HIV rapid test counseling among parturient

Aconselhamento sobre o teste rápido anti-HIV em parturientes

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Abstract

Introduction: The pre and post-HIV test counseling is recommended by the Ministry of Health, and is a tool for reflection and joint decision-making. **Objectives:** To determine the proportion of women receiving counseling for submission to the HIV rapid test and to assess factors associated to not receiving counseling for this test. **Method:** A cross-sectional study was conducted in five "Baby-Friendly Hospitals" from the High Risk Pregnancy System in Rio de Janeiro City, Southeast Brazil. The study population were 955 rooming-in parturients, undergoing the HIV rapid test, between September 11th and December 11th, 2006. Semi-standardized questionnaires were applied to the mothers, and data were also obtained from laboratory and health archives. Binomial regression was performed in order to analyze the variables associated with non-counseling. **Results:** Were submitted to the HIV rapid test 28.5% of the parturients, and only 26.9% of them were counseled. Factors associated with non-counseling were: maternal education below 8 years of school (PR = 1.36; 95% CI: 1.15-1.62), 0 to 3 prenatal visits (RP = 0.73; IC 95%: 0.59-0.90) and hospitals with less than 50% of the parturients submitted to the HIV rapid test (PR = 1.65; 95% CI: 1.40-1.96). **Conclusion:** Socially underprivileged women were not a target of counseling, and only the low number of prenatal visits proved to be a protective factor against non-counseling. Counseling was seldom practiced for HIV rapid testing, indicating that this test has been performed without the consent of women, in an imperative way.

Keywords: Counseling. HIV rapid test. Parturition. Women´s Rights. Cross-sectional studies.

Resumo

Introdução: O aconselhamento pré e pós-teste anti-HIV é preconizado pelo Ministério da Saúde, e constitui-se em ferramenta para a reflexão e tomada de decisão conjunta. **Objetivos:** Verificar a proporção de parturientes que receberam aconselhamento por ocasião da submissão ao teste rápido anti-HIV e analisar os fatores associados ao não recebimento de aconselhamento por estas parturientes. **Método:** Estudo transversal conduzido nos cinco "Hospitais Amigos da Criança" do Sistema de Gestação de Alto Risco do município do Rio de Janeiro. A população do estudo foram 955 mães submetidas ao teste rápido anti-HIV internadas em alojamento conjunto entre 11 de setembro e 11 de dezembro de 2006. Foram aplicados questionários às mães e coletados dados do laboratório e do prontuário materno. Para análise das variáveis associadas ao não recebimento de aconselhamento utilizou-se a regressão multivariada binomial. **Resultados:** Foram submetidas ao teste rápido anti-HIV 28,5% das parturientes. Destas, apenas 26,9% foram aconselhadas. Os fatores associados ao não aconselhamento foram: escolaridade materna inferior a 8 anos de estudo (RP = 1,36; IC 95%: 1,15-1,62), realização de 0 a 3 consultas de pré-natal (RP = 0,73; IC 95%: 0,59-0,90) e parto em hospitais com menos de 50% das parturientes submetidas ao teste-rápido anti-HIV (RP = 1,65; IC 95%: 1,40-1,96). **Conclusões:** As mulheres em situação socialmente desfavorável não foram alvo de aconselhamento, e apenas o baixo número de consultas pré-natais mostrou-se um fator de proteção contra o não aconselhamento. O aconselhamento foi pouco praticado por ocasião da realização do teste rápido anti-HIV, sinalizando que este teste vem sendo realizado sem o consentimento das mulheres, de modo imperativo.

Palavras-chave: Aconselhamento. Teste rápido para o HIV. Momento do parto. Direitos da Mulher. Estudos Transversais.

Introduction

In Brazil, AIDS cases in the female population have increased since 2000[1]. The prevalence of HIV in Brazilian pregnant women in 2004 and 2006 was 0.41%[2] and the estimated rate of vertical HIV transmission in 2004 was 6.8%[3]. Vertical transmission is the primary mode of HIV infection in the child population[4]. Nearly 65% of vertical HIV transmission occurs during labor and delivery[5]. Continuing maternal breastfeeding contributes to an additional risk of 7% to 22%[6]. Prenatal care is an opportune time to reduce the incidence of vertical transmission through early diagnosis and adequate treatment[7]. However, a sentinel study conducted with parturients in Brazil estimated the effective coverage of serological HIV tests during pregnancy to be 63%[2].

The Ministry of Health recommends that anti-HIV tests should be performed with counseling during pregnancy and, whenever possible, so should the repetition of serology in the beginning of the 3rd trimester, using fast tests if necessary[7]. These tests have a simple methodology[8], they are adequate for situations that require preventive interventions for specific emergencies, such as vertical HIV transmission prevention during delivery, and they have been used with this purpose in Brazil since 1999[9]. The results of HIV rapid tests must be produced in a maximum of 30 minutes and be made available before delivery, as the anti-HIV chemoprophylaxis during delivery is known to be effective. Women must receive pre- and post-test counseling from health professionals and tests must be performed after verbal consent[7].

Counseling is an instrument that enables reflection and joint decision-making. It is based on active listening, through which health professionals seek to establish a relationship of trust, providing strategies that facilitate the recognition of users as participants in their own health condition[10]. Delivery and postpartum are not ideal moments to perform an anti-HIV test[1,11]; however, it is recommended that fast tests

should be performed in parturients who met the criteria for its recommendation as instructions on its benefits, advantages and need were given. It is important to record the request for an anti-HIV test or its refusal by parturients in the patient chart, to provide emotional support and to guarantee the right to information about test results[2].

Despite its relevance, little is known about the practice of counseling during the performance of the HIV rapid test during delivery. In view of the new reality resulting from the use of HIV rapid tests to diagnose the HIV status during delivery in a significant number of women[12], it is important to investigate whether the process of test performance and presentation of results is being conducted according to the Ministry of Health recommendations[10]. The present study aims to verify whether the performance of HIV rapid tests in parturients occurs through counseling and to analyze the factors associated with non-counseling.

Methods

A cross-sectional study was conducted as part of the inter-institutional research project entitled "Gender, Power and Citizenship: Are Women Participants in the Decision Process of Breastfeeding at Birth when the HIV Status is Ignored by Health Services?". This study was approved by the Research Ethics Committee of the City of Rio de Janeiro Department of Health, official opinion 82A/2006 from July 31st 2006. The study population was comprised of all women who had the HIV rapid test performed during delivery in the five "Baby-Friendly Hospitals" of the High-Risk Pregnancy System in the city of Rio de Janeiro, between September 11th and December 11th 2006. All mothers who underwent the HIV rapid test in these hospitals during the period of study with live newborns were included, regardless of having been tested for HIV during prenatal care or not. In contrast, mothers whose babies were born with an Apgar score at five minutes after birth lower than seven or who were hospitalized in a neonatal unit for any period of time were excluded from this study, as these conditions could hinder breastfeeding at birth, the main theme of this inter-institutional research project[12]. The "Baby-Friendly Hospitals" were selected as setting for this study, as these hospitals were accredited for the fulfillment of the "10 Steps for Successful Breastfeeding", whose fourth step was "To help mothers to begin to breast-feed in the first 30 minutes after birth"[13]. High-Risk Pregnancy System units were selected as they met the conditions required to perform HIV fast tests, because they are referral units caring for pregnant women with HIV[14].

The sample size was calculated according to the study conducted by Morimura et al. in the city of Recife, Northeastern Brazil[15], where a prevalence of counseling for the performance of the HIV rapid test of 7.7% was found. A sample size of 888 women was estimated for an expected prevalence of 5% among parturients with more than three prenatal consultations and a prevalence of 12% among parturients with a lower number of consultations, with a prevalence ratio of 0.42 and considering a significance level of 5% and power of 80%.

A daily survey was conducted in the laboratory of each hospital to identify parturients who underwent the HIV rapid test and this information was compared with the list of patients hospitalized in shared rooms on a daily basis. Trained and supervised interviewers applied semi-structured questionnaires to the mothers in shared rooms after these mothers themselves or their legal guardians signed an informed consent form, in accordance with the National Health Council Resolution 196/96. Additionally, birth records, the mothers' and babies' medical charts and Live Birth Certificates[12] were used as data sources.

The outcome variable was non-counseling during the performance of the HIV rapid test during hospitalization for delivery. For the purpose of this study, it is understood that women were counseled when: 1) they were informed about the performance of HIV rapid tests; 2) they received explanations

about the reasons for HIV rapid tests to be performed; and 3) they received the results of the HIV rapid test during hospitalization. In case one of these items had not been included, non-conformity to counseling would have been considered.

The following exposure variables were investigated: 1) maternal reproductive and socioeconomic characteristics such as age, ethnicity, level of education, maternal income, number of household goods (radio, refrigerator, washing machine, landline telephone, television), presence of partner and parity; 2) profile of prenatal care: trimester of the beginning of prenatal care, number of prenatal consultations, having the HIV rapid test performed during prenatal care; and 3) delivery care profile: hospital where delivery was performed, type of delivery.

The database was created using the Epi-INFO® software and the data analysis was performed with the SPSS® software. Initially, the simple frequency of variables was calculated to find out the profile of mothers, prenatal care and delivery. Subsequently, a bivariate analysis was performed to verify the prevalence ratio between each exposure variable and the outcome and respective statistical significance. Binomial regression was performed to analyze the factors associated with the outcome[16]. Modeling was conducted with the variables that reached a significance level lower than 20% and the final model was comprised of the variables with a significance level lower than 5%.

Results

During the three months when this research project was conducted, there were 4,895 deliveries in the five "Baby-Friendly Hospitals" of the High-Risk Pregnancy System of the city of Rio de Janeiro. A total of 28.5% of parturients underwent the HIV rapid test, with an amplitude ranging from 18.4% to 50.7%. The hospital showing the highest number of deliveries was that with the lowest proportion of women submitted to the HIV rapid test. Of all 1,074 eligible mothers, 955 were interviewed and 11.1% were losses or refusals[12] (Table 1).

Table 2 shows that 26.6% of the population studied were adolescents aged between 13 and 19 years and 43.5% had completed up to seven years of school. The majority of mothers (72.4%) had no income or received up to one minimum wage and 37.5% of homes had between zero and three household goods. A total of 87.4% of women had a partner and 39.3% were primiparous. In the bivariate analysis, the socio-demographic and reproductive variables associated with non-counseling during the performance of HIV rapid tests with a statistical significance of up to 20% were as follows: level of education, maternal income and number of household goods.

Table 1 - Prevalence of non counseling among mothers undergoing the HIV rapid test in five "Baby-Friendly Hospitals", Rio de Janeiro City, Brazil, September 11th to December 11th, 2006.
Tabela 1 *– Prevalência de não aconselhamento entre mães submetidas ao teste rápido anti-HIV em 5 "Hospitais Amigos da Criança", Município do Rio de Janeiro, 11 de setembro a 11 de dezembro de 2006.*

Hospital	Deliveries performed		Women submitted to the HIV rapid test		Eligible women	Interviewed women	Prevalence of non-counseling
	n	%	N	%	N	N	%
1	1,152	23.5	585	50.7	456	392	62.8
2	1,893	38.7	349	18.4	301	276	76.8
3	1,081	22.1	328	30.3	246	220	84.1
4	159	3.3	60	37.7	34	32	84.4
5	210	4.3	74	35.2	37	35	80.0
Total	4,895	100.0	1,396	28.5	1,074	955	73.1

Table 2 - Prevalence and prevalence ratio of non counseling among women undergoing the HIV rapid test according to demographic and socio-economic characteristics, Rio de Janeiro City, Brazil, 2006.
Tabela 2 *– Prevalência e razão de prevalência de não aconselhamento entre mulheres submetidas ao teste rápido anti-HIV segundo características demográficas e socioeconômicas, Município do Rio de Janeiro, 2006.*

Variables	N	%	Prevalence of non-counseling	PR	CI	p-value
Age *						
13 to 19 years	254	26.6	73.2	1.007	0.795-1.277	0.953
20 years or more	701	73.4	73.0	1		
Ethnicity *						
Non-white	693	72.6	72.9	0.971	0.766-1.230	0.805
White	262	27.4	73.7	1		
Level of education *						
Up to 7 years	415	43.5	78.3	1.426	1.142-1.781	0.001
8 years or more	540	56.5	69.1	1		
Maternal income *						
Up to 1 minimum wage	691	72.4	71.9	0.850	0.664-1.087	0.189
More than 1 minimum wage	264	27.6	76.1	1		
Number of household goods**						
0 to 3	358	37.5	76.5	1.241	0.991-1.555	0.057
4 to 5	594	62.2	70.9	1		
Mother has a partner *						
No	120	12.6	75.2	1.087	0.782-1.511	0.614
Yes	835	87.4	72.8	1		
Number of children ***						
Primiparous	373	39.3	74.0	1.066	0.859-1.323	0.559
Multiparous	577	60.7	72.3	1		

* n = 955;** n = 952;*** n = 950

Of all parturients, 8.6% did not receive prenatal care and 56.0% began prenatal care after the 1st trimester. The majority (80.1%) of pregnant women had four or more prenatal consultations. A total of 77.8% of them had an anti-HIV test during prenatal care. The hospital with the highest frequency of HIV rapid tests concentrated 41.0% of the interviewed women. Vaginal deliveries totaled 67.2% of all births. With regard to the characteristics of prenatal care and deliveries, the following were selected to comprise the multivariate model in the bivariate analysis: trimester of beginning of prenatal care, number of prenatal consultations, having had an HIV rapid test during prenatal care and hospital where delivery was performed (Table 3).

Although all women included in this study were submitted to the HIV rapid test during hospitalization for delivery, when asked about whether the test had been performed, 2.5% reported it had not and 22.5% could not inform this. A total of 55.1% of women had not been given explanations about the performance of HIV rapid tests in the hospitals. Additionally, 46.5% of them received negative test results, 0.6% received positive results and 52.9% were not aware of these results in the moment of the interview.

Table 3 - Prevalence and prevalence ratio of non counseling among women undergoing the HIV rapid test according to prenatal care and childbirth characteristics, Rio de Janeiro City, Brazil, 2006.
Tabela 3 *– Prevalência e razão de prevalência de não aconselhamento entre mulheres submetidas ao teste rápido anti-HIV segundo características de assistência pré-natal e ao parto, Município do Rio de Janeiro, 2006.*

Variables	N	%	Prevalence of non-counseling	PR	CI	p-value
Trimester of beginning of prenatal care **						
1st trimester	334	35.0	70.4	1	-	
2nd trimester	429	44.9	76.7	1.090	1.000-1.190	0.048
3rd trimester	106	11.1	73.6	1.050	0.920-1.200	0.520
Did not receive prenatal care	82	8.6	64.6	0.920	0.770-1.090	0.310
Number of consultations***						
4 or more	758	80.1	74.3	1		
0 to 3	188	19.9	67.0	0.902	0.809-1.006	0.045
Had the HIV rapid test during prenatal care*						
Yes	743	77.8	74.4	1		
No	212	22.2	68.4	0.809	0.641-1.021	0.081
Type of hospital where delivery was performed*						
Hospital 1	392	41.0	62.8	1		
Hospitals with less than 50% of parturients submitted to the HIV rapid test	563	59.0	80.3	1.889	1.531-2.332	0.000
Type of delivery *						
Vaginal	642	67.2	73.2	1		
Cesarean section	313	32.8	72.8	0.987	0.790-1.232	0.905

*n = 955; **n = 951; ***n = 946

Among interviewed women, only 26.9% met the three outcome conditions selected: being informed about the performance of the HIV rapid test, receiving an explanation about the reason for its performance, and receiving the test results, i.e. 73.1% did not receive counseling (Table 4).

In the multivariate analysis (Table 5), the following were risk factors for not receiving counseling about the performance of the HIV rapid test: level of education lower than complete primary school and delivery occurring in hospitals where the HIV rapid test is performed in less than 50% of parturients. Having between zero and three prenatal consultations was a protective factor against not receiving counseling. The model had an accuracy of 72.5%.

Discussion

The moment of delivery requires special attention due to women's emotional and physical vulnerability[11,15]. In this context, counseling becomes a key tool, aiming to reduce the anguish caused by doubts and lack of information about the performance of the HIV rapid test. However, the present study shows that only one fourth of parturients were counseled and more than half were not even given an explanation about the reason for the HIV rapid test to be performed, indicating that this test has been performed forcefully, without women's consent. In the city of Recife, the prevalence of counseling for the HIV rapid test during delivery was even lower: 7.7%[15].

Table 4 - Information, explanation, knowledge of result, and counseling about HIV rapid testing, Rio de Janeiro City, Brazil, 2006.
Tabela 4 *- Informação, explicação, conhecimento do resultado e recebimento de aconselhamento sobre o teste rápido anti-HIV, Município do Rio de Janeiro, 2006.*

	N	%
Received information about the performance of the HIV rapid test		
Yes	716	75.0
No	24	2.5
Did not know	215	22.5
Received an explanation about the reason for the HIV rapid test to be performed		
Yes	416	43.5
No	526	55.1
Did not know	13	1.4
Received the test results		
Negative	444	46.5
Positive	6	0.6
Did not know	505	52.9
Received counseling		
Yes	257	26.9
No	698	73.1
Total	955	100

Table 5 - Crude and adjusted prevalence of non-counseling among women undergoing the HIV rapid test according to socio-demographic, prenatal care and childbirth characteristics, Rio de Janeiro City, Brazil, 2006.
Tabela 5 *– Razão de prevalência bruta e ajustada do não recebimento de aconselhamento entre mulheres submetidas ao teste rápido anti-HIV segundo características sociodemográficas, de assistência pré-natal e ao parto, Rio de Janeiro, 2006.*

	Crude PR	Adjusted PR	95%CI	p-value
Level of education lower than complete primary school	1.426	1.364	1.153-1.615	0.000
Complete primary school or higher	1	1		
Had 0 to 3 prenatal consultations	0.902	0.727	0.587-0.899	0.003
Had 4 or more prenatal consultations	1	1		
Delivery performed in hospitals with less than 50% of parturients submitted to the HIV rapid test	1.889	1.654	1.398-1.958	0.000
Delivery performed in a hospital with more than 50% of parturients submitted to the HIV rapid test	1	1		

n = 944; model accuracy = 72.5% / *n = 944; acurácia do modelo = 72,5%*

Against the Ministry of Health recommendations, in the present study, the majority of mothers had not yet received the result of the HIV rapid test in the moment of interview. There was not a well-established routine to deliver these results and to counsel women. Increasing the serological coverage of parturients is as important as the role of counseling about the performance of the HIV rapid test. Women must

have autonomy when deciding to have this test performed, to be instructed on HIV and vertical transmission prevention actions, and to receive information about test results. HIV prevention becomes really effective when individuals reflect on their own life situation as participants capable of changing their behavior. As half of parturients received the test results in the present study, this could be reflecting advances in such routine or regional differences, as a study conducted in the city of Recife in 2003 showed that only 3.8% had received the HIV rapid test results[15].

The hospital that submitted more than half of parturients to the HIV rapid test was the one where counseling was most frequently performed. In this hospital, 85.5% of mothers did not breast-feed in the first hour of life[12], suggesting that counseling could be associated with the need to justify the restriction to breastfeeding while the test results are not available, rather than being a way of listening to and instructing women. The remaining hospitals had a profile of non-counseling, increasing its prevalence by 1.7 times.

The small number of prenatal consultations was a protective factor against non-counseling about the performance of HIV rapid test in hospitals. Information about prenatal consultations is usually available in prenatal care cards and patient charts or it can be obtained from the mothers themselves. Health professionals often consider women who do not receive prenatal care or those who had few prenatal consultations as more vulnerable. In this way, they tend to provide more information during hospital procedures, including the time when the HIV rapid test is performed in this population. In contrast, a study on anti-HIV tests performed prior to delivery, conducted in the city of Porto Alegre, showed that the absence of prenatal care, the use of the HIV rapid test, multiparity and low income increased the chance of non-counseling[17].

Low-income women were expected to receive more care and, consequently, more counseling from the health team. However, low income was not associated with the outcome and a low level of education increased the prevalence of non-counseling. Although important to enable better care from the health team, information about the low level of education of women is yet undervalued in the hospital environment, apart from professionals' difficulty in accessing it. Another alarming factor is that women's low level of education hinders the search for information about their health condition and the hospital procedures performed.

Finally, certain limitations of this study should be considered, such as the potential memory bias with regard to receiving counseling. The moment of delivery is when women are more vulnerable and when they undergo a series of procedures and receive information that may not be entirely recalled. However, the questionnaire structure was designed to help mothers recall this information, which could have contributed to reduce such bias. All interviewers selected for the research field work were women, aiming to minimize possible embarrassment when asking parturients about intimate issues, such as the performance of the HIV rapid test and the counseling received.

Additionally, it should be emphasized that the present study was restricted to "Baby-Friendly Hospitals" of the High-Risk Pregnancy System[14], where prenatal and delivery care is a benchmark for the remaining hospitals. If the situation found in these hospitals was not satisfactory, an even more unfavorable reality would be expected in the other network hospitals.

All parturients should be informed about the test performance, receive explanations about the reason for such test, and receive the test results. Pre- and post-test counseling is key to help individuals cope with stressful situations brought about by the need to have the HIV rapid test during delivery[18].

Health professionals must be sensitized and their capacity built, so that pre- and post-test counseling can be provided in the hospital environment and the relationship between patients and the health team can

be strengthened. Dialogue, the exchange of information and knowledge and the democratization of power relations in the hospital environment are essential to achieve this.

It is paramount that women be included as participants in the health care process. The feminization of AIDS has contributed to the increasing trend towards the demand for such test. Additionally, if the current routines continue, more and more women will have their rights violated. There are countless movements seeking to recognize user rights based on their needs, as recovery of the principle of patient autonomy is a precondition to achieve health and citizenship.

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