International Journal of Current Advanced Research
ISSN: O: 2319-6475, ISSN: P: 2319-6505, Impact Factor: 6.614
Available Online at www.journalijcar.org
Volume 7; Issue 4(A); April 2018; Page No. 11362-11365
DOI: http://dx.doi.org/10.24327/ijcar.2018.11365.1963

Research Article

ACUTE POSTTRAUMATIC STRESS, EMERGENCY AND SCHEDULED CESAREAN SECTION: CROSS SECTIONAL STUDY IN MOROCCO

Yassari Mohsine[1, 2*]., Mouhadi Khalid[3]., Hicham Bousbaa[1]., Aarab Chadya[2]., Aalouane Rachid[2] and Rammouz Ismail[2]

[1]Military Hospital Moulay Ismail, Meknes. Morocco
[2]Ibn Al Hassan Psychiatric Hospital, Hassan II University Hospital & Clinical Neuroscience Laboratory, Faculty of Medicine and Pharmacy, University Sidi Mohammed Ben Abdellah, Fez, Morocco
[3]Department of Medicine, Faculty of Medicine and Pharmacy, University IBN ZOHR, Agadir, Morocco

A R T I C L E I N F O

Article History:

Received 29th January, 2018
Received in revised form 12th February, 2018 Accepted 8th March, 2018
Published online 28th April, 2018

Key words:

Caesarean section, acute stress, satisfaction

A B S T R A C T

A significant fraction of women is experiencing the birth of their child as a negative event. Cases might develop post-traumatic stress disorder (PTSD).
The purpose of this study was to compare the prevalence of the acute PTS in patients that underwent emergency Caesarean surgery and patients that underwent a scheduled Caesarean surgery. Beside, the satisfaction of healthcare personnel satisfaction was assessed.
This observational study included patients that underwent Caesarean surgery and scheduled Caesarean surgery. Acute stress assessment questionnaire was responded to by patients between the 2nd and the 5th day of postpartum. The recruitment of patients was done in the obstetric public hospital in Meknes (Morocco). The diagnosis of the acute stress was based on Stanford Acute Stress Reaction Questionnaire SASRQ.
100 patients were included in this study. The socio-demographic characteristics were statistically similar in both patients groups except higher age of the unexposed group (p= 0.03). However, these characteristics do not impact the stress onset of patients.
Besides, there was no significant difference regarding the existence of acute stress between the emergency Caesarean group and the scheduled Caesarean one. Finally, there wasn't any significant difference in care offered to both groups of Caesarean surgery, although it was revealed there was a significant association between the satisfaction of the care personnel and the acute stress.
The emergency aspect of the cesarean section is not a risk factor of acute post-traumatic stress. The quality of management of obstetric staff is more important in preventing acute stress.

INTRODUCTION

Caesarean section is the surgical procedure that allows the fetus to be extracted from the maternal uterus after incision, usually by a transperitoneal or, more rarely, retroperitoneal, abdominal approach. Currently, it is known that a significant proportion of women experience the birth of their child as a negative or even traumatic experience. In some cases, they will develop post-traumatic stress disorder, known in the international literature as the post-traumatic stress disorder (PTSD).

Various factors have been identified in the onset of postpartum PTSD, some of which are inherent to the parturient such as personality traits, others being environmental factors, such as pain during delivery or caesarean section. The evolution of childbirth (instrumented delivery, caesarean section) and the role played by caregivers involved in the prevention of stress during childbirth and postpartum [1,2, 3,4]. Evidence from the literature has shown that women giving birth by caesarean section are at higher risk of developing PTSD symptoms, especially when cesarean section is urgently performed [5].

This post-traumatic stress has been linked in various studies [6, 7, 8, 9, 10, 11,12] to a perception of loss of control, a feeling of helplessness and a lack of information. There is also a link between low social support, including partner and carers, and a negative perception of childbirth and a manifestation of post-traumatic stress symptoms [7,13,14]. The question that might arise, do both types of caesareans generate the same degree of intensity of anxiety and stress? In many studies, the comparison was between cesarean sections, all combined or

Corresponding author:* **Yassari Mohsine
Military Hospital Moulay Ismail, Meknes. Morocco

only in emergency and vaginal deliveries [6, 7, 8, 9, 13, 14, 15]. However, the comparison with a vaginal delivery is unreliable because there are not the same prognostic issues, nor the same psychological, physiological and therapeutic effects, as during an emergency Cesarean section [16]. Hence this study aims at assessing acute stress during emergency cesarean section compared to cesarean section before work it also intends to evaluate the satisfaction of the care of the nursing staff by the patients.

METHODS

It is an observational study of the type exposed / not exposed in a maternity of the city of Meknes (Morocco), and which took place over a period of three months, between August and October 2016. We included all the parturients coming to the hospital where the indication of a cesarean was made. We excluded women who had been transferred to a resuscitation unit for medical or obstetric reasons such as fetal death in utero and postnatal death. Non-consenting women were also excluded.

The "exposed" population consisted of patients who underwent an emergency caesarean section; that is during labor, or following a failure to trip. The "unexposed" population consisted of patients who had a caesarean section before labor (scheduled caesarean section).

Measuring tools

Anonymous questionnaires were administered to patients between the second and fifth day postpartum.

A questionnaire including socio-demographic data as a first step, then administered the questionnaire assessing acute stress: Standford Acute Reaction Stress Questionnaire (SARSQ) [17]. This validated English scale, which is widely used for the diagnosis of post-traumatic acute stress, follows the precise criteria of the DSM-IV TR, (Diagnostic and Statistical Manual of Mental Disorders, Version IV, Revised Text) [18], defining the symptoms of stress. In the English literature, this scale is applicable to all types of trauma, and must be delivered within three to five days of the traumatic event. This questionnaire includes a first question assessing the experience of the event, whose answer is between "not at all disturbing" and "extremely disturbing". Followed by 30 questions with possible answer, an intensity scale of 0 corresponding to "never felt", to 5 corresponding to "very often felt".

These 30 questions were grouped by the authors into five symptoms of stress: dissociation; reactivation, avoidance, anxiety and depreciation. The satisfaction of the care by the health professional was evaluated thanks to five items, such as courtesy, availability, competence, explanations before the gesture and explanations on the follow-up. The definition of satisfactory care was established arbitrarily by ourselves, when at least three of the five items included the "satisfactory" answer to the questionnaire. The analysis was done by SPSS software version 20. The univariate analysis used the Chi2 test for the comparison of the percentages, Student's T test for the comparison of the means. The materiality threshold was set at 0.05.

RESULTS

During the study's recruitment period, from August 1st to October 31st, 2016, 150 patients received a cesarean section. After exclusion factors were applied, 100 files were included in the study. 75 of the patients underwent emergency cesarean delivery, 75%. 25 patients had a caesarean section before work, 25%.

Our study showed that 24% of the population shows signs of stress, while 76% are not stressed. The characteristics of mothers at baseline did not differ significantly between the two compared groups (Table 1).

Table 1 Varied analysis of socio-demographic characteristics

	Exposed c. in emergency	**Not exposed c. scheduled**	**p-value**
Average age (standard deviation)	29(6 ,7)	32(4,8)	0,033
Rate			
Illiteracy %	29	10	0 ,640
Employment (%)	10	3	0,863
Couple married life (%)	71	25	0 ,569
Primipare	29	3	**0 ,013**
Multiparous	14	2	0 ,414
History of cesarean section	14	19	0 ,522

However, we found a statistically significant difference for age that is higher in the unexposed group: 32 years +/- 4.8 versus 29 years +/- 6.7 in the exposed group and obstetric ATCDs prim parity is greater in the exposed group (29%) than in the unexposed group (3%) (p = 0.013). (Table 2)

Table 2 Linkages between Stress and Sociodemographic and Obstetric Characteristics

	P. stressed	**P.no stressed**	**p-value**
Average age (standard deviation)	29(6,6)	30(5,6)	0,742
Rate			
Illiteracy %	10	29	0,256
Employment (%)	3	10	0,933
Couple married life (%)	24	72	0,570
Primipare	8	24	0,013
Multiparous	5	19	0,763
History of cesarean section	11	30	0,670

On the other hand, we found no statistically significant association in the various signs of stress according to the urgency or not of the caesarean section. No statistically significant association between stress (overall score greater than or equal to 75) and urgency of caesarean section (Table 3) Caregiver satisfaction is not statistically different depending on the urgency or otherwise of caesarean section. Caregiver satisfaction is statistically different between the two groups of stressed and unstressed patients (p = 0.001).

Table 3 Relationship between stress and exposed and unexposed cases

	Exposed	Not exposed	P-value
Dissociation %	17	7	O ,589
Reactivation %	22	7	0 ,533
Avoidance %	48	18	0,465
Anxiety %	26	8	0,807
Depreciation %	17	5	0,780
Overall score %	17	8	0 ,282

DISCUSSION

Morocco still has relatively high maternal mortality. Access to antenatal care remains difficult and usually occurs without psychological preparation with the obstetric teams and during childbirth. The parturient is often in a situation of insecurity and worry. This would promote the occurrence of a stress load much more than expected. Caesarean section, if it is decided, can therefore be felt as an unexpected sudden event, violent, and with a history of failure of childbirth and an impression of "not giving birth". The pathogenic effects of this failure are diminished, when the emotional and effective support of the entourage is of good quality, and the ubiquitous availability and listening of the nursing staff [16]. This study comes to answer the question: if the decision to undertake an emergency caesarean section would promote more acute stress than if it is taken at a distance and the woman is well prepared for such a decision.

The difference between emergency cesareans and those scheduled is the "unplanned" and "unscheduled" caesarean section. Indeed, in a study by Fisher [19], it was shown that following an emergency Cesarean section, the patients reported a feeling of loss of control of their delivery, especially if the parturient is already reassured by the condition. Health of the child who is no longer compromised. A study by Demier [20] showed that the frequency of post-traumatic acute stress symptoms in mothers of children hospitalized with neonatal resuscitation was higher than in mothers with healthy children. This would increase the risk of acute stress. This situation is an exclusion criterion, as there is an added risk for caesarean section, which could skew the results of the assessment, and thus an overestimate of the risk of acute stress. Similarly, a French study [21] has shown that socio-demographic factors do not influence the onset of acute stress in caesarized women, and that primiparity is more important in emergency caesarean groups, unlike the multiparity that is high in the group of scheduled cesareans

The difference between these two populations lies in the fact that a woman who gives birth to a child for the first time is confronted with the unknown, with an event she has never experienced and that she may be of advantage stressed by a delivery that does not unfold as she imagined. Women who have experienced childbirth are less likely to be surprised by unexpected and distressing events, and are less likely to develop post-traumatic stress after childbirth [22]. In our series, there was no association between the urgency of Caesarean section and the onset of acute stress, while for other authors [23, 24, 25, 26] the urgency of Caesarean section is a factor in the onset of acute stress. Parturient reassurance through fair and objective information remains a key element in the prevention of acute stress. In a study by Garel et al, they found that, in general, little information is delivered to patients on caesarean section, while the role of information and its psychological interest are often underestimated [27].

This lack of information provided by doctors or midwives, would be linked to "a fear of worrying the patient", which would push her to do her own research which increases the risk of having wrong information. In this study, there was no difference in care provider coverage by type of caesarean section, but there was a statistically significant association between staff satisfaction and satisfaction, caregiver and acute stress. Our study therefore suggests a renewed interest in this subject among obstetric care staff and to implement concrete steps such as the establishment of mother-child units, the sensitization of the nursing staff, and an account of the aspects of the doctor-parturient relation, as well as the information of the parturient, with regard to the risks and consequences of diapers.

CONCLUSION

This study revealed that the urgency of caesarean section is not a risk factor for the development of post-traumatic acute stress, and that there is no difference in the management of caregivers by type of caesarean section, but there is a statistically significant association between caregiver satisfaction and acute stress in the studied population, that is to say, the major benefit of psychological care that goes to the minimum through a good therapeutic relationship, availability and medical information that is fair, authentic, ethical and reassuring.

"What is already known about this subject"

Several factors are involved in the occurrence of postpartum PTSD, some are directly related to the parturient such as personality traits, others are environmental factors. Evidence from the literature has shown that women delivering by caesarean section are at higher risk of developing PTSD symptoms, especially when cesarean delivery is urgent.

"What this study adds"

Our study showed that the quality of the care provided by the nursing staff was a determining factor in the occurrence of PTSD, which is consistent with the literature in the Moroccan context

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How to cite this article:

Yassari Mohsine *et al* (2018) 'Acute Posttraumatic Stress, Emergency And Scheduled Cesarean Section: Cross Sectional Study In Morocco', *International Journal of Current Advanced Research,* 07(4), pp. 11362-11365.
DOI: http://dx.doi.org/10.24327/ijcar.2018.11365.1963

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