63 - INFLUENCE OF MATERNAL AGE ON PERINATAL RESULTS

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INTRODUCTION

In general, pregnancy is associated with anatomical and physiological adaptations, which cause changes in the mother, and maternal age alone has been questioned in several studies as a predisposing factor and / or causing changes in perinatal outcomes (Carniel, 2006; SANTOS et al, 2009; Surita E SILVA, 2009).

There is an impact of age of women on perinatal outcomes. According to Silva and Surita (2009) women at the extremes of age generally has less favorable results than the so-called young adult between 20 and 35.

Women with late pregnancy are at risk similar to teenagers in some respects, and higher in other situations, such as miscarriage, ectopic pregnancy, chromosomal abnormalities and congenital malformations.

Adolescent pregnancy is considered in some countries, especially in developing countries, a major public health problem, with its social and biological weapons, and the gestation age is becoming increasingly common due to effective birth control , advances in assisted reproductive technology, the home ment postponed to increased rates of divorce followed by new unions, women with higher education and advances in health care (Santos et al., 2009).

Whereas the Information System of Live Births by Birth certificate (DNV) is an important source of information for vital statistics, this research aimed to examine the influence of maternal age on perinatal outcomes from the Birth certificate Mothers living care in the city of Cajazeiras, Paraíba, in 2007, and this becomes a tool of assistance, which will put the knowledge about the influence of maternal age and perinatal outcomes of teenage mothers and mothers in adulthood.

Thus, their findings may be used for better understanding of epidemiological and support the planning of actions more appropriate to the health problems faced by the population investigated.

MATERIALS AND METHODS

This is an epidemiological research, an exploratory type of documentary. Held in the city of Cajazeiras - Paraíba, Brazil. Regarding ethical aspects, this research was based on the principles of beneficence, respect for dignity and justice that guide the conduct of research involving human subjects, as stipulated by Resolution No. 196/96 of the National Health Service (BRAZIL, 2008).

This research project was submitted to the Director of Regional Health Management IX was made the request in writing to this direction, so they could gain access to file statements of live birth. This project was also referred to the Committee on Ethics in Research, State University of Paraíba, for its review and approval.

Furthermore, it ensures that in the process of collection and dissemination of data requirements have been complied with the aforesaid resolution regarding the anonymity of the information contained on birth certificates relating to the subjects that comprised this study.

To collect data on these chips was built instrument with a space for the literal transcription of the records contained in DNV regarding pregnancy, childbirth and newborn. The data was collected directly in the archives of the Ninth Regional Health Cajazeiras, PB.

Were included as a sample of this survey data from 830 DNV found in the archives researched, corresponding to births that occurred from January 1 to December 31, 2007.

With a quantitative approach of the findings, the variables mother's age, data on pregnancy, childbirth and newborn contained on birth certificates were analyzed statistically.

The data collection instruments were listed and coded for using the statistical package Statistical Package for the Social Sciences (SPSS). To study the correlation between the variables, we used chi-square and Fisher exact test, adopting a significance level of 5% to reject the null hypothesis.

Based on this statistical analysis, tables were prepared containing absolute numbers and percentages and discussed in the light of literature relevant to theme.

RESULTS

Table 1 - Distribution of births according to maternal age and gestation length.

Maternal age	n	%	Duration of pregnancy The term preterm n	%	n	%	*p*
Until 18 years	119	14,5	5	0,6	114	13,9	
19 to 35 years	643	78,6	14	1,8	629	76,8	
> 35 years	56	6,8	3	0,4	53	6,4	**0,201**
Amount	**818***	**100**	**22**	**2,9**	**796**	**97,1**	

p (statistical significance test Chi-square see p <0.05).
*DNV were excluded without information.
Source: Birth certificate. Department of Health Cajazeiras, Paraíba: January-December, 2007.

As the data in Table 1 in both age groups surveyed had a prevalence of term gestation (between 36 weeks and 41

weeks and 6 days), representing 97.1% of cases. Statistically, there is no evidence that the age influence over the gestation length (p = 0.201), being independent variables.

For Moraes and Reichenheim (2000), clinical examination of the newborn shortly after his birth, in some situations, it is the only means available for both pediatricians and for researchers in the field of perinatal health to measure GI. Lack of access to prenatal care, or a later onset for the majority of Brazilian women, hinders the achievement of ultrasonography in gestational periods of greater diagnostic ability of this method. Moreover, the last menstrual period - LMP is unknown in some situations. In these circumstances the use of clinical examination of the newborn is presented as the only way to estimate the GI of the child.

In high-risk pregnancies often clinical or obstetric complications are present. In these situations, some particularities the possibility of obtaining the vaginal delivery. Prematurity, for example, which was present in 2.9% of cases in this study complicates the induction of labor, especially when there is no ripening of the cervix, influencing the increase in cesarean rate. (Nomura et al., 2004).

Table 2 - Distribution of live births for maternal age and mode of delivery.

			Type of delivery						
			Vaginal		Cesáreo		Ignored		n
Maternal age	**n**	**%**	**%**	**n**	**%**	**n**	**%**		***p***
Until 18 years	122	14,7	58	7	63	7,6	1	0,1	
19 to 35 years	652	78,6	277	33,3	372	44,8	3	0,4	
> 35 years	56	6,7	18	2,2	38	4,6	0	-	0,345
Amount	**830**	**100**	**353**	**42,5**	**473**	**57,0**	**4**	**0,5**	

p (statistically significant chi-square p <0.05).
Source: Birth certificate. Department of Health Cajazeiras, Paraíba: January-December, 2007.

The data shown in Table 2 report that, in relation to maternal age, there was a lower percentage of patients who progressed to vaginal delivery (42.5%). Yazlle et al. (2002) found that the occurrence of clinical abnormalities is directly proportional to age, affecting, often the increase in the incidence of cesarean sections. The authors describe the influence of maternal age on the incidence of clinical complications such as chronic hypertension and diabetes, and describe also increased the rate of cesarean delivery in nulliparous women aged over 35 years. Some maternal conditions associated with possible fetal compromise are usually more frequent and more severe in this age group and thus may increase the number of Cesarean section for fetal indication. The dystocia occurred during labor have also tended to occur more often among women with advanced age and are partly responsible for higher number of caesarean sections (ANDRADE, 2004).

In the present study found no significant association in the route of delivery and maternal age in the data reported here (p = 0.345). Since there is no information about the DNV option by cesarean section, there is no way to verify if the action was performed by obstetric need or only elective.

This study showed that, like elsewhere across the country, the occurrence of cesarean delivery (57%) in Cajazeiras in 2007, is far beyond that recommended by national and international bodies. According to World Health Organization (WHO) to meet the medical indications for surgical interruption of the pregnancy would require a C-section rates around 15%. The analysis of risk factors suggests that his statement appeared to be based not only on technical standards, but various reasons such as those raised in other studies, such as the belief that this type of delivery is a safe, painless and with greater comfort for the mother; notion that this intervention is improved quality of care for medical convenience; the possibility of tubal ligation, for disinformation and lack of participation of women in decisions related to pregnancy, lack of communication between doctor and patient, among other (Barbosa et al. 2003; Camané, 2002).

Table 3 - Distribution of live births according to maternal age and number of prenatal visits.

			Number of prenatal visits				
	n	**%**	**<7**		**7 and more**		
Maternal age			**n**	**%**	**n**	**%**	***p***
Until 18 years	121	14,8	79	9,7	42	5,1	
19 to 35 years	643	78,7	384	47,0	259	31,7	0,516
> 35 years	53	6,5	32	3,9	21	2,6	
Amount	**818***	**100**	**495**	**60,5**	**322**	**39,5**	

p (statistically significant chi-square p <0.05).
* DNV were excluded without information.
Source: Birth certificate. Department of Health Cajazeiras, Paraíba: January-December, 2007.

By correlating the variable maternal age and number of prenatal visits was not found statistical significance (p = 0.516), as the data shown in Table 3, ie, constitute independent variables. You may also be noted that most mothers in the study (60.5%) in both age groups made less than 7 prenatal visits. Gonçalves and Giant (2006) point out that the minimum number of visits recommended by the Ministry of Health (MOH) is 6 queries for a low-risk pregnancy. However, the data do not allow DNV an accurate analysis of data, since June as MS recommends as the ideal number of queries, DNV groups in this variable: none, 1-3, 4-6, 7 and more queries, and unknown. For this reason, in this research, to facilitate the statistical evaluation of the findings, grouped into <7 and 7 and more queries.

Nahagama and Santiago (2006) claim that participation in prenatal care is related to several factors, both those related to pregnancy or the health service. As the process of work involved in the health complex, and at the same time, a strong determinant in the results. The concern with the broadest coverage and adequate prenatal care in this study supports the ideas of Coutinho et al. (2003), to emphasize that, through this monitoring, you can perform actions in health education, how to guide pregnant women about the care of their own health and adopt a healthy lifestyle for you and your child identify situations risk for pregnancy and childbirth, and implement timely interventions to prevent adverse outcomes for mother and baby, and encourage the bond between the mother and health care program for women and children, to follow up later. For this to occur, the woman

should start prenatal care in the first quarter and be fully monitored throughout their pregnancies, thus accounting for more than six visits.

Table 4 – Distribution of birds according to maternal age and birth weight.

Maternal age			Newborn weight (g)						*p*
	n	%	Até 2.500 n	%	2.500 a 3999 n	%	>4000 n	%	
Until 18 years	122	14,8	8	1,0	106	12,9	8	1,0	
19 to 35 years	645	78,4	43	5,2	559	67,9	43	5,2	0,181
> 35 years	56	6,8	8	1,0	47	5,7	1	0,1	
Amount	**823***	**100**	**59**	**7,2**	**712**	**86,5**	**52**	**6,3**	

p (statistically significant chi-square p <0.05).

* DNV were excluded without information. Source: Birth certificate. Department of Health Cajazeiras, Paraíba: January-December, 2007.

Teen mothers have been considered at higher risk for adverse outcomes in birth weight and gestational age. However, it is suggested that there is a direct cause or independent determinant.

By correlating birth weight with maternal age (Table 4) revealed that 7.2% of all women had children weighing less than 2,500 g, and 1% among adolescents, 5.2% among adults and 1% of women aged over 35 years. Regarding infants, 86.5% had good birth weight, with proportional results between groups the ranges studied, and statistically not proved that there is influence maternal age on the weight of the newborn, with a significance of p = 0.181.

This study is in agreement with the research Mariotoni and Azevedo (2003) in which the authors found no differences in preterm and low birth weight among adults and adolescents, and in turn, brings out the character actor of care conditions in primary feature that can influence this factor.

Chronological age alone is not a good predictive factor in determining birth weight and must be considered along with other factors, particularly the socioeconomic. Overall the analysis of this impact is a complex issue, especially when many variables are simultaneously considered maternal. The analysis of biological events, especially those related to human development and pregnancy in their ages, should follow a model that addresses the various situations in the life of an individual. It is essential to consider the interaction of various dimensions, such as socioeconomic, psychological and cultural impact on the biological responses under consideration and / or studied. The great diversity of situations found within a social group may intervene, and give at the same time, different responses in the biological manifestations of the study groups (Kass et al., 2005).

FINAL THOUGHTS

It is understandable that health assessments are needed to establish levels and trends of specific outcomes, to identify its characteristics and determinants, as well as to evaluate the effectiveness of programs designed to influence the results.With respect to prematurity, the mothers in the study were within the ideal standards, however, reaffirms that it is necessary a more detailed analysis regarding the fidelity of the data.

With respect to low adherence to prenatal care, it is recommended that pregnant women to enroll early for the monitoring of pregnancy, which will monitor their risks it is exposed this way, it is necessary to establish health services strategies that enable the early entry of pregnant women in prenatal care, to ensure supply and access to services and, especially, to promote improvements in quality of care provided to women during pregnancy and puerperium.It is suggested, then, that efforts should be made to improve the quality of care offered by these services. It is therefore necessary to expand the coverage of programs for the health of women and children, motivate and train professionals for the practice of public health and multidisciplinary team, ensuring the completion of routine procedures in prenatal care and treatment of common complications of pregnancy, and organize the system of care between levels of care. It would be important also to recast the form of certificates of live birth, including the runs including the completion of the correct distribution of the number of prenatal visits for more consistent assessment of adherence to prenatal care.

It is believed that at the local level, adolescent and adult pregnant possibly subjected to the same socioeconomic conditions and prenatal care can produce results on the evolution of pregnancy, with similar biological characteristics in perinatal outcomes, making necessary an evaluation of factors socio demographic and economic data in order to ascertain the evidence of the influence of maternal age on perinatal outcomes.

REFERENCES

ANDRADE P. C, et al. **Resultados perinatais em grávidas com mais de 35 anos: estudo controlado**. Revista Brasileira de Ginecologia e Obstetrícia. v. 26. n. 9. p. 697-702. 2004;

BARBOSA, M. V. O, et al. **Parto cesárea: quem o deseja? Em quais circunstâncias? Caderno de Saúde Pública.** Rio de Janeiro. v. 19. n. 6. p. 1611-1620. 2003;CAMANO L.; SOUZA E. **Assistência ao parto e à tocurgia.** Manual de orientação. FEBRASGO. São Paulo, 2002;CARNIEL. E. F. et al. **A declaração de nascido vivo como orientadora de ações em nível local.** Revista Brasileira de Saúde Materno-Infantil. v. 3. n. 2. p. 165-174. 2006;

COUTINHO, T. et al. **Adequação do processo de assistência pré-natal entre usuárias do sistema único de saúde em Juiz de Fora - MG.** Revista Brasileira de Ginecologia e Obstetrícia. Juiz de Fora. v. 25. n. 10. p 717-724. 2003;

KASSAR, S. B. et al. **Peso ao nascer de recém-nascidos de mães adolescentes comparados com o de puérperas adultas jovens.** Revista Brasileira de Saúde Materno Infantil. Recife. v. 5. n. 3. p. 293-299. 2005;

MARIOTONI, G. G., AZEVEDO, A. B. F. **A gravidez na adolescência é fator de baixo peso ao nascer?** Revista Chilena de Pediatria. v. 71. n. 5. Santiago, 2003;

MORAES, C. L.; REICHECHEIM, M. E. **Validade do exame clínico do recém nascido para a estimação da idade gestacional: uma comparação do escore New Ballard com a data da última menstruação e ultra-sonografia.** Caderno de Saúde Pública. v. 16. n. 1. p. 1-19, 2000;

NAGAHAMA E. E. I.; SANTIAGO S. M. **O cuidado pré-natal em hospital universitário: uma avaliação de processo.** Caderno de Saúde Pública. Rio de Janeiro. v. 22. n. 1. p.173-179. 2006;

NOMURA R. Y. M, et al.. **Complicações maternas associadas ao tipo de parto em hospital universitário.** Revista Saúde Pública. v.38. n.1. São Paulo, 2004;

_____. Resolução Nº 196 de 10 de outubro de 1996. **Ministério da Saúde: Conselho Nacional de Saúde** –

Comissão Nacional de Ética em Pesquisa. Disponível em: <http://conselho.saude.gov.br/comissao/conep/resolucao.html>. Acesso em: 12 nov. 2008.SANTOS, G. L. N., et al. **Impacto da idade materna sobre os resultados perinatais e via de parto.** Revista Brasileira de Ginecologia e Obstetrícia. v. 31. n. 7. p. 326-334. 2009;

SILVA, J. L. C. P.; SURITA, F. G. C. **Idade materna: resultados perinatais e vias de parto.** Revista Brasileira de Ginecologia e Obstetrícia. Campinas. v. 31. n. 7. p. 321-325. 2009;

YAZLLE M. E. H. D., et al. **Incidência de cesáreas segundo fonte de financiamento da assistência ao parto.** Revista Saúde Pública. v. 35. p. 202-206, 2001.

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INFLUENCE OF MATERNAL AGE ON PERINATAL RESULTS

ABSTRACT

The increase in the incidence of pregnancy at extremes of reproductive life before the age of 20 and after 35 years-old, is actual. The gestation is associated with physiological and anatomical adjustments, which carry transformations of maternal organism and, the isolated maternal age has already been queried in several studies as a prevailing factor and/or cause of alterations on perinatal results. Thus, we aimed at identifying the influence of maternal age on perinatal results. Information contained in Certificate of Live Birth regarding the year 2007, Cajazeiras town, Paraiba. The variables studied were: duration of pregnancy, kind of birth, number of antenatal consultations realized and weight of new born, all correlated to maternal age. The data were analyzed and statistically codified by Statistical Package for the Social Sciences (SPSS), using the Chi-square test and a 5% significance level for the rejection of nullity hypothesis has been adopted. In a total of 830 DNV observed there was not statistical significance in the variable maternal age over perinatal results. There was prevalence of gestations at term, Caesarian birth, low adhesion to antenatal and ideal weight of new born among most mothers studied. This research provided the observation that maternal age as an isolated factor does not exert influence on perinatal results, so it becomes necessary the assessment of common characteristics in both age groups researched, such as socioeconomic and sociodemographic levels, aiming at observing the responsible correlations, mainly, because of high rates of Caesarian births and low adhesion to antenatal in the group studied. We conclude that in a local level, pregnant adolescents and adults possibly submitted to the same socioeconomic conditions and antenatal assistance presented similar perinatal results in both the variables researched.

KEYWORDS: Certificate of Live Birth. Maternal age. Perinatal results.

INFLUENCE L'ÂGE MATERNEL SUR RÉSULTATS PÉRINATAUX

RÉSUMÉ

L'augmentation de l'incidence de la grossesse aux extrêmes en âge de procréer avant 20 et après 35 ans de l'âge est une réalité. La grossesse est associée à des adaptations anatomiques et physiologiques, qui causent des changements dans la mère, et l'âge maternel seul a été remis en question dans plusieurs études comme un facteur prédisposant et / ou provoquant des changements dans les résultats périnataux. Ainsi, l'objectif était d'identifier l'influence de l'âge maternel sur la périnatalité. Nous avons analysé les informations contenues dans les déclarations de naissances vivantes pour l'année 2007 dans la ville de Cajazeiras Collection. Les variables étaient les suivantes: durée de la grossesse, le type de prestation, le nombre de visites prénatales faites et le poids des nouveau-nés, qui sont corrélés avec l'âge maternel. Les données ont été analysées statistiquement et codés par le Statistical Package for Social Sciences (SPSS) en utilisant le test du chi carré, l'adoption d'un niveau de signification de 5% à rejeter l'hypothèse nulle. Sur un total de 830 DNV n'a pas observé de signification statistique entre l'âge de la mère variable sur les résultats périnatals. La prévalence des grossesses à terme, le type de césarienne, une faible adhérence aux soins prénataux et le poids idéal de nouveau-nés dans la majorité des mères dans l'étude. Grâce à cette recherche peut être noté que l'âge maternel en tant que facteur ne suffit pas à influencer les résultats périnatals, rendant nécessaire l'évaluation des autres caractéristiques communes dans les deux groupes d'âge, comme le statut socio-économique et socio-démographiques, afin de déterminer les corrélations principalement responsable du taux élevé de césariennes et d'une faible adhérence aux soins prénatals dans le groupe d'étude. Il s'ensuit donc que, au niveau local, des adolescents et des adultes enceintes éventuellement soumis aux mêmes conditions socio-économiques et de soins prénataux présente les résultats périnataux similaire dans les deux variables.

MOTS-CLÉS: certificat de naissance. L'âge maternel. résultats périnatale.

INFLUENCIA DE LA EDAD DE LA MADRE RESULTADOS PERINATALES

RESUMEN

El aumento de la incidencia del embarazo en los extremos de la edad reproductiva antes de los 20 y después de 35 años de edad es una realidad. El embarazo se asocia con las adaptaciones anatómicas y fisiológicas, que causan cambios en la madre, y la edad materna solo ha sido cuestionado en varios estudios como un factor predisponente y / o cambios que causan en los resultados perinatales. Así, el objetivo fue identificar la influencia de la edad materna sobre los resultados perinatales. Se analizó la información contenida en las declaraciones de nacidos vivos para el año 2007 en la ciudad de Cajazeiras colección. Las variables fueron: duración del embarazo, tipo de parto, número de dichas consultas realizadas y el peso de los recién nacidos, que son todos los relacionados con la edad materna. Los datos fueron analizados estadísticamente y codificadas por el Statistical Package for Social Sciences (SPSS) mediante la prueba de chi-cuadrado, la adopción de un nivel de significancia del 5% de rechazar la hipótesis nula. En un total de 830 DNV no se observaron diferencias estadísticamente significativas entre la variable edad materna sobre los resultados perinatales. La prevalencia de embarazos a término, el tipo de cesárea, baja adherencia a la atención prenatal y el peso ideal de los recién nacidos en la mayoría de las madres en el estudio. A través de esta investigación se observa que la edad materna como un factor por sí solo no influye en los resultados perinatales, lo que hace necesario la evaluación de otras características comunes en ambos grupos de edad, como socio-económicos y socio-demográficos, a fin de determinar las correlaciones encarga principalmente de la elevada tasa de cesáreas y baja adhesión a la atención prenatal en el grupo de estudio. De ello se deduce, pues, que a nivel local, adolescentes y adultas embarazadas posiblemente sometido a las mismas condiciones socioeconómicas y de atención prenatal resultados perinatales similares presentes en ambas variables.

PALABRAS CLAVE: Certificado de nacimiento. La edad materna. resultado perinatal.

INFLUÊNCIA DA IDADE MATERNA SOBRE OS RESULTADOS PERINATAIS

RESUMO

O aumento na incidência da gravidez nos extremos da vida reprodutiva, antes dos 20 e após os 35 anos de idade, é uma realidade. A gestação está associada a ajustes fisiológicos e anatômicos, que acarretam transformações no organismo materno, e a idade materna isolada já foi questionada em vários estudos como fator predisponente e/ou causador de alterações em resultados perinatais. Dessa forma, objetivou-se identificar a influência da idade materna sobre os resultados perinatais. Analisaram-se as informações contidas nas Declarações de Nascido Vivo relativas ao ano de 2007, na cidade de Cajazeiras, Paraíba. As variáveis estudadas foram: duração da gestação, tipo de parto, número de consultas pré-natais realizadas e peso do recém nascido, sendo todas correlacionadas com a idade materna. Os dados foram analisados e codificados estatisticamente pelo Statistical Package for the Social Sciences (SPSS), utilizando o teste do qui-quadrado, adotando um nível de significância de 5% para a rejeição da hipótese de nulidade. Em um total de 830 DNV não observou-se significância estatística entre a variável idade materna sobre os resultados perinatais. Houve prevalência de gestações a termo, tipo de parto cesáreo, baixa adesão ao pré-natal e peso ideal de recém nascidos na maioria das mães em estudo. Através desta pesquisa pode-se observar que a idade materna como fator isolado não exerce influência sobre os resultados perinatais, tornando-se necessária a avaliação de outras características comuns em ambas as faixas etárias pesquisadas, tais como níveis sócio- econômicos e sócio- demográficos, a fim de constatar correlações responsáveis, principalmente, pelo alto índice de cesarianas e baixa adesão ao pré-natal no grupo em estudo. Conclui-se, portanto, que em nível local, gestantes adolescentes e adultas possivelmente submetidas às mesmas condições socioeconômicas e de assistência pré-natal apresentarão resultados perinatais semelhantes em ambas as variáveis pesquisadas.

PALAVRAS-CHAVE: Declaração de Nascido Vivo. Idade materna. Resultados perinatais.