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Acceptability of neonatal circumcision by Hispanics in southern Florida

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Summary

This study attempted to determine the acceptability of neonatal circumcision in Hispanic expectant and new parents and to explore potential associations with lower acceptability. Overall, we found surprisingly high rates of acceptability in this community that contrasts with the actual low rates of circumcision in Hispanics in the USA. This gap is important since newborn circumcision has been suggested as an additional long-range tool in reducing longstanding ethnic disparities in HIV incidence in the USA. A larger study will be needed to determine what factors are associated with low acceptability and how one might effectively address these concerns in this population.

Keywords

neonatal circumcision; HIV; STD; Hispanics; patient acceptability

Introduction

Hispanics in the USA have the lowest rates of circumcision of all ethnic groups and have some of the highest rates of several sexually transmitted diseases (STDs), including heterosexual human immunodeficiency virus (HIV) infection.^{1–5} Male circumcision has been shown to be partially protective for men against HIV and some STDs.^{6–8} A recent study has shown that newborn circumcision in the USA is usually cost-saving, taking into consideration the low cost of the procedure, current lifetime risk of HIV infection among USA men and the high cost of treating HIV.⁹ In the same study, neonatal circumcision of Hispanic men would yield the most cost-saving benefits; the greatest risk reduction would occur in black and Hispanic men.

Male circumcision is a common surgical procedure in many parts of the world, undertaken for religious, cultural and secular reasons. In the USA, male circumcision is usually done in the neonatal period but there are few data about the prevalence of circumcision in the general population. However, a large study reported overall male circumcision prevalence rates of 79% in men who were born from the 1940s through the 1980s.¹ The study also reported important variations according to race/ethnicity: prevalence varied from 88% in non-Hispanic whites to 42% in Mexican Americans. There are no systematic reports of accurate prevalence of circumcision in Latin America, but isolated reports from selected groups from Latin American and the Caribbean ranging from 5% in Dominican Republic and Haiti to 11% (Panama, Costa Rica and Colombia), and 38% in Mexico.^{10–12} Concordant with these low rates of circumcision, there is also little information on attitudinal/cultural factors surrounding male circumcision in these countries. We are not aware of any study or

report looking at potential barriers or facilitators of male neonatal circumcision in Hispanics in the USA or in Latin America. These perceptions and beliefs may represent some of the challenges inherent in the implementation of a programme designed to increase favourable attitudes regarding the acceptability of circumcision in the Hispanic population. Thus, this study sought to assess and quantify attitudes and beliefs surrounding male neonatal circumcision among Hispanics in south Florida.

Methods

Study design

The study was approved by the Institutional Review Boards of the University of Miami Miller School of Medicine and the Florida Department of Health prior to study onset in accordance with the provisions of the US Department of Health and Human Services regarding the conduct of research. Participants were a non-random sample recruited from an urban South Florida (Miami-Dade County) Health Department Prenatal Clinic and Birth Registry Office between September 2008 and May 2009. Study candidates were approached individually at the Prenatal Clinic or the Registry Office while registering a newborn male child. Participants were screened; those eligible were (1) Hispanic and (2) current pregnancy (women) or (3) pregnant or postpartum partner (men). After providing informed consent, participants were provided with an appointment at the study offices off site.

All assessments were administered (i.e. read) by a trained interviewer in the individual's preferred language (Spanish, English) in a private room. Study assessments were an average of one hour in duration, and participants were provided with monetary compensation for their time and travel.

Assessments

The Demographics Questionnaire included data on time in the USA, country of birth, religion, education, employment, income, residence, marital/current partner status, gender, medical treatment, access to health care and service delivery.

The Kebaabetswe's Circumcision Attitudes Questionnaire is a six-item measure that includes questions on willingness to circumcise your child, willingness to be circumcised, attitudes towards cultural acceptability of circumcision, opinion on optimal circumcision age and opinion on optimal setting for circumcision.

The Bidimensional Acculturation Scale¹³ consists of 24 items measuring two dimensions of acculturation (Hispanic and non-Hispanic). The Hispanic dimension reflects a preference for the Spanish language and a perceived proficiency for reading, understanding and speaking Spanish. The non-Hispanic dimension reflects a preference for the English language and a perceived proficiency for reading, understanding and speaking English. These two scales are used together to assess the level of acculturation to the host culture and cultural pluralism (degree of linguistic participation in both cultures). The range of scores for each dimension is 1–4. A score of 2.5 or higher in a given dimension (i.e. Hispanic or non-Hispanic) indicates a high level of adherence to that acculturation dimension. A score of 2.5 or higher in both the Hispanic and non-Hispanic dimensions indicates biculturalism. Thus, by combining scores on the two dimensions the participants are classified as Hispanic, non-Hispanic or bicultural.

Data analysis

Data from assessments were analysed using SPSS 17.0. Descriptive statistics and bivariate analyses were conducted using Spearman's rho for ordinal variables and Pearson's *r* for scale

variables to examine associations between variables. Characteristics of study participants were stratified by gender to test the primary outcome variables regarding attitudes towards circumcision. The majority of independent variables were dichotomous ('yes' 'no') or rank order preference ('prefer, unsure, do not prefer'). The variable of time in the USA was split into three levels (0–5 years, 6–14 years, 15 or more years). Contingency tables were created for all comparisons and chi square (χ^2), Mantel–Haenszel statistics and measures of association were calculated (odds ratios). Test statistics were considered significant if P values were less than 0.05.

Results

Participants

A total of 100 individuals, 33 men and 67 women, completed this study. The majority of participants were of low income, foreign-born from South, Central America/Caribbean and the average years in the USA was 11 for women and 13 for men, although the bimodal distribution for women was three and 10 years and the mode for men was 10 years. No statistically significant differences were detected between men and women in number of children, number of years of education completed, country of birth, health insurance status or religion. Income in the month prior to the study was higher in men ($P = 0.025$), and men were more likely to be single than women ($P = 0.002$). Table 1 presents the demographic information stratified by willingness to circumcise their unborn sons. Only relationship status ($P < 0.05$) and availability of health insurance ($P < 0.05$) were different between both groups.

Male circumcision acceptability

The majority (79/93) of participants in this study indicated they would be willing to circumcise their child if circumcision was free of charge. One man and six women chose not to answer this question. Although men (31/32) were more willing than women (48/61) to circumcise their child (odds ratio: 4.06, $P < 0.04$), both men and women agreed that the best time to circumcise a child was between birth and one month of age and that the best place to circumcise was the hospital (Table 2). The male circumcision rate (self-reported) found in this study was 15%. Interestingly, most (52%) of the uncircumcised men indicated they would be willing to undergo circumcision.

Male circumcision attitudes associations

In order to better understand the factors positively or negatively associated with willingness to circumcise their yet unborn child, we explored the potential association of willingness to circumcise and several cultural/socioeconomic indicators. Among women, income was negatively correlated with the cultural acceptability of circumcision ($r = -0.35$, $P = 0.04$). Among men, employment status was negatively correlated with willingness to be circumcised ($r = -0.4$, $P = 0.04$). No other associations were obtained. Only among women were attitudes regarding the cultural acceptability of circumcision, acceptability of infant circumcision and preference for circumcision associated ($r = 0.45$, $P < 0.001$).

The influence of acculturation and circumcision acceptability by levels of acculturation are presented in Table 3. No significant differences were found among the proportion of men and women at each level of acculturation.

The influence of acculturation, time in the USA and country of birth on attitudes regarding circumcision were examined by gender. The length of residency was not associated with differences in the cultural acceptability of circumcision (men, $\chi^2 = 3.25$, $P = 0.52$; women,

$\chi^2 = 6.34, P = 0.18$) or in the acceptability of infant circumcision (men, $\chi^2 = 1.72, P = 0.42$; women, $\chi^2 = 0.53, P = 0.77$).

Discussion

The primary aim of this study was to determine the acceptability of neonatal circumcision in Hispanic expectant/new parents. We found a high rate of neonatal male circumcision acceptability among our study sample; 85% of the participants in this study were willing to circumcise their future sons if the circumcision was offered free of charge, done in a hospital and within 30 days of birth. In our study we did not conduct 'informational' sessions. The high rate of acceptability of neonatal circumcision found in our study is similar to the one recently reported in a study conducted in Boston, where 86% of the respondents were favourable towards neonatal circumcision.¹⁴ However, in that study, Hispanic ethnicity was one of the predictors of decreased support for circumcision and being born in the USA was one of the predictors of support for circumcision. Although our sample consisted of mostly foreign-born Hispanics from several countries in Latin America, most of them had been in the USA for several years (mode 10 years in men and bimodal distribution of 3 and 10 years in women). This bimodal distribution of time residing in the USA in women, with a group among them who were relatively recent immigrants in the sample, could explain the relatively lower acceptance of neonatal circumcision by women in our sample. Nevertheless, there seems to be a contradiction between this high rate of acceptance of circumcision and the low actual rates of circumcision in Hispanics in the USA, ranging from 10% to 40% (15% in this study). The acceptability of neonatal circumcision found in this study in Hispanic participants in Miami is similar to the acceptability reported in recent surveys of young boys (62%) and their parents (91%) in Botswana, of Indian mothers (82%) and of men from Dominican Republic and Haitian (74%) after they received information about the risk and benefits of neonatal circumcision.^{10,15,16} It is interesting to note that some of these reports disclosing high levels of acceptability of neonatal male circumcision come from traditionally non-circumcising cultures, such as the Dominican Republic, Haiti and certain ethnic groups in Africa and India. Acceptability of circumcision from traditionally non-circumcising culture has been more explored in adults. These surveys have shown lower levels of acceptability such as 14% in a study from Thailand, 23% of long-distance truck drivers in India and 29% (prior to the administration of information about the benefits of circumcision) of Dominican men and immigrants to the Dominican Republic from Haiti.^{10,17,18} Some of these studies of adult and neonatal circumcision have included 'informational sessions' and assessments of acceptability prior to and after these sessions. This is understandable, given the low awareness of the procedure and its benefits in non-circumcising cultures; and suggests that a culturally appropriate intervention aiming to increase the acceptability of circumcision in traditionally non-circumcising cultures should include an informative component about the procedure and its risks and benefits. To our knowledge such an intervention has not been developed.

The apparent paradox between the fact that more than 50% of the men participating in the study were willing to be circumcised, and the low rates of circumcision among Hispanics in the USA, may be due to the following of cultural tradition in the absence of any other countervailing influence. For neonatal circumcision, cost, lack of support by health-care providers and cultural tradition are formidable barriers to increasing neonatal circumcision rates in this population. Addressing these issues in turn, the cost for Medicaid recipients can be mitigated by recognition of the ultimate cost-savings if this procedure was to be covered by Medicaid. For this to occur, the endorsement by the American Academy of Pediatrics^{19,20} would be a major step towards removing both financial and health professional obstacles towards increased rates among Hispanic male newborns. The cultural issue appears to be at least in part related to a lack of opportunity to discuss circumcision

with a knowledgeable and supportive health-care professional (e.g. the attending physician) to provide informed guidance on this matter. In earlier studies cited above of various cultural groups who traditionally practiced low rates of circumcision, informed discussion and guidance appeared to be major facilitators leading to high rates of acceptance of circumcision for newborns.

Although we did not find a formal association between acculturation and willingness to perform circumcision in their yet unborn child, the percentage of participants (15%) unwilling to circumcise their yet unborn children was similar to the group of participants (20% of men and 10% of women) who thought that circumcision was not culturally acceptable. The unexpected high numbers of participants who endorsed circumcision made it difficult to ascertain what cultural factors might be associated with unacceptability due to the small numbers of participants ($n = 14$) unwilling to support circumcision. If the ultimate objective is to increase the uptake of circumcision by the Hispanic population in the USA, it will be important to explore in greater detail associations between different factors (country of origin, time in the USA, acculturation scores, income, etc.) in order to guide interventions tailored to specific groups in the Hispanic community.

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Table 1
Participant demographics by willingness to circumcise

Domain	Would not <i>n</i> (%)	Would <i>n</i> (%)	χ^2, <i>P</i> value
Number of children			
0	4 (29)	36 (46)	1.64, 0.440
1	6 (43)	29 (37)	
2 or more	4 (29)	14 (18)	
Income in last month			
< \$500	3 (21)	11 (14)	2.040, 0.199
\$500–\$999	6 (43)	26 (34)	
\$1000–\$1999	4 (29)	29 (38)	
\$>2000	1 (7)	11 (14)	
Current employment status			
Unemployed	9 (64)	45 (57)	262, 0.481
Employed	5 (36)	34 (43)	
Education (years)			
<10	1 (7)	15 (19)	1.78, 0.411
10–14	12 (86)	54 (68)	
>14	1 (7)	10 (13)	
Time in the USA in years			
<6	5 (36)	29 (23)	0.287, 0.866
6–13	4 (29)	27 (34)	
>13	5 (36)	29 (37)	
Country of birth			
Central America/Mexico	11 (79)	46 (63)	0.620, 0.411
South America	1 (7)	15 (20)	
USA	2 (14)	11 (15)	
Others	0 (0)	1 (1)	
Relationship status			
Single	0 (0)	10 (13)	11.1, 0.026*
Relationship not married	8 (57)	35 (44)	
Married	2 (14)	27 (34)	
Divorced	1 (7)	0 (0)	
Separated	3 (21)	7 (9)	
Health insurance			
No	14 (100)	56 (70)	5.4, 0.018*
Yes	0 (0)	23 (29)	
Religion			
Roman Catholic	8 (57)	34 (43)	3.05, 0.384
Christian	2 (14)	21 (27)	
None	4 (29)	16 (20)	
Others	0 (0)	8 (10)	

Results are presented as means or percent in parentheses preceded by the absolute number of participants; significant differences are presented as chi square (χ^2) with *P* values;

* = *P* < 0.05; \$ = US\$

Table 2
Attitudes regarding circumcision

Domain	Men <i>n</i> (%)	Women <i>n</i> (%)	χ^2 , <i>P</i> value (men versus women)
Willing to circumcise your male child at no cost			
Would	31 (97)	48 (79)	5.43, <i>P</i> = 0.03 *
Would not	1 (3)	13 (21)	
Willing to be circumcised yourself in a safe hospital (men only)			
Already circumcised	5 (15)		
Would	16 (57)		
Would not	12 (43)		
Unsure	0 (0)		
Preference for penis circumcision (women only)			
Prefer		17 (26)	
Do not prefer		6 (9)	
Unsure		43 (65)	
Circumcision is culturally acceptable			
Acceptable	22 (66)	47 (70)	2.56, <i>P</i> = 0.28
Not acceptable	7 (21)	7 (10)	
Unsure	12 (4)	13 (19)	
Best age to circumcise			
Never	1 (3)	5 (8)	1.303, 0.728
Birth—about 1 month	30 (94)	53 (87)	
1 month—about 1 year	3.1 (1)	2 (3)	
2 years or older	0 (0)	1 (2)	
Unsure	0 (0)	0 (0)	
Best place to circumcise			
No place, not acceptable	1 (3)	5 (8)	
Hospital	32 (97)	61 (92)	
Traditional setting	0	0	0.798, 0.344
Unsure	0	0	

Results are presented as means or percent in parentheses preceded by the absolute number of participants; significant differences are presented as chi square (χ^2), Mantel-Haenszel statistics (M-H) and measures of associated as odds ratios;

* = *P*<0.05

Table 3
Percentage of participants at given levels of acculturation

Domain	Men (%)	Women (%)	Total (%)
Non-Hispanic acculturation	6	5	5
Hispanic acculturation	52	63	59
Bicultural acculturation	42	33	36

No significant gender differences were found