

CLINICAL AND OBSTETRIC COMPLICATIONS EXPERIENCED BY WOMEN IN PRENATAL CARE

Rafaella da Silva Calegari¹, Helga Geremias Gouveia², Annelise de Carvalho Gonçalves³

ABSTRACT: The objective was to get to know the clinical and obstetric problems women experience in prenatal care and to verify whether the women's reports agreed with records on the prenatal care history, associating the problems with the type of birth. A cross-sectional study was undertaken at a University Hospital, involving 361 puerperal women between February and April 2013. In the analysis, descriptive statistics and the chi-squared test were applied. It was observed that 67.9% of the women experienced some problem. The most frequent was urinary tract infection, but the records in the prenatal history agreed with the reports in cases of hypertensive syndrome, urinary tract infection, premature labor and gestational diabetes. No statistically significant association was found between the problems and the type of birth. These findings can permit the planning of actions to guide health promotion measures.

DESCRIPTORS: Woman's health; Obstetrics; Prenatal care.

INTERCORRÊNCIAS CLÍNICAS E OBSTÉTRICAS VIVENCIADAS POR MULHERES NO PRÉ-NATAL

RESUMO: Objetivou-se conhecer as intercorrências clínicas e obstétricas em mulheres no pré-natal e verificar a concordância do relato da mulher com registros da carteira de pré-natal associadas às intercorrências com o tipo de parto. Trata-se de um estudo transversal, em um Hospital Universitário, com 361 puérperas, de fevereiro a abril de 2013. Na análise, procedeu-se à estatística descritiva e aplicação do teste qui-quadrado. Observou-se que 67,9% das mulheres tiveram alguma intercorrência, a mais frequente foi a infecção do trato urinário, porém, houve coincidência entre registro na carteira pré-natal e relato nos casos de síndrome hipertensiva, infecção do trato urinário, trabalho de parto prematuro e diabetes gestacional. Não houve associação estatisticamente significativa entre as intercorrências e tipo de parto. Esses achados podem possibilitar o planejamento de ações que direcionem medidas de promoção de saúde.

DESCRIPTORIOS: Saúde da mulher; Obstetria; Cuidado pré-natal.

COMPLICACIONES CLÍNICAS Y OBSTÉTRICAS VIVIDAS POR MUJERES EN EL PRENATAL

RESUMEN: La finalidad fue conocer las complicaciones clínicas y obstétricas en mujeres en el prenatal y verificar la concordancia del relato de la mujer con registros en el archivo de prenatal, asociando las complicaciones con el tipo de parto. Se trata de un estudio trasversal, en un Hospital Universitario, con 361 puérperas, de febrero a abril del 2013. En el análisis, fueron aplicadas la estadística descriptiva y la prueba qui-cuadrado. Fue observado que el 67,9% de las mujeres vivió alguna complicación. La más frecuente fue la infección del tracto urinario, pero coincidieron los registros en el archivo prenatal y relatos en los casos de síndrome hipertensiva, infección del tracto urinario, trabajo de parto prematuro y diabetes gestacional. No fue encontrada asociación estadísticamente significativa entre las complicaciones y el tipo de parto. Esos hallazgos pueden posibilitar la planificación de acciones que dirigen medidas de promoción de salud.

DESCRIPTORIOS: Salud de la mujer; Obstetria; Cuidado prenatal.

¹RN.Universidade Federal do Rio Grande do Sul. Porto Alegre, RS, Brazil.

²RN. Ph.D. in Health Sciences, area Maternal and Perinatal Health. Nursing Professor, Universidade Federal do Rio Grande do Sul. Porto Alegre, RS, Brazil.

³RN. Ph.D. in Public Health. Nursing Professor, Universidade Federal do Rio Grande do Sul. Porto Alegre, RS, Brazil.

Corresponding author:

Rafaella da Silva Calegari
Universidade Federal do Rio Grande do Sul
Av. Panamericana, 257/303 - 91050-001 - Porto Alegre, RS, Brasil
E-mail: calegarirafaella@gmail.com

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● INTRODUCTION

Any woman in the pregnancy period needs and is entitled to high-quality prenatal care, which is important for maternal and fetal health⁽¹⁾. This high-quality and differentiated care, according to the gestational risk, promotes improvements in the health of both and prevents possible complications⁽²⁾.

Pregnancy is a physiological phenomenon that involves physical, social and emotional changes that can imply risks for the woman and for the fetus. Part of the pregnant women, due to particular characteristics, presents a greater probability of a negative evolution in the pregnancy. These are the so-called high-risk pregnant women⁽³⁾. In high-risk as well as in habitual-risk pregnancies, changes may occur in the physiological risk of the pregnancy, which we call obstetric complications, in which the evolution and progress of the physiological pregnancy process change. This complication can often influence the outcome of this pregnancy⁽⁴⁾.

In most cases, normal birth is the safest and healthiest way for the infant's birth. Many unnecessary caesarean sections are still done. These should only be done when there is some risk for the mother and/or for the baby⁽¹⁾.

In 2013, (56.6%)⁽⁵⁾ of the deliveries in Brazil were caesarean sections. The World Health Organization (WHO) recommends a caesarean section rate of 15% at most⁽⁶⁾. The cases of pregnant women with hypertension, for example, are entailing an increase in the incidence rate of caesarean sections, as these are considered severe disorders during pregnancy⁽⁷⁾.

Among the causes of maternal death, the prevailing causes in Brazil are hypertension, hemorrhage and puerperal infection. In Rio Grande do Sul, the primary cause is hypertension⁽⁸⁾.

According to WHO, "more than half a million women around the world die due to maternal causes each year"^(9:1). Maternal and also fetal deaths often occur due to problems related to prevention, that is, causes that could be avoided during prenatal consultations⁽⁹⁾.

Among the eight Millennium Development Goals (MDG) established by the United Nations Organization (UNO), the fifth goals proposed the reduction of maternal mortality, between 1990 and 2011, by three quarters. In a report presented in 2014, it was appointed that, between 1990 and 2011, Brazil reduced 55% of the deaths, from 141 to 64 deaths per 100 thousand live births. Nevertheless, the maternal death ratio still exceeds the target established for 2015 of 35 deaths per 100 thousand live births, showing that Brazil faces challenges to achieve the recommended reduction in maternal mortality⁽¹⁰⁾.

The need for humanized obstetric care and a strong bond between the women and the health service is highlighted. In some cases, the diagnosis of the clinical and/or obstetric complication in prenatal care is reached at a late stage and can culminate in negative maternal-fetal conditions⁽¹¹⁾. The problems could be avoidable in prenatal care through measures like education and information services and well-equipped reference sites of easy access to these women⁽¹¹⁾, as well as appropriate monitoring to favor an early diagnosis and treatment. All women, even before getting pregnant, should have access to the health services and suitable information to properly conduct their pregnancy, through the use of communication media, home visits and educative activities⁽³⁾.

In view of the repercussion of the complications for the woman, fetus or infant, it is relevant to get to know the frequent clinical and obstetric complications women experience in prenatal care and associate them with the type of birth. These data can contribute to the planning and implementation of health promotion actions and measures for these women. In addition, nursing can intensify health education measures and strategies to prevent these events, guiding the care for the pregnant women attended at the place of study.

● METHOD

This study is a sub-analysis of the research entitled "Factors associated with the execution of caesarean sections at a University Hospital". A quantitative and cross-sectional study was undertaken. The research was developed at the Obstetric Inpatient Service of a University Hospital in Porto Alegre between February and April 2013. To calculate the sample size, the total number of births occurred in 2011 was considered, i.e. 00203714, and the caesarean section rate, which amounted to 37.4% (1392 caesarean sections). Considering the caesarean section rate, with a 5% absolute error margin and a 95% confidence level, the sample consisted of 361 postpartum women. For this calculation, the software Win Pepi version 11.43 was used.

The sample included women who gave birth at the Obstetric Center of the place of study, whether through vaginal birth or (elective or emergency) caesarean section. Women without psychological conditions to answer the questions, cases of fetal death, with birth weight under 500 grams and/or gestational age of less than 22 weeks were excluded.

The primary data were obtained from the even worksheet of the restricted area of the obstetric service, from records in the printed and electronic maternal histories, from the prenatal monitoring form and from the structured interview. A pilot test was undertaken by means of the application of the data collection tool to ten postpartum women. Adjustments and adaptations were made, also tested, until the final version of the tool was obtained.

The research variables were the sample characteristics, the obstetric history, pregnancy complication, according to the notes on the prenatal monitoring form and/or reported by the woman, and the type of birth.

For the analysis, descriptive statistics were used and, to verify the association between the research variables, the chi-squared test. The software used was SPSS version 18. As the study involved human beings, the initial project was submitted to the institution's Research Ethics Committee for ethical assessment and approved under registration number 120466 on January 31st 2013. The research complied with National Health Council Resolution 466/12 concerning the ethical aspects⁽¹²⁾.

● RESULTS

Among the study participants, 245 women (67.9%) had some clinical and/or obstetric complication in their current prenatal period, 120 of whom (49%) had more than one complication registered in the prenatal monitoring form (Table 1).

Among the women who experienced clinical and/or obstetric complications in their current pregnancy, registered in the prenatal monitoring form, the majority was in the age range between 16 and 34 years of age $n=207$ (84.5%), had more than eight years of education $n=133$ (54.3%) and a family income of up to two minimum wages $n=161$ (65.7%). As regards the obstetric history, the majority had two or more pregnancies $n=153$ (62.4%), of whom about half was primiparous $n=78$ (51%) (Table 2).

The most frequent complication among the women according to the prenatal monitoring form was urinary tract infection (104 cases). When the reported information was analyzed, greater coincidence (>90%) was found between records about the problem in the prenatal monitoring form and what the woman reported in cases of hypertensive syndrome, urinary tract infection, premature labor and gestational diabetes (Table 3).

As for the main obstetric complications the women presented, none showed a statistically significant association with the type of birth – outcome (Table 4).

Table 1 – Distribution of women according to number of clinical and/or obstetric complications in current pregnancy registered in prenatal monitoring form. Porto Alegre, RS, Brazil, 2015 (N=361)

Number of complications	N	%
None	116	32.1
One complication	125	34.6
Two complications	75	20.8
Three complications	29	8
Four complications	11	3
Five complications	3	0.8
Six complications	1	0.3
Seven complications	1	0.3
Total	361	100

Table 2 – Distribution of women who experienced some clinical and/or obstetric complication in their current pregnancy according to age, education, family income, obstetric history. Porto Alegre, RS, Brazil, 2015 (N=245)

Variable	N	%
Age		
< 15 years	6	2.4
16 to 34 years	207	84.5
> 35 years	32	13.1
Education		
< 8 years of education	66	26.9
8 years of education	46	18.8
> 8 years of education	133	54.3
Family income		
Up to one minimum wage	68	27.8
Two minimum wages	93	37.9
Three or more minimum wages	70	28.6
Did not know	14	5.7
Obstetric history		
First pregnancy	92	37.6
Two or more pregnancies	153	62.4
Previous birth (N=153)†		
No previous birth	14	9.1
Primiparous	78	51
Multiparous	61	39.9

†Considered only in case of two or more pregnancies (obstetric history).

Table 3 – Distribution of women who experienced some clinical and/or obstetric complication in their current pregnancy according to agreement between records in prenatal monitoring form and women's reports. Porto Alegre, RS, Brazil, 2015 (N=245)

Records in prenatal monitoring form		Women's report				Total
		Yes	%	No	%	
Premature amniorrhexis‡	Yes	58	81.7	13	18.3	71
	No	10	5.8	163	94.2	173
Gestational diabetes‡	Yes	21	91.3	2	8.7	23
	No	4	1.8	217	98.2	221
Streptococcus B‡	Yes	24	58.5	17	41.5	41
	No	2	1	201	99	203
Premature birth‡	Yes	23	92	2	8	25
	No	11	5	208	95	219
Hypertensive syndrome‡	Yes	37	94.9	2	5.1	39
	No	15	7.3	190	92.7	205
Urinary tract infection	Yes	98	94.2	6	5.8	104
	No	23	16.3	118	83.7	141

‡One unregistered case.

Table 4 – Association between obstetric complications and type of birth. Porto Alegre, RS, Brazil, 2015 (N=245)

Obstetric Complication		Vaginal Birth		Caesarean section		p value
		N	%	N	%	
Premature amniorrhexis§	Yes	48	67.6	23	32.4	0.780
	No	112	64.7	61	35.3	
Gestational Diabetes§	Yes	12	52.2	11	47.8	0.234
	No	148	67	73	33	
Streptococcus B§	Yes	26	63.4	15	36.3	0.890
	No	134	66	69	34	
Hypertensive syndrome§	Yes	21	53.8	18	46.2	0.134
	No	139	67.8	66	32.2	
Premature labor§	Yes	15	60	10	40	0.691
	No	145	66.2	74	33.8	
Urinary tract infection	Yes	69	66.3	35	33.7	0.966
	No	92	65.2	49	34.8	

§One unregistered case.

● DISCUSSION

In this study, 245 women had at least one complication in the prenatal period. In a study undertaken at a high-risk pregnancy outpatient clinic, that frequency was even higher, as 91.8% of the histories assessed indicated that the women had an obstetric complication in their current pregnancy⁽¹³⁾. On the opposite, lower rates of pregnancy complications were found in other studies⁽¹⁴⁻¹⁵⁾. At a referral institution for high fetal risk pregnancy in Rio de Janeiro, 20.3% of the women presented pre-existing clinical conditions and clinical complications and 45.2% had some obstetric condition in their current pregnancy⁽¹⁴⁾. At a teaching maternity, 42.7% of the pregnant women attended had an obstetric complication⁽¹⁵⁾.

Concerning the characteristics of the women with pregnancy complications, a study highlights that 64% were between 26 and 35 years of age, 56% of the women had finished basic education, 68% had two or more pregnancies, and 46% between one and three births⁽¹¹⁾. Those data support the present findings.

The obstetric complication rates rise with age (65.4% for women between 40 and 44 years and 125.9% for women between 45 and 49 years)⁽¹⁶⁾. That analysis was not developed in this study, but it is highlighted that 32 (13.1%) women were aged 35 years or older, representing a gestational risk factor that permits prenatal care in primary health care services⁽¹⁷⁾. Nevertheless, it is emphasized that these factors should be verified throughout the prenatal period as, for example, the risk of complications of arterial hypertension increases gradually with age in pregnant women over 35 years of age. And the risks of pre-eclampsia and eclampsia increase in case of adolescent pregnancy⁽¹⁸⁾.

As regards the family income, a study presented that most women with some clinical and/or obstetric complication gained a family income between one and three minimum wages (39.4%)⁽¹⁴⁾. This finding is equivalent to the present findings, possibly due to the similarities between the institutions, both serving as referral institutions for high-risk pregnancy, which characterizes the attended women's profile.

It is highlighted that low education (less than five years of regular education), nulliparity and multiparity (five or more births) are considered gestational risk factors⁽¹⁷⁾, variables with low frequencies in this study.

Concerning the pregnancy complications, hypertensive complications occur in about 10% of all pregnancies and reoccur in 20% to 50% of subsequent pregnancies⁽¹⁷⁾. Urinary tract infection happens

in 17% to 20% of the women; the incidence rate of premature amniorrhexis varies between 3% and 18.5%, with a reoccurrence rate of 21%; the prevalence rate of gestational diabetes varies between 3% and 13% of the pregnancies, being the most common metabolic problem⁽¹⁷⁾. The rate of prematurity varies between 5% and 15%⁽¹⁹⁾. In this study, the frequency of the complications studied was similar to the rates appointed for Brazil.

The women's knowledge about their own and the baby's health conditions is considered a key point for proper pregnancy monitoring. In this study, part of the women had no knowledge on the complication they were experiencing, and that can be considered an aggravating factor for these women.

In that sense, 51.4% of the pregnant women at a maternity hospital in the city of São Paulo, who were submitted to screening for *Streptococcus B* had no records in their prenatal monitoring forms and 43.2% reported not knowing or recalling that they had been subject to this test⁽²⁰⁾.

Prenatal monitoring should include not only clinical, but also educational procedures, as these guide the woman about the evolution of the pregnancy⁽²¹⁾. The pregnant woman should accept not only what is offered, but also seek what she is entitled to, such as appropriate knowledge on her health problems during the pregnancy⁽²²⁾. Orientations about prenatal complications are extremely important, as they will reflect in care for this group of pregnant women in terms of treatment, and also in the identification of worsening in their own and/or the fetus' health condition.

As regards the type of birth, in a cohort study involving 500 pregnant women with severe pre-eclampsia, it was found that 22% of the women spontaneously started labor, against 28.2% of induced labor, while 49.8% had an elective caesarean section. Among the cases of induced labor, 67.4% had a vaginal birth, leading to a total caesarean section rate of 68.2%⁽²³⁾. In another studies involving pregnant women with hypertensive syndrome, 78.4% had a caesarean section⁽²⁴⁾. The caesarean section rates in those studies were higher than in the present study.

The decision about how to give birth in women with hypertensive syndromes should be taken in function of the gestational age, fetal vitality and severity of the condition⁽²⁴⁾. In pregnant women with pre-eclampsia/eclampsia, vaginal birth is preferable over caesarean section, thus avoiding the additional stress of a surgical procedure in situations of multiple physiological alterations⁽³⁾.

Data from a tertiary hospital in Portugal revealed that, among pregnant women with gestational diabetes mellitus, the non-elective caesarean section rate corresponded to 19.5%⁽²²⁾. It is important to highlight that gestational diabetes is not an absolute indication for caesarean section. The decision on the form of delivery is obstetric and the fetal weight should be considered. If the estimated fetal weight is 4500g or more, a caesarean section can be considered⁽³⁾.

In pregnant women with premature amniorrhexis at a university hospital, the caesarean section rate was 36.9%⁽²⁵⁾. In another study, premature amniorrhexis is not described as an indication for caesarean section. Therefore, the risks and benefits for mother and fetus should be analyzed⁽²⁶⁾. The reduction of the amniotic fluid volume adds up to the assessment of gestational age as a fundamental parameter in deciding on how to conduct the delivery⁽³⁾.

In view of the above, the best type of delivery for the woman should be the type that is most suitable to her gestational conditions and that best serves her baby⁽¹⁷⁾. Hence, during the pregnancy, the gestational risk factors should be taken into account, guaranteeing proper development and outcome of the pregnancy and the birth of a healthy infant.

● CONCLUSION

In conclusion, 245 interviewed women had one or more clinical and/or obstetric complications registered on their prenatal monitoring form, the most frequent being urinary tract infection. The records on the form coincided more with the woman's reports in case of hypertensive syndrome, urinary tract infection, premature labor and gestational diabetes, and a considerable number of women did not know about the complication.

This situation can entail greater repercussions, such as non-compliance with the treatment for not knowing or understanding that she is going through an atypical situation in pregnancy, and for not knowing the signs of worsening in the complication. It should be kept in mind that the large number of women with pregnancy complications can be related with the quality of prenatal care.

Characterizing the profile of these women with pregnancy problems is considered important, as knowing these data permits planning actions to guide health promotion measures for this group of women. Thus, the nursing team can intensify health education measures and strategies to prevent these events, orienting care for the pregnant women attended at the place of study.

Further research on the theme is suggested to clarify the reasons why women do not know what is happening during the pregnancy. The study limitations are related to the presence of few Brazilian studies to support further elaboration of the theme.

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