


RESEARCH

Maternal satisfaction with postpartum surgical pain management in a hospital in northern Mexico


Satisfacción materna con manejo del dolor en posparto quirúrgico en un hospital del norte de México

Satisfação materna com a gestão da dor cirúrgica pós-parto num hospital do norte do México

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Abstract

Introduction: The quality of care is a priority in the health system, especially patient satisfaction. Postoperative pain management is an indicator that can affect it. **Objective:** Establish the relationship between maternal satisfaction with postoperative pain management, pain intensity, preoperative orientation, health personnel response time and obstetric factors in a hospital in northern Mexico. **Methodology:** Descriptive, correlational design. A total of 259 postpartum surgical patients from a public hospital in Monterrey, Nuevo Leon, Mexico participated. The Patient Pain Intensity Questionnaire was used; women with 24 hours of postpartum surgery were included in the study; women with tubal ligation or hysterectomy were excluded. Descriptive and inferential statistics were used. **Results:** All participants presented pain; 61.4% reported severe pain in the first 24 hours; 69.5% reported a response time for pain management of less than 10 minutes. Mean satisfaction was 8.9 (SD=1.3). A relationship was found between maternal satisfaction with postoperative pain management and personnel response time ($p=.001$); as well as with the number of cesarean sections ($p=.04$). Women who received preoperative counseling reported greater satisfaction with pain management (9 vs. 8.27, $p=.001$) and less pain (7.87 vs. 6.90, $p=.01$). **Conclusions:** Correct pain management should be prioritized as a quality criterion. Preoperative orientation is a practice that should be reinforced in the care of surgical patients.

Key words: Postpartum Period; Patient Satisfaction; Postoperative Pain (DeCS).

Resumen

Introducción: La calidad de la atención es una prioridad en el sistema de salud en especial la satisfacción del paciente. El manejo del dolor postoperatorio es un indicador que puede afectarlo. **Objetivo:** Establecer la relación entre satisfacción materna con el manejo del dolor postoperatorio, con intensidad del dolor, orientación preoperatoria, tiempo de respuesta del personal de salud y factores obstétricos en un hospital del norte de México. **Metodología:** Diseño descriptivo, correlacional. Participaron 259 con posparto quirúrgico de un hospital público de Monterrey, Nuevo León, México. Se utilizó el Cuestionario de Intensidad del dolor en el paciente. Se incluyó en el estudio a mujeres con 24 horas de posparto quirúrgico; se excluyó a mujeres con salpingoclasia o histerectomía. Se utilizó estadística descriptiva e inferencial. **Resultados:** Todas las participantes presentaron dolor, 61.4% refirió dolor severo en las primeras 24 horas, 69.5% señaló un tiempo de respuesta para manejo del dolor menor a 10 minutos. La media de satisfacción fue 8.9 ($DE=1.3$). Se encontró relación entre la satisfacción materna con el manejo del dolor postoperatorio y el tiempo de respuesta del personal ($p=.001$); así como con el número de cesáreas ($p=.04$). Las mujeres que recibieron orientación preoperatoria reportaron mayor satisfacción con el manejo del dolor (9 vs 8.27, $p=.001$) y menor dolor (7.87 vs 6.90, $p=.01$). **Conclusiones:** El correcto manejo del dolor debe priorizarse como criterio de calidad. La orientación preoperatoria es una práctica que debe reforzarse en la atención a pacientes quirúrgicos.

Palabras clave: Período Posparto; Satisfacción del Paciente; Dolor Postoperatorio (DeCS).

Abstrato

Introdução: A qualidade do atendimento é prioridade no sistema de saúde, principalmente a satisfação do paciente. O manejo da dor pós-operatória é um indicador que pode afetá-la. **Objetivo:** Estabelecer a relação entre a satisfação materna com o manejo da dor pós-operatória, intensidade da dor, orientação pré-operatória, tempo de resposta do pessoal de saúde e fatores obstétricos em um hospital no norte do México. **Metodologia:** Desenho descritivo e correlacional. Um total de 259 pacientes cirúrgicas pós-parto



de um hospital público em Monterrey, Nuevo Leon, México participaram. O Questionário de Intensidade da Dor do Paciente foi usado; mulheres com 24 horas de cirurgia pós-parto foram incluídas no estudo; mulheres com laqueadura ou histerectomia foram excluídas. Estatísticas descritivas e inferenciais foram utilizadas. **Resultados:** Todos os participantes apresentaram dor; 61,4% relataram dor intensa nas primeiras 24 horas; 69,5% relataram um tempo de resposta para o controle da dor de menos de 10 minutos. A satisfação média foi de 8,9 (DP = 1,3). Foi encontrada uma relação entre a satisfação materna com o manejo da dor pós-operatória e o tempo de resposta do pessoal ($p = 0,001$); bem como com o número de cesáreas ($p = 0,04$). Mulheres que receberam aconselhamento pré-operatório relataram maior satisfação com o controle da dor (9 vs. 8,27, $p = 0,001$) e menos dor (7,87 vs. 6,90, $p = 0,01$). **Conclusões:** O gerenciamento correto da dor deve ser priorizado como um critério de qualidade. A orientação pré-operatória é uma prática que deve ser reforçada no cuidado ao paciente cirúrgico.

Palavras-chave: Período Pós-Parto; Satisfação do Paciente; Dor Pós-Operatória (DeCS).

Introduction

Quality is an essential requirement in the care provided by health personnel, demanding accessible, individualized, friendly, permanent and efficient delivery of care, the objective is to meet the needs of the user and of the providers who deliver the care. A topic of major interest in health management is patient satisfaction⁽¹⁾. This can be affected by various factors, one of those reported in the literature is pain, specifically pain management⁽²⁾. For this study, postoperative pain is a priority because it is one of the most common due to the high demand for surgical procedures⁽³⁻⁵⁾.

One of the greatest demands for care in Mexico is reproductive health, which emphasizes care during pregnancy, childbirth and postpartum. In Mexico, 49.7% of all women are at childbearing age, with a birth rate of 18.5 per thousand inhabitants⁽⁶⁾. It is expected that these pregnancies culminate in childbirth; however, 46.3% end in surgical delivery, which increases the demand for postoperative care in this population group within the health services⁽⁷⁾.

Some authors point out that postoperative pain is usually treated incorrectly and insufficiently. This is confirmed by studies which report that around 95% of women with surgical postpartum express moderate, intense or extreme postoperative pain⁽⁸⁻¹⁰⁾. The consequences of poor pain management in the surgical



postpartum period can lead to an increase in respiratory and thromboembolic complications caused by the decrease in women's movement due to pain^(11,12).

This has a negative impact because the patients have difficulty wandering early and during their stay in the hospital, which increases their dissatisfaction and interferes with their mother-child relationship in the first days of the newborn's life, because the pain makes it difficult to hold and care for the newborn and breastfeed it, producing anxiety and postpartum depression⁽¹³⁻¹⁶⁾.

Satisfaction with postoperative pain management has been studied by different authors, who report that the greater the preoperative orientation, the greater the satisfaction with pain management^(2,15). Likewise, another study shows that the more pain reported, the lower the satisfaction⁽²⁾; however, in the case of the postpartum period, the patients, in spite of the fact that pain is present, the level of satisfaction is high⁽¹⁵⁻¹⁹⁾. In another study carried out in Spain on women who underwent cesarean section, where postoperative pain was rated, the intensity reported a mean of 3.66, making it impossible for 58% of the women to carry out activities such as sitting up in bed or coughing. However, 41% of the participants who received preoperative information reported greater satisfaction with postoperative pain management⁽²⁰⁾.

Other authors conclude that the pain experienced postoperatively after cesarean section is the consequence of a unique experience caused by many factors, including anxiety, ethnic and cultural aspects, previous cesarean sections, age (particularly young women), type of cesarean incision and context, in addition to the health status of the newborn⁽²¹⁻²²⁾.

In another study, they emphasize that the immediate attention or brevity of the health personnel to the need for pain after surgery is important for patient satisfaction, since a high percentage of patients (83.9%) who received the requested pain killer in less than 15 minutes, showed greater satisfaction with postoperative pain management⁽²³⁾.

From the foregoing, it can be seen that satisfaction has been associated with pain and its intensity, as well as with previous experience, orientation received, response time or perception of timely management



in the presence of pain, and in the case of women during the surgical postpartum it has been associated with the type of surgical incision. However, the findings are not conclusive and in this particular group the results seem to differ, while for some, pain intensity decreases, in others satisfaction with care is high.

Taking into account this context, the objective of this research was to establish the relationship between maternal satisfaction with postoperative pain management, pain intensity, preoperative orientation, health personnel response time and obstetric factors.

Methodology

Descriptive and correlational study. The population corresponded to patients during the surgical postpartum period, hospitalized in the obstetrics department of a public social security institution, located in Monterrey, Nuevo Leon, Mexico. For the selection of patients, a systematic one-by-two sampling with a random start was used, the first participant was chosen at random and then every other patient. The study included women with one full day of postpartum surgery, without complications in their evolution or with the health of the newborn; those who, in addition to cesarean section, underwent another surgical procedure such as tubal ligation or hysterectomy, were excluded from the study.

To estimate the sample size, the statistical package nQueryadvisor 4.0 was used with a correlation of .20, a significance level of .05 and a power of 90%. A sample of 259 participants was obtained. Data collection was carried out from January to March 2016.

To measure the study variables: Maternal satisfaction with postoperative pain management, pain intensity, preoperative orientation, health personnel response time and obstetric factors, the Patient Pain Intensity Questionnaire (PPIQ)⁽²⁴⁾ was used, which measures pain intensity and the level of satisfaction with pain management by nursing and medical personnel. The questionnaire has obtained a Cronbach's alpha of .85, which means that it is reliable. For the purposes of this study, only nine items were used, which measure the intensity and presence of pain, using a visual numerical scale, with evaluations ranging from a score of



0 to 10. Intensity was classified as no pain (zero values), mild pain ⁽¹⁻³⁾, moderate pain ⁽⁴⁻⁶⁾ and severe pain ⁽⁷⁻¹⁰⁾.

Likewise, it also contains a question that evaluates the interruption when there is pain in various activities such as sleep and mood, with scores from 0 to 10 (0=no interruption and 10=High interruption). To evaluate the guidance given to the woman for pain management, one item evaluates with a dichotomous response (Yes/No) whether she was given guidance. Finally, to evaluate satisfaction with pain management in the surgical postpartum period, as a result of the care provided by the nursing and medical personnel, two questions were asked with response options from 0 to 10 (0 points = total absence of satisfaction and 10 points = highest satisfaction). The response time to receive the requested analgesic was measured with options from less than 10 minutes to 60 minutes.

Regarding ethical aspects, this study considered the Regulations of the General Health Law on Research⁽²⁵⁾, and was approved by the Ethics and Research Committees of the School of Nursing of the Universidad Autónoma de Nuevo León and the participating health institution (FAEN-M-1506).

All participants were asked for their authorization and to sign the informed consent form. During data collection, attention was applied not to interfere with care. If the patient reported pain during the application of the instrument, she was referred to the nursing personnel for management and then returned to the patient to continue with the questionnaire.

Data capture and analysis was performed using the Statistical Package for the Social Sciences (SPSS) version 20. Inferential analysis was performed using nonparametric tests because the data showed a non-normal distribution using the Kolmogorov-Smirnov test. To test the relationship of the proposed variables, Spearman's correlation and the Mann-Whitney U test were applied to identify differences between the groups.



Results

The participants reported a mean age of 26 years (SD=5.09) and 10 years (SD=2.57) of schooling, which means having incomplete high school preparation. The mean number of pregnancies was two and 50.2% had a history of previous cesarean section.

The maximum pain reported by the women in the first 24 hours had a mean of 7 (SD=2.56) and the pain reported at the time of the interview had a mean of 4.45 (SD=1.81). When classifying the intensity of the pain, moderate pain predominated, while the maximum pain presented in the first 24 hours was classified as severe in 61.4% of the participants, the average pain was classified as moderate by 68% (Table 1).

Table 1. Distribution of women according to the classification of the level of pain during the surgical puerperium.

Pain Intensity	Pain at time of interview		Maximum pain within 24 hours		Average pain level in the first 24 hours	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Mild	86	33.2	32	12.4	42	16.0
Moderate	133	51.4	68	26.2	175	68.0
Severe	40	15.4	159	61.4	42	16.0

Source: Patient Pain Intensity Questionnaire

n=259.

The mean obtained for overall satisfaction with pain management by health personnel was 8.9 (SD=1.30).

The nursing personnel obtained a slightly higher mean than the medical personnel (9.02 vs. 8.87) (Table 2).

Table 2. Women's perception of satisfaction with pain management by health personnel.

Women's satisfaction	Mean	Median	Standard Deviation	Minimum Value	Maximum Value
The physician performs pain management	8.87	9.00	1.56	0	10
The nurse performs pain management	9.02	9.00	1.27	0	10
Global satisfaction	8.90	9.00	1.30	2	10

Source: Patient Pain Intensity Questionnaire

n=259.



Of the women, 81.1% reported requesting pain killers when they had pain, and the average response time to receive it was less than 10 minutes in 69.5% (Table 3).

No statistically significant relationship was found between maternal satisfaction with pain management by physician and nursing response time with pain intensity reported in the interview, maximum pain in 24 hours and average pain; however, a statistically significant negative relationship was obtained between maternal satisfaction with pain management by nursing personnel, and response time ($r_s = -.19, p = .01$), a similar finding in relation to satisfaction with pain management by the physician with response time ($r_s = -.13, p = .03$), which indicates that the shorter the response time by the health personnel, the greater the woman's satisfaction.

Table 3. Distribution, according to the women in the study, of the response time to receive the painkiller requested by the health personnel.

Pain response time	<i>f</i>	%
I never asked for pain medication	49	18.9
Less than 10 minutes	180	69.5
11 to 20 minutes	24	9.3
21 to 30 minutes	4	1.5
31 to 60 minutes	8	0.2

Source: Patient Pain Intensity Questionnaire
n=259.

Note: *f*=frequency, %=Percent

Finally, it should be noted that maternal satisfaction with pain management was positively related to the number of cesarean sections ($r_s = .13, p = .03$), which means that women who had a greater number of cesarean sections reported a statistically significant higher satisfaction with pain management (Table 4).



Table 4. Correlation table between maternal satisfaction with pain management and response time, maximum pain at 24 hours and number of cesarean sections.

Maternal satisfaction with pain management	<i>r</i>	<i>p</i>
Response time by nursing personnel	-.19	.01
Response time by physician	-.13	.03
Maximum pain at 24 hours	.05	.83
Number of cesarean sections	.12	.04

Source: Patient Pain Intensity Questionnaire

n=259.

Preoperative counseling was received by 82.62% of the women, and one of the most outstanding findings was to identify a statistically significant difference in maternal satisfaction with pain management with respect to the preoperative counseling received. Women who received preoperative counseling were more satisfied than those who did not ($p=.001$) (Table 5).

Table 5. Difference between the perceived satisfaction of post-surgical women with pain management according to preoperative orientation.

Satisfaction with pain management	Mean	Median	Standard Deviation	U	<i>p</i>
Received orientation	9.00	9	1.46	3605	.001
Did not receive orientation	8.27	9	1.88		

Source: Patient Pain Intensity Questionnaire

n=259.

In women who reported severe pain intensity as maximum pain in the first 24 hours, it was analyzed whether or not they received preoperative orientation. Women who received orientation reported less pain intensity compared to those who did not (mean= 6.90 vs. 7.87). Women who did not receive orientation reported that the pain interfered more with their activities (Mean= 3.64 vs. 4.38).



Discussion

A quality indicator or criterion in all health systems is the timely and adequate management of pain; however, the findings of the present study show that all the patients reported moderate to severe pain during the postoperative period and that most of them present moderate to severe pain during the first 24 hours postoperatively. This finding matches what was reported by several authors ^(2,8,9-12,19,20,22), who point out that the actions taken to treat pain are not sufficient. This result is relevant due to the limitations it generates and its effect on the morbidity of the patient.

In spite of the above, the opinion of pain management obtained a high satisfaction, this data coincides with that reported in other studies performed in women with characteristics similar to those of the present study^(2,9,15-18). This shows that in this particular group of participants, satisfaction is explained by other aspects, such as preoperative orientation. The women who reported greater satisfaction with pain management by the medical and nursing personnel were those who received preoperative orientation; this result was similar to that reported by Garcia^(2,19,20). The orientation that people receive about what is going to happen after surgery can have an effect on the patients' expectations; for the participants in the study, knowing that after a surgical event there is pain and that treatment is required, allows them to request the prescribed medication to relieve pain in a timely manner with the effect of reducing the intensity of the pain.

It is important to investigate other causes that explain this finding of increased pain and greater satisfaction, because in another study⁽²⁾, patients with postoperative pain were included, but not in the postoperative surgical period, and they reported less pain and greater satisfaction. This reflects that the findings are not conclusive and it is necessary to investigate the behavior of the variables in other surgical procedures.

Other relevant aspects that were related to satisfaction with pain management were the response time of the personnel for pain relief, as well as the number of cesarean sections. It was identified that women



with less waiting time to receive analgesic indicated greater satisfaction, coinciding with other authors^(2, 19, 20). It is clear that if people are attended in a timely manner when they have pain, satisfaction will be greater.

It was seen that women who reported a greater number of previous cesarean sections reported greater satisfaction with pain management, this finding can be attributed to previous experience, women know that they will present pain, they already have an expectation for its management so interventions can be evaluated by comparing previous experience. These findings should be considered in interventions aimed at pain management.

The standardization of postoperative pain management that includes preoperative orientation and response time to attend to the presence of pain is a strategy that would be relevant and useful to improve women's satisfaction. It is important that these aspects are considered independently of the number of pregnancy of the woman, however, it is relevant to emphasize the orientation to primigravid women, because they do not have previous experience. Addressing these aspects will contribute on the one hand to reduce the level of pain in women by actively participating in its management, and on the other hand, it will contribute to increase satisfaction with pain management, both aspects considered quality indicators or criteria within health institutions.

Conclusions

All the patients reported pain in the postoperative period, a high proportion reported moderate to severe intensity in the first 24 hours. In spite of this, there was a high rate of maternal satisfaction with postoperative pain management. The patients who received preoperative orientation, who waited less time for the personnel to respond to pain and who had a greater number of cesarean sections were satisfied with postoperative pain management.

Since pain management is an indicator of quality and in view of the findings of the study, it is important for nursing care managers to consider strategies that contribute favorably to reducing the presence and intensity of pain in postpartum surgical women.



Study limitations

One limitation of the study is attributed to the methodological aspect of the cross-sectional design, which limits causality.

Conflict of interests

The authors stated that they do not have any conflict of interest in relation to the article.

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