

About the Foreskin: Parents' Perceptions and Misconceptions

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ABSTRACT

Objective: To determine parents' understanding of the foreskin, in an effort to improve parent education.

Methods: A questionnaire was administered to parents of patients attending outpatient clinics at the Wendy Fitzwilliam Paediatric Hospital (Eric Williams Medical Sciences Complex), the San Fernando General Hospital and the Scarborough General Hospital during an eight-month period. It comprised 15 questions, 10 of which asked about the role of the foreskin, retraction and views on circumcision.

Results: There were 520 completed questionnaires. The majority of participants were mothers. Twelve per cent of parents had a child who was circumcised. The reasons for circumcision were mostly because of phimosis (31%), religious reasons (26% Islamic), personal preference (21%) and infection (20%). Regarding the need for circumcision, 31% of parents believed all boys should be circumcised and 36% did not agree. The majority of parents felt that by one year, full retraction should occur and 66% of parents felt that circumcision should be performed if the foreskin is not retractable. With respect to hygiene, 75% felt that circumcision made cleaning the penis easier and 43% believed the foreskin causes infections. Concerning HIV/AIDS, 67% did not believe that circumcision helps to prevent its transmission. When considering penile cancer and sexual function, more than 50% of parents did not know the role of the foreskin. Approximately 25% of parents answered 'do not know' to most of the questions.

Conclusion: Despite foreskin pathology being a common paediatric problem, it is clear that there is a lot of misunderstanding and ignorance of the facts relating to the function of the foreskin in children. There is an obvious need for better parent education.

Keywords: Circumcision, education, foreskin, perception

Sobre el Prepucio: Percepciones y Concepciones Erróneas de Padres y Madres

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RESUMEN

Objetivo: Determinar la comprensión de los padres y las madres acerca del prepucio, en un esfuerzo por mejorar la educación de los padres.

Métodos: Se aplicó un cuestionario a padres y madres de los pacientes que asisten a las clínicas de atención ambulatoria del Hospital Pediátrico Wendy Fitzwilliam (Complejo de Ciencias Médicas Eric Williams), el Hospital General de San Fernando, y el Hospital General de Scarborough durante un período de ocho meses. El cuestionario comprendía 15 preguntas, 10 de las cuales preguntaban acerca del rol del prepucio, la retracción, y los puntos de vista sobre la circuncisión.

Resultados: Se completaron 520 cuestionarios. La mayoría de los participantes eran madres. El doce por ciento de los progenitores tenían un niño circuncidado. Las razones para la circuncisión eran mayormente fimosis (31%), motivos religiosos (26% islámicos), preferencias personales (21%) e infección (20%). Con respecto a la necesidad de la circuncisión, el 31% de los padres y las madres creía que todos los chicos debían ser circuncidados, en tanto que el 36% no estaba de acuerdo. La mayoría de los progenitores sentían que por un año, debían ocurrir retracción completa, y el 66% de ellos sentían que la circuncisión debía realizarse si el prepucio no era retractable. Con respecto a la higiene, el 75% opinó que la circuncisión hacía más fácil la limpieza del pene, y el 43% creía que el

prepucio produce infecciones. Con respecto al VIH/SIDA, el 67% no creía que la circuncisión ayudara a prevenir su transmisión. Cuando se trataba de consideraciones en torno al cáncer de pene y la función sexual, más del 50% de padres y madres no sabían el papel del prepucio. Aproximadamente el 25% de ellos respondieron 'no sé' a la mayoría de las preguntas.

Conclusión: *A pesar de que la patología del prepucio es un problema común en pediatría, está claro que hay mucha incomprensión y desconocimiento de los hechos relativos a la función del prepucio en los niños. Resulta evidente que se necesita mejorar la educación de padres y madres en tal sentido.*

Palabras claves: Circuncisión, educación, prepucio, percepción

West Indian Med J 2014; 63 (5): 485

INTRODUCTION

In the Paediatric Surgical Outpatient Clinic (PSOPC) at the Wendy Fitzwilliam Paediatric Hospital (WFPH), there have been many requests by parents to circumcise their sons for non-medical reasons. It is suspected that these non-medical requests are likely due to misconceptions and misunderstandings about the foreskin. Circumcision at this institution is commonly performed for patients with phimosis and recurrent balanitis. This study is aimed at revealing parents' understanding of the foreskin in an effort to improve parent education. In a similar Korean study performed by Oh *et al* (1), it was suggested that more clinical research on the natural history of the foreskin is needed and it is important that both parents and patients are well informed about the potential advantages and disadvantages of circumcision. By closely evaluating parents' knowledge, better education can therefore be imparted on the topic of the foreskin.

SUBJECTS AND METHODS

The population used in this study comprised parents of patients attending outpatient clinics (surgical and medical) at the WFPH and the San Fernando General Hospital (SFGH) in Trinidad and the Scarborough General Hospital (SGH) in Tobago. The statistically estimated sample size for this paediatric population was 519 parents. A total of 520 parents agreed to participate in the study after reading a short introduction on the topic and the aims of the study (Appendix 1). A parent questionnaire (Appendix 2) was then administered; it comprised 15 questions, five of which involved demographic data. Data were collected during the period March 8, 2010 to October 15, 2010, during both the morning and afternoon sessions at the outpatient clinics.

RESULTS

Out of the 520 completed questionnaires, 100% were valid for interpretation. The demographic data are shown in Table 1. Of the total responses, most male patients were not circumcised (83%). However, of the circumcised patients, most were circumcised because of phimosis (31%) and 26% were attributed to religious reasons (Islam). The incidence therefore of non-religious circumcisions was calculated to be 8.6% (Table 2).

Table 1: Demographic data of the study population

		n	%
Gender	Male	59	11
	Female	461	89
	Total	520	100
Religion	Christianity	345	66
	Hinduism	63	12
	Islam	26	5
	Other	86	17
	Total	520	100
Education	Not educated	9	2
	Primary school level	75	14
	Secondary school level	290	56
	Tertiary level	146	28
	Total	520	100

Table 2: Number of circumcised patients and reasons for the procedure

		n	%
	Uncircumcised	433	83
	Circumcised	61	12
Reasons for circumcised	Phimosis	19	31
	Paraphimosis	1	2
	Infection	12	20
	Religious	16	26
	Personal	13	21

When asked whether or not all boys should be circumcised, parents' opinions were equivocal. Most felt, however, that the foreskin should retract fully by one year of age (Tables 3a and 3b.). Most parents thought that circumcision should be performed if the foreskin could not retract (66%) and 12% of parents did not think that circumcision was necessary if the foreskin could not retract; 22% did not know if circumcision should be performed in this case.

With respect to hygiene, most parents felt that the foreskin causes more infections than in a circumcised male (43%). Most also felt that circumcision makes cleaning the

Table 3a: Parents' opinion on circumcision

	n	%
All boys should be circumcised	162	31
All boys should not be circumcised	185	36
Does not know	173	33
Total	520	100

Table 3b: Parents' opinion on age of retraction

	n	%
Birth	152	29
1 year	166	32
5 years	85	16
10 years	19	4
15 years	8	2
Adult	13	3
Does not know	77	14
Total	520	100

penis easier (75%) [Table 4]. When asked about the association between circumcision and certain medical conditions, most parents thought that circumcision does not prevent HIV/AIDS (67%) and most parents did not know if circumcision prevents penile cancer or not (54%). Most parents did not know if the foreskin in the adult male makes sex more pleasurable or not (Table 5).

Table 4: Parents' opinion on hygiene

	n	%
Foreskin causes infection	222	43
Foreskin does not cause infection	165	32
Does not know	133	25
Total	520	100
Circumcision makes cleaning easier	388	75
Circumcision does not make cleaning easier	67	13
Does not know	65	12
Total	520	100

Table 5: Parents' opinion on medical conditions

	n	%
Circumcision prevents HIV/AIDS	35	7
Circumcision does not prevent HIV/AIDS	347	67
Does not know	138	26
Total	520	100
Circumcision prevents penile cancer	40	8
Circumcision does not prevent penile cancer	199	38
Does not know	281	54
Total	520	100
Foreskin makes sex more pleasurable for a man	97	19
Foreskin does not make sex more pleasurable	122	23
Does not know	301	58
Total	520	100

DISCUSSION

The foreskin is defined as a continuation of skin from the shaft of the penis that covers the urethral meatus and the glans penis (2). There is variability in the appearance and development of the foreskin throughout childhood and puberty. Circumcision is a procedure by which some or the entire foreskin is removed from the penis. There is debate about the role of the foreskin and also about the role of its removal. The indications for circumcision include: phimosis, recurrent balanitis, recurrent febrile urinary tract infections (UTI) in patients with an abnormal urinary tract, severe traumatic injury of the foreskin and penile malignancy (3). Non-therapeutic 'ritual' circumcisions are also performed most commonly for Jewish and Muslim boys.

The National Census Report (4) confirms an adult literacy rate of 100% in Trinidad and Tobago. More than 50% of the population has completed a secondary school level of education. Over 80% of adult Trinidadian females have completed primary and secondary school levels and less than 3% received no education. This is important to note as the majority of the participants in the study were mothers and a basic level of understanding was required in order to achieve appropriate feedback.

The majority of the study population (61%) believed that by age one year, the foreskin should be able to retract fully. However, almost all boys have a non-retractile

foreskin at birth. Only about 4% of all newborns have a retractable prepuce. The inner foreskin is attached to the glans penis and its adhesions break down naturally with time. This process concludes around the age of 17 years as the incidence of preputial adhesions declines steadily with age (5). Manipulation is therefore not needed. By age six years, the incidence of phimosis or a tight prepuce is below 10% and by age 17 years, the incidence is approximately 1% (6). In the event of phimosis, topical steroids have been shown to be a good alternative to surgery, with an overall efficacy of approximately 66% (5). Various studies have shown steroid success rates to be between 33% and 95% (3). However, patients with a persistent phimotic ring after steroid treatment may require circumcision.

Balanitis and balanoposthitis occur in approximately 4% of uncircumcised boys, especially within the first three years of life. The aetiology is likely contact irritation. It is possible that beneath the foreskin is an appropriate environment for replication of pathogens. For example, uncircumcised infants are more likely to harbour uropathogenic bacteria. However, it has been shown that neonatal circumcision increases the risk of penile inflammation rather than offering protection, especially in boys younger than three years of age (7). As the foreskin matures, the incidence of balanitis and balanoposthitis reduces. Smegma production increases from about 12–13 years of age. This does not present any problems if the boys are regularly instructed on prepuce hygiene (6).

There have been changing patterns of adult male circumcision due to the expanding HIV epidemic. It has been demonstrated that circumcising adult males in high-risk areas such as South Africa and Kenya has reduced the transmission of HIV by 50–60% (8). Comprehensive HIV prevention packages are being made available to these high-risk areas. However, these trials have been done in specific high-risk areas. Any strong associative studies for prevention in a routine paediatric population have not been addressed.

Human papillomavirus (HPV) has a strong association with the development of penile cancers. There is not much information on the role of circumcision in the aetiology of penile cancer. However, significant risk factors for invasive cancer include cigarette smoking, lack of circumcision in childhood and phimosis. Perhaps circumcision in early childhood may prevent its development in adulthood, but the high association with HPV and penile cancer still very much exists regardless of circumcision status (9).

The majority of the study population (58%) did not know how circumcision affects male sexual pleasure in adulthood and the alternative opinions were equivocal. Observational studies on the effect of adult male circumcision on sexual satisfaction have shown conflicting results. It was thought that penile sensation was affected after circumcision. Adult male circumcision does not adversely affect sexual function or satisfaction (10). Childhood cir-

cumcision, however, may affect some sexual functions in adulthood depending on the age at circumcision (11). Premature ejaculation was the most common dysfunction noted in this issue.

It is evident that there is lack of knowledge on the function and natural history of the foreskin, especially when considering the age of retraction. Despite foreskin pathology being a common paediatric problem, parents are either misinformed about this topic or are ignorant of the facts. The continuous requests for non-medical circumcisions exemplify this. It is therefore very important to promote parent and patient education, in addition to the routine clinic consultation. There is also a need to assess the level of understanding among medical professionals such as paediatricians and general practitioners. Since many of the referrals are from these sources, this may allow for better counselling at the primary healthcare level as well as decrease the number of inappropriate referrals to the surgical clinics.

ACKNOWLEDGEMENTS

The authors thank the parents and patients of the outpatient clinics at the Wendy Fitzwilliam Paediatric Hospital (Eric Williams Medical Sciences Complex), the San Fernando General Hospital and the Scarborough General Hospital for their contributions to the study.

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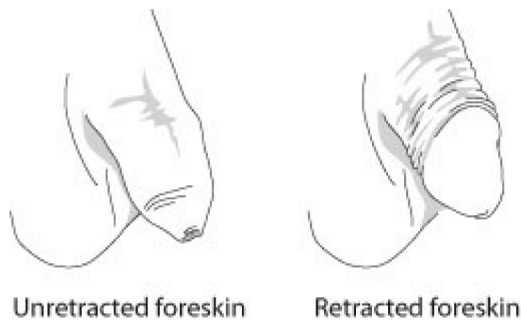
APPENDIX 1

PARENT QUESTIONNAIRE: ABOUT THE FORESKIN

Dear Parent,

Thank you for participating in our survey. You will be asked a series of simple questions about your understanding of the FORESKIN in boys.

The foreskin is the piece of loose skin that covers the end of the penis. It is shown in the picture below. Sometimes the foreskin is removed by CIRCUMCISION for different reasons.



The purpose of this questionnaire is to find out how much information you know about the purpose of the foreskin. There are boxes next to the questions for you to tick your answer. All your answers will be confidential. There is no need to put your name on the questionnaire.

Your responses will be greatly appreciated as it will help to communicate better with our patients on this topic. Thank you again for your support and participation.

Sincerely,

Dr. B. Rampersad (Paediatric Urologist)

APPENDIX 2

PATIENT QUESTIONNAIRE:

1. I am a
 - Mother
 - Father
2. What level of education do you have?
 - None
 - Primary
 - Secondary
 - Tertiary
3. What religion are you?
 - Christian
 - Muslim
 - Hindu
 - Other
4. How many male children do you have?
 - None (if none, please skip questions 5–7)
 - 1
 - 2
 - 3
5. Please give the ages of your son/ sons.
 - Less than 1 year
 - 1–5 years
 - 5–16 years
 - More than 16 years
6. Are any of your sons circumcised (had foreskin removed)?
 - Yes
 - No
7. If yes, why was the procedure done?
 - o Medical reasons
 - Infections
 - Phimosis (foreskin too tight)
 - Paraphimosis (foreskin pulled back and stuck)
 - o Religious reasons
 - o Personal preference
8. Do you think that all boys should be circumcised (foreskin removed)?
 - Yes
 - No
 - Don't know
9. At what age do you think the foreskin should be able to retract fully (pull back)?
 - At birth
 - At 1 year
 - At 5 years
 - At 10 years
 - At 15 years
 - As an adult

10. Do you think your child should be circumcised if he cannot retract (pull back) his foreskin?
- Yes
 - No
 - Don't know
11. Does having a foreskin cause more infections?
- Yes
 - No
 - Don't know
12. Does removing the foreskin (circumcision) makes it easier to clean the penis?
- Yes
 - No
 - Don't know
13. Does removing a foreskin (circumcision) help prevent HIV/AIDS?
- Yes
 - No
 - Don't know
14. Does removing a foreskin (circumcision) help prevent cancer of the penis?
- Yes
 - No
 - Don't know
15. Later in life, does having a foreskin make sex more pleasurable for a man?
- Yes
 - No
 - Don't know