J Women's Health Dev 2021; 4 (2): 078-081 *DOI: 10.26502/fjwhd.2644-28840062*

Research Article

A Secondary Analysis of the LILAC Study Regarding Cesarean Birth by Maternal Request in Women Living with HIV

Margo S Harrison*

Department of Obstetrics and Gynecology, University of Colorado School of Medicine, Aurora, Colorado, USA

***Corresponding author:** Margo S Harrison, Department of Obstetrics and Gynecology, University of Colorado School of Medicine, Mail Stop B198-2, Academic Office 1, 12631 E. 17th Avenue, Rm 4211, Aurora, Colorado 80045, USA

Received: 07 June 2021; **Accepted:** 14 June 2021; **Published:** 16 June 2021

Citation: Margo S Harrison. A Secondary Analysis of the LILAC Study Regarding Cesarean Birth by Maternal Request in Women Living with HIV. Journal of Women's Health and Development 4 (2021): 078-081.

Abstract

Background: Latin America has the highest regional average cesarean birth rates. One potential driver is cesarean birth by maternal request (CBMR).

Methods: We analyzed of a large prospective cohort study of HIV-infected women in six Latin American countries.

Results: Comparisons were made between women who chose CBMR (n = 38) and women with a medical indication for cesarean (n = 683). The only variable associated with CBMR was onset of labor (AOR 0.3 [0.1,0.9], p = 0.04).

Conclusion: Spontaneous labor reduced the likelihood of a woman living with HIV to pursue CBMR in a large Latin American cohort.

Keywords: Latin America; Caribbean; HIV; Cesarean Birth by Maternal Request

1. Introduction

Latin America has the highest regional average cesarean birth rates in the world [1]. One potential driver is cesarean birth by maternal request (CBMR), which is elective cesarean birth with no other medical indication; this practice is advised against by the World Health Organization [2]. The objective of this analysis was to contribute additional data to the literature on CBMR, an elusive practice in Latin America and the Caribbean as well as globally.

2. Methods

The International Site Development Initiative (NISDI) Perinatal Study (2002–2007) and subsequent Longitudinal Study in Latin American Countries (LILAC) (2008–2012) are prospective cohort studies of HIV-infected women in six countries (Argentina, Bahamas, Brazil, Jamaica, Mexico, and Peru) [3]. Detailed methods are published, but the objectives of the protocols were to describe care of women living with HIV and their neonates in pregnancy and the early postpartum period [3].

3. Results

Women who underwent cesarean for the indication of "patient request" or "patient desires sterilization" were considered to have received CBMR (5.3%) for the purposes of this analysis. All other indications were considered medically necessary: abruption [1.0%], genital infection [1.5%], anticipated cephalon-pelvic disproportion [0.1%], arrest disorder [2.2%], cephalon-pelvic disproportion [3.5%], cord prolapse [0.3%], eclampsia/pre-eclampsia [2.1%], failed induction [3.9%], malpresentation [2.5%], fetal heart rate [6.1%], oligohydramnios [1.8%], other [2.0%], placenta previa [0.6%], prevention of HIV infection [44.1%], prolonged rupture of membranes [3.9%], and elective repeat cesarean birth [19.1%]. Comparisons were made between women who chose CBMR (n = 38) and women with a medical indication for cesarean birth (n = 683); this comprised the population of 721 (59.8%) women out of 1206 in the cohort whom delivered by cesarean birth. The only variable associated with CBMR in this cohort of pregnant women living with HIV was onset of labor (AOR 0.3 [0.1,0.9], p = 0.04), suggesting that the spontaneous onset of labor reduced the likelihood of a woman living with HIV to pursue CBMR.

Bivariate Comparisons				
Characteristic	**N (%) N = 721**	**Medically Necessary (n =683, 94.7%)**	**CBMR (n =38, 5.3%)**	**P-Value**
Age in years, Median (IQR)	28 [24, 33]	27 [24, 33]	30 [25, 33]	0.10[a]
Years of Education, Median (IQR)	8 [6, 11]	8 [6, 10]	9 [7, 11]	0.22[a]
Relationship Status				1.0[b]
Single	188 (26.1%)	178 (26.1%)	10 (26.3%)	
Not single	533 (73.9%)	505 (73.9%)	28 (73.7%)	
Employed				0.05[b]
Student	35 (4.9%)	30 (4.4%)	5 (13.2%)	
No	11 (1.5%)	11 (1.6%)	0 (0.0%)	
Yes	675 (93.6%)	642 (94.0%)	33 (86.8%)	
Parity, Median (IQR)	1 [1, 3]	1 [1, 3]	1 [1, 2]	0.59[a]
Language				0.009[b]
English	17 (2.4%)	17 (2.5%)	0 (0.0%)	
Haitian Creole	3 (0.4%)	3 (0.4%)	0 (0.0%)	
Portuguese	396 (54.9%)	365 (53.4%)	31 (81.6%)	
Spanish	305 (42.3%)	298 (43.6%)	7 (18.4%)	
Country				0.05[b]

Argentina	238 (33.0%)	231 (33.8%)	7 (18.4%)	
Bahamas	13 (1.8%)	13 (1.9%)	0 (0.0%)	
Brazil	397 (55.0%)	366 (53.6%)	31 (81.6%)	
Jamaica	7 (1.0%)	7 (1.0%)	0 (0.0%)	
Mexico	40 (5.6%)	40 (5.9%)	0 (0.0%)	
Peru	26 (3.6%)	26 (3.8%)	0 (0.0%)	
Intended Delivery Mode				0.60[b]
Cesarean Birth	326 (45.2%)	308 (45.1%)	18 (47.4%)	
Vaginal Birth	291 (40.4%)	278 (40.7%)	13 (34.2%)	
Unsure	104 (14.4%)	97 (14.2%)	7 (18.4%)	
Delivery Location				0.11[b]
Hospital	686 (95.2%)	652 (95.5%)	34 (89.5%)	
Other non-study Medical Facility	35 (4.8%)	31 (4.5%)	4 (10.5%)	
Spontaneous Onset of Labor				0.07[b]
No	530 (73.5%)	496 (72.6%)	34 (89.5%)	
Yes	186 (25.8%)	182 (26.7%)	4 (10.5%)	
Unknown	5 (0.7%)	5 (0.7%)	0 (0.0%)	
Gestational Age, Median (IQR)	38.3 [37.3, 39.1]	38.3 [37.3, 39.1]	38.3 [37.7, 38.6]	0.68[a]

Multivariable Model[c]

	OR	**CI**	**P-value**
Age (continuous)	1.1	1.0,1.1	0.07
Employed (ref: unemployed, including student)	0.4	0.1,1.1	0.07
Speaks Spanish (ref: speaks another language)	3.8	0.1,103.1	0.4
Brazilian (ref: any other nationality)	13.3	0.5,359.5	0.1
Delivered in Hospital (ref: other non-study medical facility)	0.4	0.1,1.3	0.1
Spontaneous Labor (ref: non-spontaneous labor)	0.3	0.1,0.9	0.04

[a]: Kruskall-Wallis test

[b]: Fisher's Exact test

[c]: Logistic Regression

CBMR: cesarean birth by maternal request

Table 1: Bivariate comparisons and multivariable modeling of characteristics associated with cesarean birth by maternal request in a Latin American and Caribbean cohort of women living with human immunodeficiency virus.

4. Discussion

Onset of labor can be modified by membrane stripping, if permitted in this subpopulation [4]. This study is limited by the fact that the data is old, that outcomes were not included, that the sample is weighted toward Brazil and Argentina, and that the datasets were not designed for the study question [3]. However, we believe documenting the prevalence and practice of CBMR in any population is a contribution to the literature and knowing that spontaneous labor

contributes to a reduction in the practice in this particular population, is of value.

Author Contributions

MSH conceived of the analytic plan, performed the analysis, and wrote the manuscript.

Funding

Funding for this project comes from the *Eunice Kennedy Shriver* National Institutes of Child Health and Human Development Women's Reproductive Health Research K12 award (5K12HD001271-18) and the Doris Duke Charitable Foundation.

Conflict of Interest

The author has no relationships to disclose that may be deemed to influence the objectivity of this paper and its review. The author reports no commercial associations, either directly or through immediate family, in areas such as expert testimony, consulting, honoraria, stock holdings, equity interest, ownership, patent-licensing situations or employment that might pose a conflict of interest to this analysis. Additionally, the author has no conflicts such as personal relationships or academic competition to disclose. The findings presented in this paper represent the views of the named authors only, and not the views of their institutions or organizations.

Ethical Statement

The Colorado Multiple Institutional Review Board also approved of this research (COMIRB #19-2466). Data was secured through the NICHD Data and Specimen hub with ethics approval and a data use agreement.

References

1. Betran AP, Ye J, Moller AB, et al. The Increasing Trend in Caesarean Section Rates: Global, Regional and National Estimates: 1990-2014. PLoS One 11 (2016): e0148343.
2. Betran AP, Torloni MR, Zhang JJ, et al. WHO Statement on Caesarean Section Rates. Bjog 123 (2016): 667-670.
3. Read JS, Duarte G, Hance LF, et al. The NICHD International Site Development Initiative perinatal cohorts (2002-09). International Journal of Epidemiology 41 (2012): 642-649.
4. Wiriyasirivaj B, Vutyavanich T, Ruangsri R-A. A randomized controlled trial of membrane stripping at term to promote labor. Obstetrics & Gynecology 87 (1996): 767-770.