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The feasibility and acceptability of male circumcision among men, women, and health providers of the Altagracia Province, Dominican Republic

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Abstract

Background—Male circumcision (MC) is an effective strategy to reduce the risk of HIV acquisition in men. The objective of the present study was to evaluate the feasibility of introducing MC in the Altagracia Province and to qualitatively assess the knowledge and acceptability of MC among men, women, and health providers.

Methods—Two surveys were administered to providers. The first, assessed their experience and knowledge of MC and the second, a “Health Facility Profile,” included an inventory of available surgical materials in the clinics. Fourteen focus group discussions were conducted to evaluate the acceptability of MC.

Results—Forty-three providers were interviewed at 37 clinics. Median age was 33 years (range 23–55 years). Most were physicians (91%) employed by the government. Only 23% had experience with MC. Almost universally (95%), providers knew that MC has health benefits. All agreed that MC improves hygiene and 67% knew that MC decreases the risk of HIV infection. Only six clinics provided HIV counseling and testing and most lacked adequate surgical facilities and equipment. Findings of the qualitative study showed that about half the men and the majority of women were accepting of MC.

Conclusions—Men, women, and providers in the Dominican Republic may be accepting of MC. Education about the benefits of the procedure is needed in the community.

Keywords

HIV; male circumcision; Dominican Republic; acceptability; AIDS

Introduction

Male circumcision (MC) is an effective strategy to reduce the risk of HIV acquisition in heterosexual men (Auvert et al., 2005; Bailey et al., 2007; Gray et al., 2007). MC has also been shown to reduce the incidence of other sexually transmitted infections (STIs), including herpes simplex virus Type 2 and human papilloma virus in men (Sobngwi-Tambekouas et al., 2009; Tobian et al., 2009), and chlamydia (Castellsague et al., 2005), trichomonas vaginalis, and bacterial vaginosis (Gray et al., 2009) in their female partners.

The acceptability of MC has been studied in men and women in several countries in Sub-Saharan Africa (Westercamp & Bailey, 2007), China (Ruan et al., 2009), the USA (Begley et al., 2008), India (Krupp, Madhivanan, Chandrasekaran, Karat, & Reingold, 2008), and Thailand (Tieu et al., 2008; Violante & Potts, 2004a, 2004b). Two survey-based studies have been previously conducted in Latin America (Brito, Caso, Balbuena, Bailey, 2009; Guanira, Lama, Goicochea, Segura, & Montoya, 2007).

The objectives of this study were to evaluate the feasibility of introducing MC services in the Dominican Republic (DR) and to perform a qualitative study to evaluate the acceptability, knowledge, and attitudes toward MC in men, women, and providers. The Altagracia Province constitutes an ideal setting for the potential introduction of MC services due to its moderate HIV prevalence (1.2%), low MC rates (5%), and numerous bateyes, the communities where sugar cane laborers reside, where the prevalence of HIV is reported at 3.2% (Centro de Estudios Sociales y Demográficos (CESDEM), 2007a, 2007b).

Methods

The study had two parts, a survey-based feasibility study and a qualitative study of acceptability, which was based on focus group discussions (FGDs). The feasibility study was conducted during June–July 2007. All operating government clinics and three private establishments were surveyed. Two questionnaires were administered to providers staffing the clinics. The first survey (30 questions), assessed provider's knowledge, opinions, and attitudes of MC. The second questionnaire, a "Health Facility Profile" (22 questions), assessed the demographics of the staff; the availability of HIV and STI voluntary counseling and testing (VCT); number of surgical procedures performed during the previous year; and the surgical resources available at the clinics. Data was entered into Microsoft Access and analyzed using SAS version 9.1.3 service pack4, XP_PRO platform (SAS institute Inc).

The qualitative study was conducted during June–August, 2008. Thirteen FGD were conducted (Table 1), six with women and seven with men, each consisting of 6–10 participants (mean = 7.9, SD = 1.3). Most participants were invited to participate at their household by local leaders recommended by the provincial ministry of health leadership. About 3–4 houses, preferably on different streets, were visited per neighborhood, for a total of 9–12 houses per community. Our aim was to invite 10–12 people per community estimating that 6–10 would attend. We also recruited men from sports facilities and "colmados," local convenience stores where men gather on weekends to play dominoes. Interested persons were provided with the dates and times of the FGD. Only one FGD was conducted per locale to avoid inviting people that had heard about the content of the discussions. When feasible, we invited participants who did not know each other.

FGD were held on borrowed space at community centers and local schools. Women FGD were generally conducted during the day and men's FGD were conducted in the evenings or on weekends. Participants were identified with numbers to preserve their anonymity in the recordings. A light refreshment was provided.

Groups were divided according to age into "younger" (18–25 years) and "older" (26–50 years). Half of the FGD were conducted in rural settings. The educational level of the participants ranged from an absence of formal education to a few college graduates.

A FGD was conducted with six physicians, two males, and four females. These physicians were different from the ones interviewed in the feasibility study. They were identified and invited to participate by two local physicians who were serving as our research assistants. Their mean age was 25 years (range 24–26) and they were all within the first three years of graduation from medical school. Only one person was married.

Scripts were translated to Spanish by the investigators. All sessions were audiotaped and led by a team comprised of a moderator, a note taker, and an observer. Recordings were simultaneously transcribed and translated to English over a period of several weeks. Notes were compared to the actual recordings for accuracy. Concepts were generated and coded into the following categories for analysis:

- Reasons to circumcise.
- Cultural tradition.
- Sexual pleasure and performance.
- Circumcision and hygiene.
- STIs and HIV.
- Perceptions about men's willingness to circumcise.
- Perceptions about the possible success of a MC program.

Descriptive indicators used to describe the frequency of the responses were: "All" or "universal" (100%); "nearly all" (more than 80%); "the majority" (50% or more); "about half" (50%); "fewer than half" (20–45%); "the minority" (10–20%); "a few" (less than 10%).

Results

Feasibility study

Healthcare providers—Table 2 provides the demographics of providers. Thirty-five percent were men and 65% were women. Their ages ranged from 23–55 years (median 33 years). Ninety-one percent were physicians and the rest were nurses or nurse assistants. Most providers were employed by the DR Government. Only 23% had experience with MC and the majority (86%) stated that they needed additional training if a MC program were to be started.

Table 3 summarizes the provider's knowledge and opinions about MC. Almost universally (93%), providers knew that there are health benefits to being circumcised.

All agreed that MC improves hygiene and the majority knew that MC helps decrease the occurrence of various STI. Sixty-seven percent knew that circumcised men have a decreased risk of acquiring HIV disease. Ninety-five percent were willing to be trained to provide MC services. Seventy-two percent believed that infancy (0–5 years) was the best time to circumcise males.

Focus group discussion (FGD) with medical professionals—All providers agreed that MC improves hygiene. Reported reasons for which they would recommend a MC included: to improve hygiene; to treat phimosis; and to prevent infections in both men and women. As expected, providers had a better knowledge of the health benefits of MC than non-medical participants, and all but one identified the decrease in the risk of HIV acquisition as a benefit of the procedure. They also cited a decrease in the number of "candida," "trichomonas," and "chlamydia" infections as benefits of MC. The majority correctly identified the benefits of circumcision in preventing cervical cancer in women. None were trained to perform the procedure. Almost all believed that women preferred circumcised men for reasons of hygiene. Universally, providers agreed that significant education about the benefits of MC would be needed in the community.

The group identified several potential barriers to introducing MC in the province:

- Lack of trained personnel to perform the procedures.
- Lack of information about MC in the community.
- Lack of surgical equipment.
- Cost of the procedure.
- Lack of continuous electricity or running water in some of the clinics.
- Lack of physical space for surgical theaters in some of the clinics.

Healthcare facilities—Thirty-seven facilities were assessed for the availability of equipment and supplies necessary to perform MC. Most of the facilities ($n = 31$) were dispensaries or rural clinics. All three public hospitals of the province were surveyed. The majority of establishments offered STI treatment (86%) and distributed condoms free of charge (81%). Only a small number ($n = 6$) provided VCT or HIV antiretroviral treatment. Four facilities had surgical theaters but only three had performed MC within the previous year. Table 4 provides an inventory of the available surgical equipment.

Qualitative study: focus group discussions (FGDs)

Reasons to circumcise—The most common reasons reported for considering MC were to correct problems in retracting the foreskin, which can lead to pain during intercourse, and to improve hygiene. The majority of participants of both genders identified discomfort during sexual intercourse as a common occurrence among men in the province. More than half the women had a son or knew about a friend's son, who had trouble retracting the foreskin. A few women complained about their husband's inability to retract their foreskin and experiencing discomfort during sex. A few remarked – “The uncut man feels pain and the penis goes down [*sic*], it gets swollen;” “if the circumcised man wants to have sex two or three times he is free, he doesn't have any problems.”

About half the participants viewed the potential lack of hygiene in uncircumcised men as a source of “infections.” The description of these infections was vague and, when asked to name the diseases, some participants mentioned “parasites” as probable causes. Only a few mentioned HIV or other STI.

Cultural tradition—Circumcision is not routinely practiced for non-medical indications in the DR. The procedure is rare enough that a few participants had never heard about it. A few participants viewed circumcision in the context of religion. In one instance, a participant stated, “those who are cut are allowed to talk the word of God.” Others knew MC by the biblical references of Christ being circumcised. MC is only performed by trained surgeons working for government hospitals or private clinics in the DR. Although a few individuals told stories of MC being performed by midwives in the past, the practice appears to have disappeared.

Sexual pleasure and performance—About half of the men believed that MC increases sexual pleasure because it allows better “contact” between the penis and the vagina. Others talked about the penis being “free” and less susceptible to “trauma,” “pain,” and “irritation” during intercourse. A few reported that it was easier for the circumcised man to wear a condom and penetrate the woman's vagina. Fewer than half of the men viewed the uncircumcised penis as more “natural”. Others equated the removal of the foreskin to losing a part of the body – “That (MC) is like taking a piece from you. It can't be the same pleasure (after a MC) [*sic*]. God made us with our skin.” Clever metaphors and comparisons were also used: “If you take a piece of metal and twist it, it will never return to its original shape.” About half the men believed that circumcision status is unrelated to sexual performance.

The majority of women felt that circumcised men experience more pleasure during sex. They used phrases like “less pain,” “easier sex,” “last longer,” “better erections” to justify their opinions. The circumcised penis was considered cleaner and more esthetically appealing – “When a man is peeled (circumcised), it’s easier for the woman to go down on him (perform fellatio). When the penis is all covered, it’s hard to do that.” “It is better to walk on a clean road,” remarked another participant.

The majority of men, however, believed that women prefer their partners uncircumcised. Some of the reasons given were as follows: “Women like the skin (foreskin) during oral sex. They like to play with it.” Another man said, “the skin is like a toy for women. They like to peel it back and forth. That is relaxing to them.”

Circumcision and hygiene—Nearly all participants recognized hygiene as the most important benefit of MC. The propensity for increased moisture and the accumulation of secretions in the uncircumcised penis was viewed as a risk for harboring harmful bacteria.

“The head is solid and pure, not humid (in the circumcised man).” “Removing that skin can prevent diseases. The skin can accumulate bacteria. There are many vaginal diseases that men can catch from women,” remarked some participants.

Sexually transmitted infections (STIs) and HIV—The lack of awareness about the benefits of MC to reduce the risk of HIV infection was almost universal. The majority of people believed that either circumcision had no benefits or they believed that circumcised men are at an increased risk. HIV infection was regarded by the majority as an inevitable consequence of having intercourse with someone who is infected. A few regarded the post-surgical wound as a potential portal of entry for HIV and other STI. Fewer than half considered the foreskin as a barrier against lacerations of the glans and hence protective against HIV. Some representative quotes included:

“The man who gets the surgery has a higher chance of being infected with AIDS because he has a wound and there is blood. It is easier to catch AIDS that way.”

“That disease (HIV) affects all the same, cut or uncut. If you’re going to get AIDS [*sic*], you will get it no matter what.”

“Only protection with condoms can prevent AIDS. Both men (circumcised and uncircumcised) can get it if they are not protected.”

Perceptions about men’s willingness to circumcise—About half the participants believed that men would be willing to be circumcised. The other half thought that men would not be willing or would agree only after receiving education about the benefits of the procedure. The prevailing perception was that men would be fearful of having a surgical procedure done on their genitalia.

Perceptions about the success of a MC program—Almost all participants identified education as the most important component needed for the success of a MC program. Various ways to disseminate information about the benefits of MC were proposed including: talks in the communities; lunchtime TV and radio commercials; and newspaper ads. One suggestion, heard on several of the FGD, was to invite circumcised men to the communities to talk about their satisfaction with the procedure. Almost universally, participants stated that MC should be free. The period of postoperative sexual abstinence that is recommended after a MC, was concerning to few men who were not willing to abstain from sex for a prolonged period.

Discussion

Our results suggest that providers know about the health benefits of MC but will need comprehensive training on performing the procedure. Although the number of healthcare facilities, and the working space within them, appears adequate, most lack appropriate surgical and sterilizing equipment.

About half the participants of the FGD thought that men would be willing to be circumcised. These data approximate the results of our previously published quantitative acceptability study in which we found that 67% of men would agree to the procedure after receiving information about its benefits (Brito et al., 2009). These results are also consistent with acceptability studies in eastern and southern Africa, which showed that approximately 60% of men were willing to be circumcised (Westercamp & Bailey, 2007) and that the main barriers to MC uptake were likely to be cost, pain, cultural tradition, and time to heal (World Health Organization [WHO], 2007) while the primary facilitators are hygiene, prevention of diseases, and sexual pleasure (Westercamp & Bailey, 2007).

Another interesting finding of this study was the enthusiastic endorsement of MC by women. Although the majority of women reported preferring men who were circumcised, men believed that women preferred them uncircumcised. This underscores the importance of actively involving women in a circumcision program to provide valuable support and information to their partners.

There was an almost unanimous consensus that educating about the benefits of MC is the most important intervention to increase acceptability. Several studies have documented an increase in acceptability after education is provided (Brito et al., 2009; Kbaabetswe et al., 2003; Tieu et al., 2008). Dissemination of the information could occur in a variety of ways including organizing presentations at community organizations, sport clubs, and schools. As suggested by participants, these talks should feature circumcised individuals who can provide a “before and after” perspective of the process and answer questions from interested individuals.

The strengths of this study are that it evaluated the acceptability of MC in men and women of various age groups, from urban and rural settings, and it provided a good estimate of the surgical equipment and human resources available in the province. The weaknesses are those inherent to qualitative data and reported behaviors. Participants in FGD may not be representative of the population and desirability bias cannot be excluded. We did not ask male participant’s about their own circumcision status and we did not conduct FGD in Creole, which may have excluded recent Haitian immigrants who are not conversant in Spanish.

In summary, we believe that men and women in the DR may be accepting of MC but education about its benefits is needed. In addition to decreasing HIV rates, MC could help decrease the incidence of other STI and cervical cancer.

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Table 1

Characteristics of participants in 13 focus group discussions conducted in Altagracia Province.

Variable	Men	Women	Total
Age group			
Younger	3	2	5
Older	4	4	8
Median age			
Younger	18 (18–23)	19 (18–25)	
Older	36 (26–50)	35 (26–50)	
Mean # of participants	8	8	
Median education			
Younger	10 (2–12)	11 (6–12)	
Older	9 (1–13 ^a)	7 (0–12)	
Residence			
Rural	4	3	7
Urban	3	3	6

^a 13 denotes college graduates ($n = 2$).

Table 2

Demographic characteristics of 43 health providers interviewed in Altagracia Province.

Characteristic	Frequency (%)
Gender	
Male	15 (35)
Female	28 (65)
Age	
Median	33
Range	(23–55)
Type of provider	
Physician	39 (91)
Nurse	3 (7)
Nurse assistant	1 (2)
Employment	
Government	37 (86)
Private	6 (14)

Table 3

Beliefs and knowledge of 43 health providers in Altagracia Province.

	Frequency (%)	
	Yes	No
Are there advantages to MC?	40 (93)	3 (7)
Circumcision helps to improve hygiene	43 (100)	0 (0)
Circumcision reduces risk of STIs	39 (91)	4 (9)
Circumcision reduces risk of HIV infection	29 (67)	14 (33)
Circumcision reduces penile cancer	37 (86)	6 (14)
Circumcision increases sexual pleasure	25 (58)	18 (42)
Men who are circumcised are more promiscuous	15 (35)	28 (65)
Men who are circumcised have more HIV	6 (14)	37 (86)
If circumcision were to be promoted, would you offer services?	41 (95)	2 (5)

Table 4

Inventory of surgical resources ($n = 37$).

	Frequency (%)
Surgical theater	4 (11)
Autoclave	10 (27)
Pressure cooker	2 (5)
Forceps	4 (11)
Clamps	35 (95)
Scissors	36 (97)
Scalpels	18 (49)
Surgical masks	4 (11)
Gloves	36 (97)
Sutures	37 (100)
Betadine	35 (95)