emotional changes in pregnancy and the puerperium. Baillères Clin Obstet Gynaecol. 1989; 3(6):791-804.
4. Kennerley H, Gath D. Maternity blues. III. Associations with obstetric, psychological, and psychiatric factors. Br J Psychiatry. 1989;155:367-73.
5. Kennerley H, Gath D. Maternity blues. I. Detection and measurement by questionnaire. Br J Psychiatry. 1989;155:356-62.
6. O'Hara MW, Schlechte JA, Lewis DA, Varner MW. Controlled prospective study of post-partum mood disorders: Psychological, environmental and hormonal variables. J Abnorm Psychol. 1991;100(1):63-73.
7. Adewuya AO. Prevalence and risk factors of maternity blues in western Nigerian women. Am J Ostet Gynecol. 2005;193(4):1522-5.
8. Adewuya AO. Early postpartum mood as a risk factor for postnatal depression in Nigerian women. Am J Psychiatry. 2006;163(8):1435-7.
9. Kosińska-Kaczyńska K, Horosz E, Wielgoś M, Szymusik I. Affective disorders in the first week after the delivery: prevalence and risk factors. Ginekol Pol. 2008;79(3):182-5.
10. Piacentini D, Leveni D, Primerano G, Cattaneo M, Volpi L, Biffi G, Mirabella F. Prevalence and risk factors of postnatal depression among women attending antenatal courses. Epidemiol Psichiatr Soc. 2009;18(3):214-20.
11. Romero-Gutiérrez G, Dueñas-de la Rosa EM, Regalado-Cedillo CA, Ponce-Ponce de León AL. Prevalence of maternal sadness and its associated factors. Ginecol Obstet Mex. 2010;78(1):53-7.
12. Youn JH, Jeong IS. Predictors of postpartum depression: prospective cohort study. J Korean Acad Nurs. 2013;43(2):225-35.
13. Masmoudi J, Charfeddine F, Trabelsi S, Feki I, Ben Ayad B, Guermazi M, et al. Postpartum depression: prevalence and risk factors. A prospective Study concerning 302 Tunisian parturients. Tunis Med. 2014;92(10):615-21.

Cite this article as: Foumane P, Kamga Olen JP, Fouedjio JH, Kamsu Moyo GP, Nsahlai C, Mboudou E. Risk factors of maternity blues after caesarean section in Yaoundé, Cameroon: a case-control analysis. Int J Reprod Contracept Obstet Gynecol 2016;5:4424-7.