Attitude of Maternity Staff Regarding Episiotomies in an African Rural Hospital with High HIV Prevalence: A Descriptive Qualitative Study

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Abstract. In a typical sub-Saharan African rural hospital, maternity staff seems to avoid episiotomies. The aim of this research is to develop a deeper understanding in the attitude of maternity staff regarding episiotomies. We used a descriptive qualitative approach: interviews, written questionnaires, and a group discussion. All methods showed strong reservations toward episiotomies among staff members. Most staff members have been trained to be very restrictive concerning episiotomies to prevent the transmission of human immunodeficiency virus (HIV). As a result of training and hence changing attitudes, the use of episiotomies is limited in all patients; even when strong indications are present and sometimes regardless of HIV status. This might increase the number of neonatal deaths.

INTRODUCTION

As the year 2015 approaches, it is clear that Millennium Development Goals 4 and 5 concerning maternal and child health during birth will not be reached in sub-Saharan Africa.^{1,2} Many causes can be identified, among them a large number of home deliveries, the limited number of doctors and midwives, and all kinds of delays during labor.^{1,3}

Lumezi Mission Hospital in Zambia is a typical rural African hospital. The fetal death rate and the maternal mortality rate in this hospital are high, respectively 5.2% and 0.47% in 2012 (Table 1). The human immunodeficiency virus (HIV) prevalence in this district is estimated at 18%. We observed that one of the delays during labor is caused by the reservations of hospital staff to perform episiotomies. This might result in a prolonged second stage of labor and an increased risk of complications.

This observation is remarkable, as most of the literature concerns the “over-use” of episiotomies.^{4–6} A Cochrane review of eight studies shows there are no significant differences for mother and neonate between a restrictive and a liberal application of episiotomies. The authors recommend a restrictive use of episiotomies.⁴

Worldwide, the use of episiotomies is decreasing.^{7,8} Most common indications are fetal condition/fetal distress, prematurity, macrosomia, suspected shoulder dystocia, instrumental delivery, primiparity, short perineum (< 3 cm), tight perineum, previous third degree tear, maternal fatigue, and prolonged labor.^{4,9} Contraindications for episiotomy are a lack of descent of the fetus, uncertainty about the possibility of a vaginal delivery, and a fast, uncomplicated delivery. Some of these indications and/or contraindications for episiotomies are subjective. As a result, many different opinions are found in the literature, between practitioners, between countries, and over time.^{7,8,10} The need for an episiotomy in practice is thus largely based on “clinical assessment” or “clinical opinion.”

The aim of this research is to develop a deeper understanding in the clinical assessments made by staff in Lumezi Mission Hospital. To this end, we study how they balance indications and contraindications and whether they are con-

fident in performing the procedure. We focus on the possible influence of the fear of transmitting HIV from mother to child. More insight into staff attitude regarding episiotomies might open discussion on the matter, both within the hospital and elsewhere.

METHODS

Research setting. The study area is Lumezi Mission Hospital in Zambia. This typical rural hospital with a catchment area of about 100,000 people and 100 beds facilitates more than 1,000 deliveries per year.¹¹ Eleven health posts refer patients to the hospital. In 2012, 22 episiotomies were performed, which corresponds to 2.1% of all hospital deliveries. In 2011 there were 5 (0.5%). Both years almost all episiotomies were in primips. Indications were vacuum extraction, prolonged second stage of labor, and fetal distress.

Research methods. To increase the internal validity of this qualitative research by means of methodological triangulation, three complementary methods have been chosen. Combining different outcomes of different research methods will yield more reliable results. These methods are interviews with key persons, a survey using written questionnaires, and a group discussion.

First, an interview protocol with loosely structured questions was developed and exploratory interviews were done with three key informants. These were chosen from three different professions: one midwife, one nurse, and one unqualified member of staff. They were also chosen by sex: two females and one male. The key informants all attend deliveries frequently. At the time of the interview, the key informants and the interviewer (the supervising medical officer) had a good professional working relation for 1 year. During this period mutual trust and respect were built to overcome hierarchical issues and cultural differences. Therefore, we expected people to freely express their feelings and opinions. The interview results were captured in written notes. Outcomes were treated confidentially and were used to define questions for the survey.

Second, a written questionnaire was compiled with open and closed in-depth questions (Supplemental Appendix 1). The study population consists of all members of staff who attend deliveries: eight midwives, seven nurses, two clinical officers, and three unqualified staff members. All were asked for consent and explained that the results would be used

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TABLE 1
Delivery statistics

	No.	No. of episiotomies	% Episiotomies
Delivery Statistics 2011			
All deliveries	961	5	0.5%
Nulliparous	215	5	2.3%
Delivery Statistics 2012			
All deliveries*	1068	22	2.1%
Nulliparous	302	20	6.6%
Neonates	1090	—	—
Ruptures	147	0	0%
SC	92 (8.6%)	0	0%
Vacuum extraction	9†	3	33%
Twins	22	0	0%
Breech	11	0	0%
Weight < 2,000	23	1	4.3%
Weight > 4,000	32	0	0%
Fetal distress	17‡	1	5.9%
Prolonged second stage of labor (no SC)	15‡	2	13.3%
Neonatal death§	57 (5.2%)	2	3.5%
Maternal death§	5	—	—

*HIV prevalence estimated at 18%.

†Probably not documented well.

‡Fetal death rate: 57 deaths/1,090 neonates = 5.2%.

§Maternal mortality rate: 5 deaths/1068 deliveries = 0.47%.

anonymously. All agreed and completed the questionnaire. The questionnaires were written and completed in English. The respondents all speak and write English fluently. Focus in the questionnaire was on the following subjects: the general opinion about episiotomies, indications, contraindications, education, experience, the influence of HIV, and the fear of transmission from mother to child. Specific questions were asked about the influence of vacuum extraction, maternal fatigue (locally called “poor maternal effort”) nulliparous versus parous and the healing of the perineum. At the time of the study respondents did not know the researchers’ opinion on the subject. The written data were categorized and coded in a spreadsheet for each profession.

Third, the results of the questionnaire were discussed in a group discussion open for all hospital staff. This was an elective meeting, which was attended by some staff who completed the questionnaire and by staff members not working in the labor ward (and who therefore did not fill out the questionnaire). First, the results of the survey were presented anonymously. A discussion was then opened to get insight into the argumentation and answers given. The discussion was led by the medical officer of the hospital (who is also the first author of this article). To prevent leader bias this discussion was interfered with as little as possible by the discussion leader. After the discussion staff was instructed about episiotomies in a teaching setting. During the entire meeting notes were taken by an independent observer.

Data analysis. During the course of the research, results of previous steps have been taken as a basis for further explorations. Final analysis of the data has been based upon a combination of the results of the three different methods. Background information on the respondents and the research setting has been taken into consideration.

RESULTS

Interviews with key informants. All key informants noticed a decrease in the use of episiotomies over time in their careers of respectively 12, 15, and 30 years. The midwife and the nurse were specifically taught at school not to perform episiotomies in HIV-positive patients if possible. However, “it is not contraindicated when there is fetal distress.” Other indications given in the interviews were “a tight perineum,” “sometimes in a breech delivery,” “preventing a serious tear,” “a delay in the second stage of labor,” “poor maternal effort,” and if there is “a very big baby.” On the question for what reasons they would avoid an episiotomy they all mentioned HIV infections again. Other reasons mentioned were compromised immunity, genital warts, and other sexually transmitted infections (STIs).

The general feeling about episiotomies was neutral to negative: “I don’t like episiotomies because of the pain it gives,” “people will think you are unkind,” and “midwives are now taught to do vacuum extractions, which can prevent episiotomies.” None of the key persons had any problem with the actual procedure or the suturing of episiotomies. They do not expect more problems with the healing of an episiotomy than of a tear.

Written questionnaires (Supplemental Appendices 1 and 2).

In Table 2 the characteristics of the participants have been summarized. Age, experience, and sex differ between the different professions. The written questionnaires showed that staff is well informed about indications of episiotomies. Indications given are similar to the ones commonly described. However, there are some strong reservations against actually performing an episiotomy: 10 of the total 20 members of the staff are outspoken in their dislike. This is not related to the suturing or healing of an episiotomy. Of these 10 people disliking episiotomies, seven think that episiotomies are easier to suture than a vaginal tear, and only two think that episiotomies heal slower than vaginal tears.

Almost all respondents avoid episiotomies in HIV-positive mothers. All staff members were told in training to be restrictive concerning episiotomies in HIV-positive women. Seven members of staff even mentioned that an episiotomy is contra indicated in HIV-positive mothers. When asked about specific indications (namely fetal distress, prematurity, tight perineum, suspected shoulder dystocia, and poor maternal effort)

TABLE 2
Characteristics of participants

	Midwives	Nurses	Clinical officers	Unqualified staff	Total
No. of participants	8	7	2	3	20
Age (mean and range)	43 (32–60)	35 (28–50)	31 (32–34)	43 (32–50)	39 (28–60)
Female	6	2	0	3	11
Experience (average and range in years)	13 (4–36)	8 years (2 months – 30 years)	4 (1–6)	21 (4–30)	12 (2 months–30 years)
Estimate no. of deliveries per month (average)	12	5	4	Many (not specified)	9

in an HIV-positive mother, four respondents did not find any of these indications strong enough. Overall, 11 of 20 respondents would do an episiotomy in a HIV-positive mother in case of fetal distress, whereas 13 of 20 would do an episiotomy in a HIV-positive mother with a tight perineum. Two staff members would perform an episiotomy in a HIV-positive mother when there is prematurity, four would do an episiotomy when there is maternal fatigue, and six would do an episiotomy when shoulder dystocia is expected.

When asked about any additional comments, the following about episiotomies in HIV was stated: "healing of an epi in a HIV-positive mother can be slow and poor," "you cannot do an episiotomy in a HIV-positive mother, but a Cesarean section can prevent transmission from mother to child," and "[...] nowadays nurses avoid episiotomies because of HIV pandemic."

The older staff reported a changed attitude toward episiotomies because of the HIV epidemic: "[I changed my opinion about episiotomies] because of the coming of HIV and when I learned about prevention of mother to child transmission (PMTCT)" and "sometime back we used to put an episiotomy when a primip perineum was too tight and there was fetal distress...now episiotomy is not done to prevent the spread of this deadly disease HIV from mother to child."

In the interview with one of the key informants vacuum extraction was mentioned as an alternative to episiotomy. Half of the respondents indicated that they would indeed prefer a vacuum extraction.

Two staff members wrote that episiotomies are never needed, regardless of the HIV status of the mother: "never put an episiotomy, there are other ways to manage complications like shoulder dystocia or fetal distress." Remarks from other staff members: "not every person needs an episiotomy, some mothers with indications [I have] mentioned can still deliver without it." Yet another reason to be reticent: "When I do an episiotomy I experience a big cut but when there is a tear it is not a big cut [...]."

Some of the staff think that their obstetrical skills and knowledge might cause them to avoid episiotomies: "I think I need more practice in episiotomies to save the newborn [...]" This is not surprising, realizing that not only trained midwives attend deliveries, but also unqualified staff with vast practical experience but little theoretical knowledge. During the night, nurses with adequate theoretical knowledge but few practical skills in obstetrics attend deliveries.

Group discussion. The results of the questionnaires were discussed anonymously in a meeting for all hospital personnel. This discussion between members of staff mainly focused on indications for episiotomies in HIV-positive mothers. It revealed many interesting insights into staff attitudes. As in the written questionnaire, there were some strong reservations toward episiotomies, especially in HIV-positive mothers. Some staff members prefer an elective Cesarean section in HIV-positive mothers to an episiotomy. A discussion followed about the fact that one cannot predict before labor which patient will need an episiotomy. Still some staff members stuck to their preference for Cesarean sections: "I have been told that the risk of HIV transmission through episiotomy is estimated at 90%, therefore we should do more planned Cesarean sections in HIV-positive patients." People agreed on this: "in my experience HIV-positive mothers have more difficult deliveries. There is more often prolonged labor."

Only because the discussion ended with this outcome, the opinion of the discussion leader (medical officer/researcher) was given. She disagreed on elective Cesarean sections: "the risks of maternal and neonatal mortality and morbidity in this setting are too high to increase the number of elective Cesarean sections."

Summary of all data collections. All three methods yielded some strong reservations toward episiotomies. Main cause is the fear of transmitting HIV from mother to child. This is mostly the result of training. Staff has been told on many occasions that episiotomies should be prevented. Some indicate that an episiotomy is never needed, regardless the HIV status, or only needed if the mother is not pushing well. Others indicate that they prefer a Cesarean section or vacuum extraction to an episiotomy in HIV-positive mothers.

As a result, confusion arises when asked when to put an episiotomy in HIV-positive mothers. This is shown by the fact that 9 of 20 participants would *not* do an episiotomy in a HIV-positive mother in case of fetal distress, but 11 of 20 *would* do an episiotomy in a HIV-positive mother with a tight perineum.

Staff does not avoid episiotomies to prevent having to suture the cut. Problems with materials, for example (possibly blunt) scissors were not mentioned as a reason not to perform an episiotomy.

DISCUSSION

Although it is certainly a commendable cause to reduce HIV transmission from mother to child by reducing the number of episiotomies, it seems that the reservations with staff in this particular hospital go further than that: there is reluctance toward episiotomies regardless of the HIV status of the mother. The percentage of episiotomies in the hospital (0.5–2.1%) is very low, even when compared with figures from a "restrictive" policy as a reference (a mean of 28.4% [range 7.6% to 57.1%]).⁴ If strong indications are present (i.e., fetal distress) this may lead to unnecessary complications and fetal deaths.

Explanations for circumventing episiotomies can be found in the training and experience of staff. Not only midwives are attending deliveries, but also unqualified staff and (during the night) nurses. Some of them have had only limited maternity training and/or experience. In contrast, during the last decade there have been many HIV courses and PMTCT workshops.^{12,13} Staff have been told on many of these occasions that episiotomies should be prevented, but alternatives might not have been discussed. Moreover, some staff members consider that episiotomies are only needed if the mother is not pushing well ("poor maternal effort"). Another explanation may be that in a population where grande parity is usual, most deliveries at the maternity ward will be deliveries of multiparous patients where episiotomies are needed only rarely. This may add to the feeling that episiotomies are never or only seldom needed.

Some staff members would rather do a vacuum extraction than an episiotomy. However, indications for a vacuum extraction are not interchangeable with indications for episiotomies.¹⁴ The Zambian PMTCT protocol indicates that in HIV-positive patients' episiotomies *and* instrumental deliveries should be avoided¹⁵; some staff would prefer an elective Cesarean section to an episiotomy. However, the

same guideline mentions that an elective Cesarean section is feasible and appropriate if, e.g., viral load > 1000 copies/uL, the woman has been on anti-retroviral treatment (ART) for > 8 weeks and chooses not to breastfeed.¹⁵ These criteria will not be met in most of the population, especially not in the rural areas where there is no alternative for breastfeeding and viral load cannot be measured. It has been shown that an elective Cesarean section can be effective in the prevention of mother to child transmission if women are not taking ART.¹⁶ However, the risk of transmission in women with low viral loads (i.e., women on the current PMTCT regimes) remains unclear.¹⁶ Therefore, the World Health Organization (WHO) protocol does not recommend elective Cesarean sections as part of the PMTCT measurements.¹⁷

It is likely that an episiotomy increases the risk of blood-blood contact and therefore the transmission of HIV.¹⁸ On the other hand, one could argue that the effect of transmission nowadays might be minimal when the viral load is substantially reduced by adequate ART. The literature is not conclusive on the subject. Association¹⁹ and absence of association²⁰ between episiotomy (and perineal lesion) and mother to child transmission have been described.

We would welcome quantitative studies on the transmission risk of HIV from mother to child in low resource settings, considering viral load of mothers during pregnancy and mode of delivery. As these data are still lacking, we suggested at the end of the hospital meeting to our hospital staff: "better a living baby with a risk of HIV than a dead baby without HIV. Be critical and restrictive in HIV-positive mothers and only perform an episiotomy when there is fetal distress."

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