To cut or not to cut? Personal factors influence primary care physicians' position on elective newborn circumcision

Keywords

Circumcision – male

Physicians

Men

Men's Health

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Abstract

Background: Elective circumcision in newborns has always been a controversial issue. The purpose of this study was to determine whether personal factors play a role when physicians provide advice to parents regarding elective circumcisions in infants.

Methods: Questionnaires were sent to Family Physicians, Urologists, Obstetricians, Paediatricians and Family Medicine residents in Saskatchewan, Canada. The questionnaire contained demographic questions, questions regarding the carrying out of surgical procedures, personal and family circumcision status and factors influencing decision-making regarding elective newborn circumcisions.

Results: Of the questionnaires, 57% (572/1009) were returned. Of the 572 respondents, 65% were male, 80.4% were Family Physicians or General Practitioners and 77.1% (441/572) stated that they based their decisions regarding circumcisions on medical evidence. When asked if they were in support of circumcisions, 68.3% (125/183) of the circumcised males were in support of it and 68.8% (106/154) of the uncircumcised males were opposed to it ($p<0.001$).

Conclusions: Although most respondents stated that they based their decisions on medical evidence, the circumcision status of, especially, the male respondents played a huge role in whether they were in support of circumcisions or not. Another factor that had an influence was the circumcision status of the respondents' sons.

Introduction

Elective circumcision in newborns is an issue that has been, and undoubtedly will be, debated for a long time [1–3]. In 2005 it was found that 60–80% of boys in the USA had been circumcised [4–6], while in the United Kingdom, the number of newborn circumcisions had decreased by 20% between 1997 and 2003 [7]. Elective circumcision has received a lot of publicity recently with the publication of the research done in Africa, which suggested that circumcision could lower the risk of becoming infected with the human immunodeficiency virus (HIV) and other sexually transmitted infections (STIs) [8–13]. These findings were also reported in developed countries [14]. Another study also found that the female partners of uncircumcised men had a higher incidence of *Chlamydia trachomatis* infection [15]. It would seem logical that physicians would recommend circumcision for male infants as a result of this research. However, circumcisions are not procedures without risk [16]. In 1996, the Canadian Paediatric Society (www.cps.ca) recommended against routine newborn circumcisions and has not changed its position on this, although its website states that its position is under

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consideration at the moment. More recently, in June 2006, the British Medical Association has updated its position on elective circumcisions to one of neither for, nor against, the procedure (www.bma.org.uk).

A recent study by Wang et al [17] evaluated United States parents' viewpoints on neonatal circumcisions. That study showed that 86% of respondents were in favour of elective circumcisions and this number did not change after giving parents literature on the passage of HIV/human papillomavirus (HPV).

Although it is outside the scope of this article, the ethical considerations around elective circumcisions have also received a lot of publicity. The biggest argument against elective circumcisions in newborns is the lack of informed consent from the infant [18,19].

In 1996, the Ministry of Health in Saskatchewan de-insured elective circumcisions in newborns, resulting in parents having to pay for the procedure. The College of Physicians and Surgeons of Saskatchewan cautioned against routine circumcision of newborns in a strongly worded letter to physicians in February 2002. However, in the USA the circumcision rate in newborns was not influenced by the availability of health coverage for this procedure [11]. These points lead to the questions: What are physicians' positions regarding elective newborn circumcisions? Are they incorporating recent research, or are there other factors influencing their decision-making and advice to parents?

Subjects, Materials and Methods

Survey design and participants

In 2006, 1009 physicians and residents were identified using the registry of the College of Physicians and Surgeons of Saskatchewan and the Department of Academic Family Medicine at the University of Saskatchewan, Canada. Only Family Physicians, General Practitioners, Obstetricians, Urologists, Paediatricians and Family Medicine residents were selected for this study, as they were more likely to be confronted with the decision of elective newborn circumcision. There was no existing questionnaire available in the literature that could be used for this survey, so a new, non-validated questionnaire was specifically designed for this study and mailed to these physicians (see Appendix). The study participants had the option of completing and mailing the questionnaire back or completing it online. All respondents that did not submit their questionnaires within 1 month were sent a reminder letter and a second copy of the questionnaire. This was repeated once more a month later. The study period was closed 3 months after the initial mail-out.

The questionnaire was designed by the author and was pilot tested on a group of 7 physicians in other provinces and countries. It contained participant demographic questions (gender, age, years after graduation, discipline), surgical procedures performed (circumcisions and other), circumcision status (own, partner's and sons') and personal factors influencing a physician's position on elective circumcisions.

Statistical analysis

SPSS 16 was used to capture and analyse the data. Categorical data were summarised into frequencies and percentages. Continuous data were analysed using measures of central location. The Pearson Chi-square statistic (χ^2) for independence of association between two independent samples was used for hypotheses testing. The null hypothesis was: there is no association between demographics, surgical procedures, circumcision status and personal factors and whether physicians are in support of elective circumcisions (i.e. they are independent). The alternative hypothesis stated that these factors are not independent. Two-sided probability values (p values) were compared against an $\alpha = 0.01$ level of significance as the hypothesis rejection criterion. The degrees of freedom (df), as well as the Pearson Chi-square statistic (χ^2), were calculated for each of the multiple two-sample tests.

Results

The response rate was 57% (572/1009). Frequencies, measures of central location and hypothesis tests were performed.

The majority of the respondents (80.4%) were Family Physicians (Table 1), while specialists (Urologists, Obstetricians and Paediatricians) constituted 10.85%. The category ''other'' consisted mostly of Emergency Physicians. The category ''medical resident'' did not elaborate on the discipline or year of study. Of the respon-

Table 1 Medical specialty of respondents (%)

Specialty	%
Medical resident	5.1
Family physician	80.4
Urologist	1.8
Obstetrician	2.8
Paediatrician	6.3
Other	3.7
Total	100

dents, 65% were male physicians. This resembled closely the cohort that was surveyed, since, according to the Saskatchewan Medical Association, approximately 68% of those sent a questionnaire were reported to be male.

The average age was 49.1 years (range = 26–87 years) and respondents had been in practice for an average of 22.9 years (range = -1–62 years). (The 'minus 1 year' took account of residents that had not completed their programme yet.)

The percentage of respondents performing procedures was 83% (n = 473) and of those, 23% (n = 111) indicated that they performed circumcisions.

Of the male respondents who answered the question on circumcision status, 53.4% (195/365) were circumcised themselves, while 4.1% (15/367) of the men who answered the question on satisfaction with their own circumcision status would have liked to change it (Table 2). When asked about their partners, 19.8% (112/565) of the total number of respondents reported that their partners were circumcised, whereas if only the female respondents were selected, they reported that 57.1% (112/196) of their partners were circumcised.

The majority (77.1% or 441/572) of the respondents stated that they based their recommendation regarding elective circumcisions on medical evidence.

Table 2 Satisfaction with personal circumcision status

If you could, would you like to change the fact that you're circumcised / not circumcised?	Percentage (n)
Yes	4.1 (15/367)
No	77.9 (286/367)
Does not matter	16.1 (59/367)
Not sure	1.9 (7/367)
Total	100

Respondents were almost equally divided between supporting elective circumcisions in newborns (47.5% or 266/560) and opposing it (52.5% or 294/560). Of the male physicians that were circumcised themselves, 68.3% (125/183) were supportive of elective newborn circumcisions; of those not circumcised, 68.8% (106/154) were opposed to it. The relationship between personal circumcision status and support of circumcision or not, was statistically significant ($p<0.001$, df = 1, $\chi^2 = 46.17$) (Figure 1).

The majority (77.2% or 105/136) of respondents whose sons were circumcised, were in support of circumcisions, while the majority (64.7% or 145/224) of those whose sons were not circumcised, were opposed to it. This again was statistically significant ($p<0.001$, df = 1, $\chi^2 = 59.56$).

Of the respondents performing circumcisions, 68% (70/103) were in support of elective newborn circumcisions ($p<0.001$, df = 1, $\chi^2 = 16.73$).

If two-sided probability values (p values) were compared against an $\alpha = 0.05$ level of significance, the relationship between medical specialty and support of circumcisions was statistically significant. Of the 29 residents, 72.4% (21/29) indicated support of elective circumcision, while 47.8% (200/418) of the family physicians were supportive ($p = 0.029$, df = 2, $\chi^2 = 7.062$) (Table 3).

With regard to their opinion on elective circumcisions, there was no statistically significant difference between male physician respondents (50.7% or 175/345) and female physician respondents (48.9% or 88/180) ($p = 0.379$, df = 1, $\chi^2 = 0.159$). Other factors that were also not statistically significant were: whether their partner was circumcised or not ($p = 0.214$, df = 2, $\chi^2 = 3.075$), their age ($p = 0.809$, df = 3, $\chi^2 = 0.966$), time since graduation ($p = 0.508$, df = 3, $\chi^2 = 2.321$) or whether they wanted to change their circumcision status ($p = 0.453$, df = 2, $\chi^2 = 1.585$). Nine circumcised men reported that they wanted to change their status versus five uncircumcised men.

Respondents were asked to indicate which one, or more than one, of the listed factors influenced their opinion on circumcision (Table 4). Of those in support of circumcisions, religion had the biggest influence (86.8% or 59/68), followed by own circumcision status

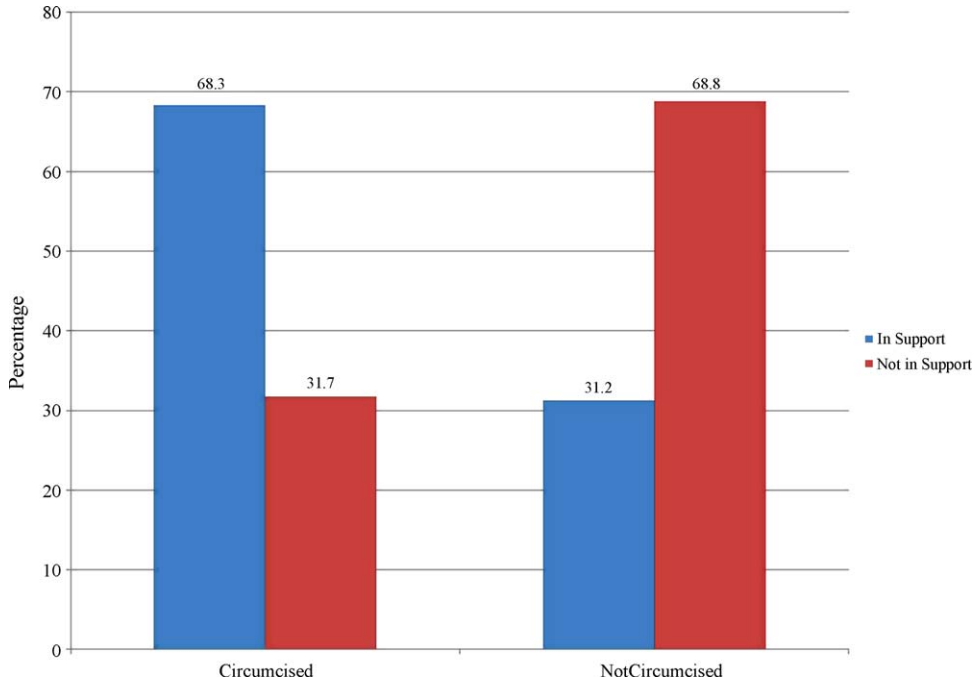

Figure 1 The circumcision status of male respondents in relation to their support of circumcision.

Table 3 Medical specialty and support of elective newborn circumcision

Medical specialty	Support of circumcision	
	Yes	No
Residents	21/29 (72.4%)	8/29 (27.6%)
Family physicians	200/418 (47.8%)	218/418 (52.2%)
Paediatricians	20/35 (57.1%)	15/35 (42.9%)
Urologists & Gynaecologists	13/26 (50%)	13/26 (50%)
Total	266/560 (47.5%)	294/560 (52.5%)

Table 4 Top three factors stated by participants as influencing personal opinion and counselling of parents on newborn circumcision

Factors influencing opinions	Percentage
Medical evidence for or against it	67.0
Own / partner's circumcision status	11.0
Own religious beliefs	10.9

(74.5% or 41/55). When looking at the number of respondents that stated that medical evidence influenced their viewpoint, 56.1% were not in favour of circumcisions.

Discussion

The results of this study indicated that although the majority of respondents stated that their views on elective circumcisions were based on medical evidence, the circumcision status of the male respondents played a significant role in their opinions. Other influencing factors were: whether they performed circumcisions; their son's circumcision status; whether they were a medical resident or not. Even though the relationship between the circumcision status of respondents' partners and respondents' opinions regarding circumcision was not statistically significant, it followed the same trend as the relationship between personal circumcision status and support of circumcision. Both genders were included in the analysis of partners' circumcision status to allow for homosexual relationships.

This confirms that circumcision is, and probably always will be, a very personal matter. The fact that respondents indicated that

medical evidence had the biggest influence on their decision-making may be because they thought it was the correct answer expected from them. It could also be that elective circumcision was very prominent in the media at the time of the survey.

Limitations

One of the limitations of the study was the fact that only Saskatchewan physicians were surveyed. The fact that elective circumcisions are not covered by the provincial health plan might have had an influence on the opinions of some of the physicians. It might have been useful to have added this variable as one of the possible factors that influence a physician's position on circumcisions. The response rate of 57% might demonstrate a bias, but the strong statistical significance between those in favour and those against elective newborn circumcision would negate this bias. This study was also done at a time when there was a lot of media publicity around circumcision and the role it played in the prevention of HIV infection. It would be interesting to find out whether opinions have changed since then. Although the data were mostly collected in 2006 and 2007, the analysis was only completed in 2009 due to human resources issues.

Disclosure Statement

No conflict of interest to declare.

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Appendix A

Do personal factors influence physicians' viewpoint on elective circumcisions?

1. What year were you born? 19

2. What year did (or will) you graduate?

3. Are you a
- ☐ Medical student
- ☐ Resident
- ☐ Family Physician
- ☐ Urologist
- ☐ Obstetrician
- ☐ Pediatrician
- ☐ Other _____

4. Do you do surgical procedures (including lumps and bumps?)
- ☐ Yes
- ☐ No
- ☐ Not yet but I will in the future
- ☐ Not anymore

5. Do you perform circumcisions?
- ☐ Yes
- ☐ No
- ☐ Not yet but I will in the future
- ☐ Not anymore

6. Are you in favor of newborn circumcision for non-medical reasons?
- ☐ Yes - for religious reasons
- ☐ Yes - for other reasons
- ☐ No - for religious reasons
- ☐ No - for other reasons

7. Are you?
- ☐ Male
- ☐ Female?

If you're female - skip to question ten.

8. If you are male – are you circumcised?
- ☐ Yes
- ☐ No

9. If you could - would you like to change the fact that you're circumcised / uncircumcised?
- ☐ Yes
- ☐ No
- ☐ Doesn't matter
- ☐ Not sure

10. Is your partner / spouse circumcised?
- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Not applicable

11. Are any of your sons circumcised?
- ☐ Yes
- ☐ No
- ☐ No sons or don't know

12. Does any of the following affect your thinking regarding circumcisions?
- ☐ Your own religious beliefs
- ☐ Medical evidence for or against it
- ☐ Your own / partner's circumcision status
- ☐ Other

_____

_____

13. Additional comments:

_____

_____

_____

_____

Thank you very much for your honesty and for taking part in this short survey.