Search for emergency care in the postpartum period

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RESUMO

Objetivo: identificação da prevalência, características e motivos que levaram a puérpera a procurar o Pronto Atendimento e associação com o tipo de parto. Métodos: estudo quantitativo de delineamento transversal. Dados extraídos das informações constantes nas fichas de Pronto Atendimento em um hospital de ensino de mulheres que estavam vivenciando o período pós-parto. Utilizou-se instrumento próprio para a coleta de dados, analisados por estatística descritiva simples e teste qui-quadrado, utilizando o software Statistical Package for the Social Science. O projeto foi aprovado pelo Comitê de Ética em Pesquisa. Resultados: foram incluídos 89 registros de puérperas que procuraram o Pronto Atendimento, correspondendo à prevalência de 16%. Das 89 mulheres, 60,6% tinham realizado cesárea. Os principais motivos que levaram à procura por Pronto Atendimento foram: alterações na ferida operatória (55%) e sangramento vaginal aumentado (20,2%). Houve associação entre maior procura por Pronto Atendimento no período puerperal entre mulheres que tiveram parto cesáreo. Conclusão: a prevalência de procura por Pronto Atendimento na amostra do estudo foi de 16%, sendo o principal motivo as alterações da ferida operatória.

Descritores: Postpartum period. Puerperal disorders. Emergencies.

RESUMEN

Objetivo: identificación de la prevalencia, características y motivos que llevaron a la puérpera a buscar atención de emergencia y asociación con el tipo de parto. Métodos: estudio cuantitativo con diseño transversal. Datos extraídos de la información contenida en los registros de Atención de Urgencias en un hospital universitario de mujeres que se encontraban en el puerperio. Para la recolección de datos, se utilizó un instrumento específico, analizado mediante estadística descriptiva simple y la prueba de chi-cuadrado, utilizando el software Statistical Package for Social Science. El proyecto fue aprobado por el Comité de Ética en Investigación. Resultados: se incluyeron 89 registros de puérperas que acudieron a Urgencias, lo que corresponde a una prevalencia del 16%. De las 89 mujeres, el 60,6% se había sometido a cesárea. Los principales motivos que llevaron a la búsqueda de Urgencias fueron: cambios en la herida quirúrgica (55%) y aumento del sangrado vaginal (20,2%). Hubo asociación entre una mayor búsqueda de Urgencias en el puerperio entre mujeres que tuvieron un parto por cesárea. Conclusión: la prevalencia de búsqueda de urgencias en la muestra de estudio fue del 16%, siendo el principal motivo los cambios en la herida quirúrgica.

Descritores: Periodo posparto. Trastornos puerperales. Urgencias médicas.
INTRODUCTION

The puerperium or postpartum period begins soon after the placenta is removed and ends in about 40 days, and the repercussions generated by pregnancy and childbirth may be present in women for up to one year after delivery. During this period, women undergo changes in the body, mind and in social aspects, due to the previous condition of pregnancy and childbirth. In this way, they are vulnerable and susceptible to the emergence of injuries and diseases.\(^{11}\)

Although most of the changes are physiological, many complications can arise during this period, being observed more frequently: hemorrhages, thromboembolic disorders, infections and depression.\(^2\) These pathological changes, if not identified and treated, can lead to maternal deaths.

The relevance of complications in the puerperal period can be elucidated by data from the Informatics Department of the Unified Health System (Datasus). In 2019 alone, there were 1576 maternal deaths (during pregnancy or up to one year after delivery) and, of these, 939 occurred in the puerperal period (59.6%).\(^3\) Among the causes of deaths during the puerperium, were more frequent: hypertensive syndromes (371 cases); birth complications (189 cases); postpartum hemorrhage (137 cases); puerperal infections (79), among others.\(^3\)

Problems and complications are common in the puerperium and can arise once the woman starts to focus her attention on the newborn (NB) and often forgets about self-care. The study showed that 62.9% of women reported daily self-care practice, being more related to aspects of body hygiene, perineal, surgical (if applicable) and breast incision, however, 56% reported that during this period they had difficulty urinating and 54.9% to evacuate, due to care and demands with the NB.\(^4\)

Thus, the puerperal evaluation is necessary and essential. A study with 314 postpartum women, examined from the seventh to the tenth day postpartum, identified that 5.1% of the cases treated were pathological puerperium, with more frequent cases of mastitis and surgical wound infection and 1.6% had the need of re-hospitalization.\(^5\) It is noteworthy that cases of re-hospitalization can directly impact complications for mothers and newborns. A study carried out in Piauí with 52 women who presented puerperal mastitis showed that all of them required hospitalization and intravenous antibiotic therapy, and only 15.4% maintained breastfeeding and 5.8%, recurrence of the infection.\(^6\)

In addition to physical changes, a Canadian cohort follow-up study warns that generalized anxiety disorders and symptoms of major depression were commonly found in postpartum women who had never had this type of disorder throughout their lives,\(^7\) emphasizing possible changes in mental health in the period.

Attention to gynecological and obstetrical urgencies and emergencies is one of the guidelines of the Urgencies and Emergencies Care Network of the Unified Health System, given the risks that this

Search for emergency care in the postpartum period. population presents. In the Hospital Care component, more specifically the Urgency and Emergency Hospital Doors, the focus is on the service aimed at the spontaneous demand of various health conditions, including obstetric and especially puerperal conditions.\(^8\) Therefore, the importance of Emergency Care as a gateway to the prevention and treatment of puerperal complications.

Puerperal health is also one of the goals of the Pact for Health, being the reduction of maternal mortality\(^9\) a priority agreed upon by federal entities. Postpartum follow-up, especially in the first week after delivery, is also a priority for Rede Cegonha (Stork Network, in free translation, where the figure of the “stork” symbolizes the animal that delivers the baby), created in 2011 by the Ministry of Health, which aims to ensure care and rights for women in the pregnancy-puerperal cycle.\(^9\)

Thus, based on the literature review, it appears that during the postpartum adaptation period, women can present complications, as this is a period characterized by the appearance of drastic physiological and psychological changes. However, there is a scarcity of studies that address complications in the puerperium, outcomes and reasons for seeking/need of emergency care during this period, justifying this study.

Given the above, this study aimed to: identify the prevalence, characteristics and reasons that led the mother to seek the Emergency Care (EC); and association with type of delivery, in a teaching hospital.

METHOD

This is a quantitative study, with a cross-sectional outline, carried out by consulting medical records and Emergency Care forms of women who were experiencing the postpartum period. Data were collected from August 2018 to February 2019, in a teaching hospital in the interior of the State of Minas Gerais, Brazil.

The study sample was determined by convenience, during the collection period. Between July and January, there were 557 deliveries in the institution, of which: 295 normal vaginal deliveries; 260, caesarean section; two forceps deliveries. During this period, 88 curettages resulting from abortion or placental remains were also performed. Eighty-nine records of puerperal women who sought the Emergency Care during the collection period were analyzed, corresponding to all searches. All records of complications occurring up to 40 days after delivery, in the period determined for data collection were included. Emergency care records of postpartum women who sought the service 40 days after delivery and outside the collection period were excluded, corresponding to the exclusion criteria of the present study.

Data were extracted from the information contained in the Emergency Care records and, when necessary, the information was completed by consulting medical records at the Medical Archive Service or at the own sector.

A specific instrument for data collection was used, developed by the researchers, which was
tested in a pilot study. This instrument had closed and open questions about maternal sociodemographic data (date of birth, race, marital status, education, occupation and origin), clinical data (diseases, smoking, alcohol consumption and use of illicit drugs), obstetric data (pregnancy number, childbirth, abortion and type of delivery), data regarding the return to the Emergency Care in the postpartum period (intercurrences and complications, consultation conduct) and variables related to re-hospitalization.

After collection, the data were coded, with double entry typing, validated and stored in Excel® spreadsheets. Later, they were imported into the Statistical Package for the Social Science (version 23) and calculated using simple descriptive statistics (absolute frequencies and percentages), measures of centrality (average, median, mode) and dispersion (standard deviation and minimum and maximum). The association between the type of delivery and the search for an Emergency Care was verified using the chi-square test, with a significance level of less than 0.05.

This study is part of a larger project entitled “Puerperal Assistance: directing Public Health strategies” approved by the Research Ethics Committee (CEP) of the Federal University of Triângulo Mineiro, opinion number 2,148,698 of June 30, 2017. Thus, all its development was directed and conducted by the Guidelines and Regulatory Norms for Research involving human beings, contained in Resolution 466/12/CNS/MS.

RESULTS

The prevalence of search for the Emergency Care by mothers assisted in the institution during the study period was 16%, based on the number of deliveries and search in the puerperal period.

As for the sociodemographic characteristics, of the 89 postpartum women who sought the Emergency Care, the mean age was 26.55 (± 7.39) years, ranging from 14 to 44 years. The majority declared themselves white (64%), single (64%) and lived in the municipality where the service was provided (73.7%). Regarding lifestyle and medical history, most pregnancies had some pathology (51.6%), with hypertensive syndromes (20.2%), diabetes (7.9%) and urinary tract infection (6.7%) being the most frequent. None of the puerperal women reported illicit drug use; 6.1% were smokers and 4.5% alcoholics. Data on obstetric history are presented in the table below (Table1).

Among the puerperal women who sought the Emergency Care, 60.6% had undergone a cesarean section; 21.2% vaginal delivery; (42.9% with episiotomy); one, forceps; and seven had performed post-abortion curettage; 95.4% gave birth at the institution and 4.6% sought care by spontaneous demand. The reasons for searching for the Emergency Care are shown in table 2.

From the data presented in table 2, it can be seen that the main reasons that led to the search for Emergency Care were: changes in the surgical wound (55%); perception of increased vaginal bleeding (20.2%); pain (9.0%); fever (7.9%); breast Search for emergency care in the postpartum period. engorgement (6.7%) and abnormal vaginal discharge (6.7%).

Regarding the conduct in the consultations, 55.1% were medicated, 24.7% underwent exams (laboratory and/or imaging) and 2.2% required readmission. None of the puerperal women required hospitalization in the Intensive Care Unit and blood transfusion.

Characterizing the readmissions, one occurred due to the need for intravenous treatment for pyelonephritis and a puerperal woman who complained of vaginal bleeding required readmission for curettage. Both mothers had a normal vaginal delivery; the average number of days of readmission was 2.5 days and both were discharged in good general condition. The prevalence of readmissions in the puerperium, considering the births in the period, was 0.36%.

Table 3 shows that there was an association between greater search for Emergency Care in the puerperal period among women who had cesarean delivery. The occurrence of forceps delivery cannot be compared due to its low occurrence in the study sample, although 50% of women who underwent forceps in the period sought the unit.

Discussion

Promoted by the World Health Organization, the 72nd World Health Assembly, held in 2019, pointed out among the main strategies for the prevention of maternal and neonatal deaths, the need for qualified professionals to assist the pregnancy-puerperal cycle. In this same assembly, the importance of puerperal care was discussed, since this period is considered ideal to initiate or maintain attention not only focused on maternal and neonatal conditions, but also a favorable time to identify or prevent chronic diseases and mental disorders. Thus, the magnitude of puerperal care for the mother-child binomial is verified.

The puerperal consultation is one of the care quality assessment items of the Programa de Humanização ao Parto e Nascimento - PHPN (Delivery and Childbirth Humanization Program, in free translate) and should preferably take place in the first week up to 42 days postpartum. It consists of a primary care activity and puerperal women must be referred to the units where they received prenatal care. This consultation aims to prevent and treat puerperal complications and also screen for cases that need urgent and hospital emergencies, which are target of this study.

Other studies indicate an adherence rate to puerperal return ranging from 16.8 to 75.2%, being considered the item with the worst score on the PHPN. It appears that this number is far below what is desired when compared to the United Kingdom, where adherence to puerperal consultation presents an index of 91%. Seeking to identify flaws or needs for improvement in puerperal care in primary care, the review study found: inadequate physical structure; scarcity of human and material resources; lack of vaccines for vaccinal update and of medicines; inexistent or inadequate physical space to carry out health education activities; deficit in screening for postpartum depression; inflexibility in scheduling...
appointments; failure to search for absentees and to investigate the reasons that led to non-adherence; and low coverage of home visits (restricted to women who underwent prenatal care). The study pointed out that a good assessment of breastfeeding is performed during the consultation, however the focus is on the NB and not on the mother. This study reflects one of the main reasons for seeking emergency care,

Table 1. Average, standard deviation, minimum and maximum values of quantitative variables related to the obstetric history of the 89 postpartum women who sought the Gynecological and Obstetric Emergency Care, Uberaba, MG, Brazil, 2019.

| Variables             | Average | Standard deviation | Minimum | Maximum |
|-----------------------|---------|--------------------|---------|---------|
| Gestation number      | 2.2     | 1.37               | 1       | 6       |
| Number of deliveries  | 1.84    | 1.11               | 0       | 5       |
| Number of abortions   | 0.36    | 0.69               | 0       | 3       |

Table 2. Distribution of reasons for searching of the 89 postpartum women who sought the Gynecological and Obstetric Emergency Care, Uberaba, MG, Brazil, 2019.

| Reason for searching          | N    | %     |
|-------------------------------|------|-------|
| **Breasts**                   |      |       |
| Breast engorgement            | 6    | 6.7   |
| Breast pain                   | 2    | 2.2   |
| Mastitis                      | 1    | 1.1   |
| Without changes               | 80   | 89.9  |
| **Genitalia**                 |      |       |
| Abnormal vaginal discharge    | 6    | 6.7   |
| Cardinal signs in episiotomy  | 4    | 4.5   |
| Check IUD placement           | 3    | 3.4   |
| Legion (syphilis)             | 1    | 1.1   |
| Others                        | 1    | 1.1   |
| Without changes               | 74   | 83.1  |
| **Bleeding**                  |      |       |
| Increased vaginal bleeding    | 18   | 20.2  |
| Without changes               | 71   | 79.8  |
| **Surgical wound**            |      |       |
| Cardinal signs                | 49   | 55    |
| Without changes               | 40   | 45    |
| **Nonspecific infectious signs** |  | | |
| Fever                         | 7    | 7.9   |
| No temperature rise           | 82   | 92.1  |
| **Other complications**       |      |       |
| Pain                          | 8    | 9     |
| Pressure increase             | 4    | 4.5   |
| Dysuria                       | 4    | 4.5   |
| Need for curettage            | 2    | 2.2   |
| Headache                      | 2    | 2.2   |
| Pyelonephritis                | 1    | 1.1   |
| Lower limb edema              | 1    | 1.1   |
| Urinary Retention             | 1    | 1.1   |
| Constipation                  | 1    | 1.1   |
| Rashes                        | 1    | 1.1   |
| Dizziness                     | 1    | 1.1   |
| Change in continuous medications | 1 | 1.1 |
| No other changes              | 62   | 69.7  |
In addition to health care focused on the NB, mothers also prioritize the needs of the NB, often to the detriment of their own health. Based on the reports of 28 postpartum women who had puerperal complications, it can be seen that the health of the NB for the mother is an essential concern. In the statements, it was possible to identify that breastfeeding for mothers is more important than the puerperal complication itself, due to the recognition of the benefits of breastfeeding for the NB and maternal love. The disease and hospitalization for these women were experienced with sadness, despair, frustration, denial and longing, especially when breastfeeding had to be stopped.\(^\text{(16)}\)

A cohort study with 273 mothers in the interior of the state of São Paulo observed that adherence to puerperal consultation in primary care varied according to the care model, with 46.9% of puerperal women returning to consultations in traditional BHU and adherence to consultation in family health strategies of 69.7%, being considered a significant difference in adherence.\(^\text{(14)}\)

A study on factors related to non-adherence to postpartum return was carried out in Rio Grande do Sul with 572 postpartum women. Among the absentees, there was an association with women with lower income; low education level; who had morbidity during pregnancy; UHS users and women who did not use contraceptive methods. The results identified that the least assisted group was also the group most susceptible to puerperal complications.\(^\text{(15)}\) This susceptibility also appears in the study’s findings, since most puerperal women who sought the Emergency Care had a pregnancy classified as high risk (pregnancy progressed with pathology).

A study showed an index of puerperal and post-abortion complications of 0.73% in public institutions and 0.67% in private ones. When analyzing the causes of complications, it was found that 3.8% were acquired during hospitalization for birth in private institutions and 2.5% in public institutions. The main complications were: surgical wound infection (cesarean section) - 9.4%; postpartum hemorrhages (8.2%); and post spinal puncture headache (7.4%). The puerperal complications also represented an increase in hospitalization days, with a mean hospitalization of 2.4 days for physiological deliveries and an increase of 5.1 days for readmissions secondary to puerperal complications.\(^\text{(17)}\) Comparing to the data in the present study, it appears that the readmission/complication rate was lower than the values found (0.36%), as well as their duration, which had an average of 2.5 days, with good recovery.

### Table 3. Association between type of delivery and need to search for Gynecological and Obstetric Emergency Care, Uberaba, MG, Brazil, 2019.

| Type of delivery | Search for EC- yes (n) | % | No search for EC (n) | % | Total | p |
|------------------|------------------------|---|---------------------|---|-------|---|
| Cesarean         | 60                     | 23.1 | 200                 | 76.9 | 260   | 0.040 |
| Another type of delivery | 29 | 9.8 | 268 | 90.2 | 297 |
| Normal birth     | 21                     | 7.1 | 274                 | 92.9 | 295   | 0.367 |
| Another type of delivery | 68 | 26.0 | 194 | 74.0 | 262 |

* χ² Test

A study evaluated the characteristics of the 53 maternal deaths that occurred in the state of Goiás from 2010 to 2016, and found that the average age of women was 27 years; 55% were single; 8% were of advanced age (over 35 years old); 12% were illicit drug users; 41% of pregnancies had hypertensive syndromes and 61% underwent cesarean section. Among the causes of death, hemorrhages were the most frequent (21%), followed by puerperal infections (17%) and hypertensive syndromes (13%), and it was observed that 83% of deaths occurred in the puerperal period.\(^\text{(18)}\) Although it did not result in deaths, there are the following similarities between the cases of death and the mothers who needed emergency care: maternal age; most were single; hypertensive syndromes were the most frequent complications in pregnancy and most had undergone a cesarean section. Having presented hypertension during pregnancy and cesarean delivery was associated with cases of severe maternal morbidity, in a study carried out in Minas Gerais\(^\text{(19)}\), showing the importance of these conditions for negative outcomes.

In the study sample, there was an association between greater search for Emergency Care in the puerperal period among women who had cesarean delivery. Similar data were obtained in a cohort study carried out in Rio Grande do Sul with 3984 postpartum women. Among the women interviewed, 11.4% had early complications, the most common being: postpartum infections (3.4%); anemia (1.8%) and hemorrhages (1.7%). Cesarean delivery was associated with a 56% higher risk of early complications, 2.98 times higher of postpartum infections; 79% higher risk of urinary tract infection; 2.40 times greater pain; 6.16 times higher risk of headache and 12 times higher risk of anesthetic complications, when compared to data from women undergoing vaginal delivery.\(^\text{(20)}\) These associations corroborate our results.

Regarding urgent and emergency care, there is a scarcity of studies on the subject involving the obstetric population.

Over a period of 34 months, 48 emergency obstetric care sessions were carried out in a military hospital in Mexico. The mean age of women was 29 years and, after screening, 17% were classified as emergencies and 83% as urgencies. Among the emergency cases, the most frequent were: postpartum hemorrhages (12.5%), puerperal infections (4.2%) and exacerbation of chronic pathologies (2.1%). Half of the search cases occurred in the puerperal period, with half being classified as physiological alterations in the puerperium and half...
as pathological alterations. Among the puerperal women, 32% required surgical treatment and 68% were discharged after clinical care. Of the 48 women attended, three died and all were postpartum. Our results contrast with the Mexican study, since over a period of six months, we had 89 requests for emergency care. Although the demand was higher in the sample, only one postpartum woman underwent a surgical procedure and there was no record of any death.

A study on the evaluation of emergency obstetric care in a reference teaching hospital in Recife analyzed 377 occurrences and found that 3.2% of women sought the service in the puerperium and, of these, 74.5% sought the service by spontaneous demand. The findings of this study also contrast with the results, since 16% of the puerperal women sought the EC and 4.6% sought the service by spontaneous demand (without referral). This difference can be explained by the fact that all puerperal women who give birth in the institution are instructed to seek the unit in case of urgency/emergency.

Emergency care records of 736 women in a hospital in Fortaleza were analyzed, where 2.6% were postpartum. Among the puerperal women who sought the EC, 47.3% did not present any symptoms of puerperal complications; 66.6% went to remove the stitches from the cesarean section, and 33.4% wanted to certify the physiology of the cesarean healing process; 52.7% had signs of complications in the surgical wound (signs of infection or bleeding). It was verified by the results that the puerperal women were unaware of the real signs and symptoms that characterize urgencies and failures in guidance regarding the search for primary care, since the problems detected were subject to primary care actions.

These data are similar to those found in the study, as 55% sought the unit for changes in the surgical wound; 20.2% due to the perception of increased vaginal bleeding; 9.0% due to pain; 7.9% for nonspecific fever; 6.7% for breast engorgement; 6.7% for perception of abnormal vaginal discharge. There was also a search to check the positioning of the IUD, to assess syphilis lesions, among others, verifying that many of the interventions are subject to primary care and reflect flaws in the guidelines and lack of knowledge about the characteristics of urgency and emergency care.

It is necessary to rethink postpartum health care, seeking reasons for adherence and non-adherence to primary care. It is noteworthy that the urgency and emergency services are intended for the care of acute problems of high gravity that require quick and immediate assistance, especially when there is a risk of imminent death. However, as in the study, it is observed that the population seeks these units without presenting urgent problems, which can contribute to work overload, in addition to delays, when it is necessary and imminent, compromising the quality of the service. Thus, it is urgent to raise the awareness of the population in order to identify conditions that are subject to and not subject to emergency assistance.

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As limitations of the study, a shortage of studies on the subject is noted, which makes it difficult to compare and discuss the results, as well as the study design, since the results cannot be generalized to other realities. Thus, there is a need to carry out studies on the subject, given the magnitude of puerperal complications and their possible impact on maternal mortality and the quality of life of newborns. Finally, further studies with different designs are suggested.

The study contributes by presenting the prevalence, characteristics, reasons for looking for EC in the puerperal period and the relationship with the type of delivery, and from this, it collaborates with qualified care and supports individual and collective health actions, aimed at women who experience a unique period. It is expected, based on these results, to help new research and care improvements in the area of women's health.

CONCLUSION

The prevalence of seeking emergency care in the study sample was 16%, and the main reasons that led the mothers to seek the emergency gynecological and obstetrical care were changes in the surgical wound and increased vaginal bleeding. Most were medicated and discharged and the prevalence of readmissions was relatively low, with good evolution for all women. There was an association between cesarean delivery and greater demand for EC and it was found that many of the interventions were subject to primary care.

Thus, it if emphasized the importance of identifying the possible causes that lead these women to seek specialized care and, supporting health actions that prevent unnecessary demand, postpartum complications and the consequent re-hospitalization.

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