Journal of Health, Medicine and Nursing
ISSN 2422-8419 An International Peer-reviewed Journal
Vol.20, 2015

Assessment of Episiotomy Practice in Mizan Aman General Hospital, Ethiopia

Mitiku Getachew Kumera[1] Beyene Wondafrash Ademe[2] Geremew Muleta Akessa[3]
1.Gynecology and Obstetrics unit, Nekemte hospital, Nekemte, Ethiopia
2.Depatement of population and family health, Jimma University, Jimma, Ethiopia
3.Depatement of Statistics, Jimma University, Jimma, Ethiopia

Abstract
Introduction: During the 1970s, episiotomy was common for almost all women having their first delivery. It was practiced for easier delivery, prevention of severe perineum tears and repair.**Methods:** A prospective cross sectional study design was used. Data was collected from Mizan Aman General Hospital in Ethiopia. All pregnant women, for which episiotomy performed during study period included in the study. Interview and checklist data collection technique was used. Binary logistic regression model was used to identify significant factors for episiotomy practice.**Result:** From a total of 310 laboring mothers 95(30.6%) of them, their second stage labor was assisted by episiotomy, of which 65(68.4%) had ANC followed up, 57(60%) of them were promigravida and 38(40%) were 1-4 parity and 81(85.5%) were 32-42 weeks of gestational age. The most common indication for episiotomy were imminent laceration of the perineum 67(70.5%). Place of residence is significant effect for episiotomy practice having (OR=2.51, 95%CI 1.41-4.464) for rural mothers. There was 71.4% increase in Episiotomy practice for those who have no ANC follow up (OR=1.714, 95% CI 1.041-2.82). The weight of neonates >4000g have more Episiotomy practice (OR 2.697, 95% CI 1.057- 6.88) as compared with those weighting of 1500g-2499g.**Conclusion:**The prevalence of episiotomy performed is high compared with previous study done in Brazil, Nevada, and South Albert. The majority of them were married, gestational age is 37- 42 weeks and more than half of them were Primigravida. About half of the procedure was not performed according to the protocol for episiotomy procedure. Episiotomy practice increase 2.5 times in mothers residing outside Mizan Aman town compared to those residing in Mizan Aman town. Comparing Spontaneous type of labor with induced one Episiotomy done about three times more.
Keywords: Episiotomy practice (observation, indication, mediolateral incision)

Background

Episiotomy is defined as perineum enlargement, surgically performed, with incision during the second stage of labor, with a scissor or a scalpel blade and requiring suture for its correction. Episiotomy is one of the most commonly performed surgical procedures worldwide, performed in 30–63% of all deliveries and, in some regions, in up to 93% of nulliparous women .(1)

Episiotomy has been described in the medical literature for more than 300 years, but it was not until the 1920s, with the publication of papers by De Lee and Pomeroy that more routine use of episiotomy became accepted. However, there was certainly not unanimity about the utility of this approach at that time (2). The shift to in-hospital deliveries in the 20th century was associated with decreased morbidity and an increase in the use of episiotomy and proliferation of many other obstetric practices (e.g., use of forceps, use of cesarean delivery, use of anesthesia). More recently, in 1992 more than 1.6 million episiotomies were performed in the United States, with a background cesarean delivery rate of 22.3%. In 2003, 716,000 episiotomies were performed with a background cesarean delivery rate of 27.5%, suggesting that use of this procedure in obstetrics is decreasing (3).

There are different types of episiotomy median (or midline) episiotomy, mediolateral, J incision, Others usually modifications of the median episiotomy, such as the addition of bilateral transverse cuts to the apex to create an inverted "T" (4) This procedure increases the area of the vaginal opening more than a single cut.

Routine performance of episiotomy was recommended in the past with the aim of preventing damages to the pelvic floor, because this was believed to reduce the incidence of genital dystopias, in addition to protecting the anterior perineum and shortening the expulsion period. Benefits for the fetus were also reported, such as reducing cephalic pole compression in the delivery channel, which could bring about cerebral damages, mainly in premature and macrocosmic fetuses.(5)

Episiotomy was originally recommended to help in laborious deliveries and its routine performance began to be defined by Pomeroy in 1918. During many years this routine practice was accepted and taught as an absolute truth in big obstetrics services, although not based on well conducted and controlled studies. From the 1970s on the first consistent clinical tests were published, questioning the value of this procedure.

The main support for routine and broadly diffused performance of episiotomy was protection of the perineum in expulsive period. It is believed that incision hindered the disruption of muscle fibers that compose the pelvic floor. This is the greatest misconception related to episiotomy. Perineotomy damages muscle, nervous tissue, vases, mucosa and skin. Therefore, a procedure once believed to be protective is actually, in itself, a second degree

lesion.(1) Spontaneous lacerations, when routine episiotomy is performed, are of low degree most of the times. They damage only skin and mucosa; present a faster cicatrization and less complications.(6)
In this study, more effective actions will be objectively promoted in searching for the reduction of its frequency, providing a clinical practice based on scientific evidence and proper procedure.

Methods and material

A prospective cross sectional study design was employed. Check list was applied for observational study.
The study was conducted at Mizan Aman General Hospital in Bench Maji zone, Southwest Ethiopia, which is about 574 kilometers from Addis Ababa. The zone has 33 health centers one General Hospital (Mizan Aman Town health Administration Office, 2011). The total population of the Bench Maji zone is 760,314; of which 381,449 are males and 378,865 are Females. The hospital gives a general service for different parts of the zone. The average delivery service in a month in 2011 was about 100 (33) The General Hospital was established in 1986 and it is the only general hospital in the Maji zone that service for many peoples. It has 136 beds. The Hospital has labor and delivery room which give services for parturient mother. The room operates with multidisciplinary staffs (Gynecologist, Emergency surgical officers residents, midwifes and clinical nurse) through all the days of weeks. Data was collected from January 1, 2013 to March 30, 2013.

The required size for the study was all pregnant women for whom episiotomy procedure was performed during the study period. Critically ill laboring mothers were excluded

The data for the study was collected using structured questionnaire and checklist which had socio-demographic variables, practice of episiotomy, and indication of episiotomy, type of episiotomy and steps of procedure related questions.

The questionnaire was prepared in English and was translated to local language Amharic. It was checked for its consistency by back translation to English by different individual. The instrument was adopted from different literatures developed for similar purpose by different authors and tools designed by various researches and from check list prepared during the procedure.

One diploma midwife student from medical college who is for practicing was recruited to be interviewers and filling the checklist. The principal investigator was supervising the day to day data collection activity. Training was given for the data collector, by the principal investigator, on the objectives of the study and how to interview, how to fill the questionnaire, checklist and handle questions asked by clients.

The data was checked for its completeness. Then it was cleaned, entered and analyzed using SPSS version 16.0. Frequencies, percentages and graphs used to describe the descriptive part of the study. Chi-square test to check the presence of association and odds ratios with 95% confidence interval was used to measure the significance and strength of association between outcome variables and certain independent variables using Binary logistic regression model was used. In this study statistical significance was defined at probability level of 5%.

Ethical clearance was obtained from Research Ethics Committee of Jimma University. And Letter of permission was obtained from Mizan aman general hospital administration office, Obstetrics and Gynecology department. After information was provided, Verbal consent was taken from study participants (laboring mothers), anonymity and confidentiality of respondents was kept.

Result

Socio-demographic characteristics of respondents

During the study period, there were a total of 310 pregnant mothers attend to the labor ward with response rate 100% of Mizan Aman General Hospital from January,1 to March 30/2013 G.C and out of this 95(30.6%) were episiotomy procedure performed while 215(69.4%) were not performed. Of which the procedure done 29(30.5%) were from Mizan Aman town and 66 (69.5%) were from outside Mizan Aman town, Episiotomy practice has statistical association with place of residence{x^2= 10.20, p=0.001}. The majority 70(73.7%) of them were married, while 14(14.3%) were divorced and the others were single and widowed. The average age of the respondents was 21.64$\pm$ 3.56 years, and the average monthly income was 2848.94$\pm$2321.59.

Educational status of the respondents were 45 (47.4%) illiterate, 32(33.7%) primary level of education and 13.7% & 5.3% were secondary level of education and certificate and above respectively. As shown in table 1, the religions of the respondents were 45(47.4%) protestant and 33(34.7%) & 7(17.9%) were orthodox and Muslim respectively. The Ethnicity were 58 (61.1%), 20 (21.1%), 7 (7.4%) and 10(10.5%) were Bench, sheko, Meniti and others respectively. The occupation of respondents 37(20.6%) were housewife, 26(74.3%) were farmers, 27(33.8%) were governmental employers and has also association with episiotomy practice with Chi-square value of 40.398 ($p<0.001$).

Pregnancy and indication for the procedure

As shown in figure 1, Gestational age at the time of delivery 6(6.3%) were less than 37 weeks, 81 (85.5%) were 37-42 weeks of Gestational age and 8 (8.4%) were post term pregnancy.

The status of labor was 53 (55.8%), 32 (33.7%) and 10 (10.5%) were spontaneously started labor, stimulated and induced labor respectively (mentioned in figure 2) has statistical association with Episiotomy practice {x^2=25.203, p<0.001}. Sixty five (68.4%) had Antenatal care follow up and has statistical association with {x^2=4.526, p=0.033}. Fifty seven (60%) of them were Primigravida and 38 (40%) were multigravida and has association with Episiotomy practice {x^2=26.07, p<0.001}.

During the time of data collection, the presented part of the fetus to maternal pelvis was cephalic presentation 77 (81.1%), while breech presentations were18 (18.9%) (Figure 3). The most common indication for the procedure was 67 (70.5%), 21 (22.1%) and 7 (7.4%) were imminent laceration of the perineum, non reassurance fetal heart beat pattern and to assist instrumental delivery respectively. For all the procedure performed informed consent were not taken from the mothers.

As mentioned in table 3, the status of episiotomy practice after binary logistic analysis, place of residence is significant having (OR=2.51, 95% CI 1.41-4.46) which means outside Mizan Aman town mothers have 2.51 times more Episiotomy practice as compared with in the Mizan Aman town mothers. With occupation of the respondents farmers (OR 11.165, 95% CI 4.821-25.85) and with merchants (OR=1.969, 95% CI 1.094-3.544) as compared with housewife. Episiotomy practice has significant statistical association with those who have no ANC follow up (OR=1.714, 95% CI 1.041-2.823) as compared with who have ANC follow up, the weight of neonates >4000g have significant association (OR 2.697, 95% CI 1.057-6.884) as compared with those weight of 1500g-2499g this means for those weight of neonates >4000g have 2.7 times more Episiotomy practice as compared with 1500g-2499g In contrast there is no significant difference between weight 1500g-2499g and 2500g-3999g at significant probability level 5%.

The other variables like gravidity, types of labor, presenting part of the fetus to maternal pelvis during delivery and educational level have no significant statistical association with episiotomy practice since the significance probability level is more that 5%.

The outcome of the final stepwise multiple logistic regression models indicated that episiotomy practice increase 3.5 times in the mothers residing outside Mizan Aman town compared to those residing in Mizan Aman town, 3.2 times with spontaneously started type of labor compared to the induced one (table 4).

Results during Observational Part of the Study

As shown in table 5- During the observation of the procedure for 42(44.2%) necessary equipment were prepared and for 53 (55.8%) were not prepared. The perineum was cleaned with antiseptic solution for 31 (32.6%) the others 64 (67.4%) were not. The types of episiotomy planned were 95(100%) mediolateral. Out of this Local anesthesia was administered for 13 (13.7%) and was not given for 82 (86.3%) before and /or after the procedure. The procedure was performed for 51(53.7%) when the baby's head 3-4cm visible during contraction, for 41(43.2%) when baby's head 1-2cm visible during contraction and for 3(3.1%) when baby's head 1cm visible during the contraction. For all procedure done two fingers were inserted into the vagina between baby's head and perineum to prevent the injury for both the mother and fetus. After incision made, pressure was applied on the episiotomy site for 84 (88.4%) and was not applied for 11 (11.6%) on episiotomy site during the procedure to prevent blood loss.

To avoid extension of the episiotomy, the head had controlled during delivery in 90(94.7%) and 5(5.3%) were not controlled for prevention of extension but there were no extension during the observation of the procedure.

Repairing the Episiotomy and Types of Birth Attendant

As per repairing the episiotomy, for 81 (85.3%) antiseptic solution was prepared to clean women's perineum and for 14(14.7%) were not prepared. During the procedure first bite was 1cm above the apex of incision for 77(81.1%) and 17(17.9%) were at the apex of incision. About 92(96.8%) during the procedure continuous suture from the apex download to repair the vagina incision was used and 3(3.2%) were not used. Sixty three (66.3%) were brought the needle under the vaginal opening and out through the incised and tied. For 66(69.5%) interrupted sutures were used to repair the perinea muscle, working from the top of the perinea incision downward and to bring the skin edges together and 29(30.5%) were not used the mentioned step during the procedure.

Fifty one (53.7%) procedures were performed by midwifes, 41(43.2%) were performed by others including BSC and IEOS residents and 3(3.2%) were performed by the obstetrician and gynecologist when forceps were applied. During the study period the average value for APGAR score at first minute and fifth minute was 6.94$\pm$0.796 (min=5, max=8) and 8.032$\pm$0.736(min=6, max=9) respectively.

Discussion

From January 1 to March 30/2013 the study assessed the prevalence and practice of Episiotomy for pregnant mothers who attended labor ward to give birth .The response rate was 100%.

In current study, there were a total of 310 pregnant mothers attend to the labor ward of Mizan Aman General Hospital and out of this 95(30.6%) were episiotomy procedure done while 215(69.4%) were not done. Of

which 29(30.5%) were from Mizan Aman town and 66(69.5%) were from outside Mizan Aman town. The majority 70(73.7%) of them were married, while 14(14.7%) were divorced and the others were single and widowed and when it was compared with other study the Prevalence of the episiotomy done was high which means in U.S Hospital linked Nevada Birth Registry and Nevada Impatient Hospital discharges (24.8%), research done at Brazil (29.1%) research done at South Albert (13%) however, possible reason like health workers(gap for skill training), health institutions(expansion) and formal education(for the status of labor) were also found to be important and low when compared with research done at Canada(58.4%) and South Eastern Nigeria,(45%) (16, 18, 20, 21, 22, 29) In this study the episiotomy procedures 51(53.7%) were performed by midwifes, 41(43.2%) were performed by others including BSc and IEOS residents, the 3(3.2%) were performed by the obstetrician and Gynecologist when forceps were applied. All the types of episiotomy performed were mediolateral 95(100%) when compared with other study it was similar for birth attendant but the types were like mediolateral and median episiotomy research done at United states, Canada and Brazil because of the median episiotomy was not recommended in current literatures (15, 17,19,21,26) The weight of the neonates were categorized as 77(81.1%) were 2500g to 3999g, 13(13.7%) were 1500g to 2499g and greater than 4000g were 4(4.2%) the peak weight was from 2500g to 3999g it was consistent study with research done at south Alberta (3500g to 4200g) the justification was if with more fetal weighing for fear of perineal laceration. (22) The most common indication for the episiotomy procedure was 67(70.5%), 21(22.1%) and 7(7.4%) were imminent laceration of the perineum, Non reassurance fetal heart beat pattern and to assist instrumental delivery of forceps and vacuum respectively in decreasing order which was consistent with research done at Rotunda Hospital, Ireland (which was to assist instrumental delivery followed by Non reassurrance). (27, 28) Sixty six (68.4%) had ANC follow up and 57(60%) of them were Primigravida and 38(40%) were 1-4 parity when compared with research done at south Eastern Nigeria has similar finding (90% of primi underwent episiotomy procedure). (29)

During the study, to avoid extension of the episiotomy the head of the fetus controlled during delivery in 90(94.7%) of procedure and 5(5.3%) were not controlled for prevention of extension of episiotomy but there is no complication during the procedure also it was similar finding with research done at Malaysia. (30, 14) The procedure was performed when the perineum is bulging and about 3-4cm of fetal scalp is visible during a contraction, which was similar with this study episiotomy procedure were performed for 51(53.7%) when the baby's head 3-4cm visible during contraction and 41(43.2%) were when baby's head 1-2cm visible during contraction and 3(3.1%) were when baby's head 1cm visible during the contraction. For all procedure performed two fingers were inserted into the vagina between baby's head and perineum to prevent the injury to the mother and fetus. The surgeon places the second and third fingers of the left hand into the vagina to spread the vagina and perineal wound margins. (14)

Placement of the anchor suture approximately 1cm above the apex which was similar finding with this study for 77(81.1%) the first bite during the procedure were 1cm above the apex of incision, for 17(17.9%) the first bite was at the site of incision was taken during the procedure.(14,19) Sutures either interrupted or continuous locking of the vaginal mucosal are carried to the level of or slightly past the cut edges of the hymen to the introits similar finding other study with my study about 92(96.8%) were used a continuous suture from the apex downward to repair the vaginal incision and 3(3.2%) were not used the same procedure.(14)

The status of episiotomy practice after binary logistic analysis, place of residence is significant having (OR=.398, 95% CI 0.224-0.708) which means rural mothers have 0.398 times Episiotomy practice as compared with urban mothers. Episiotomy practice has significant statistical association with occupation of the respondents, farmers (OR 11.165, 95% CI 4.821-25.85) and with merchants (OR=1.969, 95% CI 1.094-3.544) as compared with housewife. Episiotomy practice has significant statistical association with those who have no ANC follow up (OR=1.714, 95% CI 1.041-2.823) as compared with those who have ANC follow up, the weight of neonates >4000g have significant statistical association (OR 2.697, 95% CI 1.057-6.884) as compared with those weighing of 1500g-2499g which was similar finding with research done at Brazil (weighing of 3600g-4200g). (20)

Conclusion and Recommendation

During the study period the prevalence of episiotomy performed were high when compared with previous studies in different countries (Brazil, Nevada, South Albert). The majority of respondents are married and outside Mizan Aman town, with gestational age 37 to 42 weeks while more than half were Primigravida. From the observational part about half of the procedure was not performed.

The commonest indication for episiotomy procedure was imminent laceration of the perineum followed by non reassurance of fetal heart beat pattern. More than half of the procedure were performed by midwifes while the others by obstetrician and gynecologist, B.Sc. and IEOS residents. The majority of neonate has weight ranged from 2,500g to 3,999g. The outcome of the final multiple logistic regression models indicated that, episiotomy practice increase 3.5 times in the mothers residing outside Mizan Aman town as compared with those residing in Mizan Aman town, 3.2 times with spontaneous type of labor compared with the induced one.

Episiotomy is the surgical enlargement of vaginal orifice by an incision of the perineum. It is better to

take informed consent before procedure. Depending on the results of the study, for the procedure important issue is capacity building (on indication of episiotomy, on proper procedure) for the service provider and important equipment also very important in order to give quality service for the servant. After the procedure it is also important to record in detail about the procedure, types, Indication, advice given after the procedure on client's card to get clear report and for researcher.

Competing of interests
The authors declare that they have no competing interests.

Authors' contributions
Authors carried out the study and participated in the design of the study, statistical analysis and the drafting of the manuscript. All authors read and approved the final version.

Acknowledgements
We wish to thank Jimma University for funding the study, the Mizan aman general hospitals administrative bodies for permitting to do the study in the hospital. Our gratitude is also to Laboring mothers who were voluntary to participate in the study, Staffs and other health professionals for their cooperation during the interview and data collection.

References
1. Althabe F, Belizan JM, Bergel E, Episiotomy rates in primiparous women in Latin America; Hospital based descriptive study. BJM 2002; 324; 945-6.
2. DE Frances CJ, Hall MJ, Podgornik MN. 2003 National Hospital Discharge survey. Advance data; No. 359, Hyattsville (MD) ; National centre for Health statistics; 2005. Available at ; http;//www.cdc. Gov/ncgs/data/ad/ad 359. Pdf. Retrieved December 29, 2005 (level II-3)
3. Martin JA. Hamilton BE. Sutton PD, Ventura SJ, Menacker F, Munson ML, Births; final data for 2003, Natl vital stat Rep 2005; 54(2); 1-116, (level II-3).
4. Gilstrap LC, Oh W; Guidelines for perinatal care, 5th edition, Washington, DC, American Acadamy of paediatrics, 2002.
5. FEBRASGO, Manual the orientation ; association episiotomy and vaginal delivery, 2002; 4;48-9
6. Carroli G, Mignini L, Episiotomy for vaginal birth. Cochrane Database systematic review 2009, issue 3, Art N0; CD000081
7. Hagos CH, Foreman KJ, Naghavi M, Ahn Sy, Wang M, Lopez AD , lozno R. Murray CJL, Maternal mortality for 181 countries, 1980-2008; a systematic analysis of progress towards millennium development Goal 5.Lacent April 12, 2010 D0I; 10.1016/50140-673(10) 60518-1.
8. United Nations population Fund, " The state of the World's Midwifery'' Accessed in August 2011 http;//www.unfpa.org/sowmy/report/home.html.
9. Cunningham FG,Mc Donald Pc, Gant NF ,et al,Fetal Growth Retardation. In ;Cunningham FG, Williams JW, eds, Williams obstetrics 20th ed, Stanford .conn;Appleton and lange ;1997;839-50
10. World Health Organization 1993, converge of maternity care , Maternal health and safe motherhood program 3;3
11. Per Gorar; Jenz-Jorgen –platz- Christenson, Boinge B. and Gerald W, J1999, Advantage or disadvantage of Episiotomy compared with spontaneous perineal laceration, obstetric and Gynecologic survey 31 (27-28)
12. World Health Organization 1997, Routine Episiotomy , safe motherhood 18 (2) ;7
13. Leeman L, Fulhlove AM, Borders N, Manocchio R, Albers LL, Rogers RG, Postpartum perineal pain in a low episiotomy setting ; association with severity of genital trauma, labor care , and birth variables. Birth 2009; 36;283-8.
14. Larryc. Gilstrap iii, md, F. Gary cunngham, md, J. Peter Vandorsten, md, Chapter 5; Operative Obstetrics second Edition , 2002.63-88.
15. Fenner DE, Genberg B, Fecal and Urinary incontinence after vaginal delivery with anal sphincter disruption in an obstetrics unit in the United states. Am J obstet Gynecol, 2003; 189(6); 1543-1550.
16. Gulzar H. shah . M. stat. M.S.S PhD, etc; Episiotomy and Obstetric trauma in Neveda ; Evidence from Linked Hospital Discharge and birth Date ; Journal of the Neveda public health Association ,vol. 4 .Issue 1. Shah et al . 2005.
17. Frankman Ea, Wang L, Bunker CH, et al, Episiotomy in the United states; has anything changed ? AmJ Obstet Gynecol 2009, 200; 573. E1-573-e7.
18. Nancy L.S. Howden, MD, Anne M.Laleber. MD, etc ; Episiotomy use among Residents and fsculty compared with private practitioners. American College of obstetrics and gynaecologist vol. 103,No, 2, January 2004.
19. James Ruderman, md, ccfp, Junec. Carroll. md. ccfp etc ; Episiotomy differences in practice between family

physicians and obstetricians. Canadian family physician vol. 38; November 1998.
20. Cynthiacoelhomedeiros Decarvaiho, Alex sandro Rolland souza, Prevalence and factors associated with practice of episiotomy at a maternity school in recife, Pernambuco, Brazil , Rev Assoc. Med Bras 2010, 56(3); 333-9.
21. Journal of clinical Nursing , 21, 2209-2218,DOI;10.1111/j. 1365-2702.2012.04133.x Flora MB da silva, PhD, Nurse midwife, National council for scientific and Technological development 2012, Brazil; Risk factors for birth related perineal trauma; a cross sectional study in birth center.
22. Andrea Hargrove MD, Kristy penner MD ‘’Family physician and obstetrician episiotomy rates in low risk obstetries in southern Alberta 2011, 57;450-6.
23. Maureen Macleod, Deidre J, Murphy; Operative vaginal delivery and the use of episiotomy –A survey of practice in the United kingdom and Ireland European Journal of obstetrics and Gynecology and reproductive Biology 2006.
24. Iran J Nurs midwifery Res.2011 summary 16(3); 197-201 ; Difference in episiotomy technique between midwives and midwifes and medical students ; Aghdas Kanini M.sc and Talaat Khadjyzadeh M.sc ; Iran J Nurs midwifery Res . 2011 summery; 16(3); 197-201.
25. Fereshteh Jahdi, Department of midwifery, Episiotomy Discomfort reliefs using cold Gelpads in primiparas Iranian Women (A comparative study), research journal of medical science 5(3). 150-154, 2011.
26. B. W. C. Sathiyasekaran, Gopal palani, etc population based study of episiotomy Sri Ramachandra Journal of medicine nov 2007.
27. Allison shorten and Brett shorten; Women’s choice? The impact of private health insurance on episiotomy rates in Australian hospitals; midwifery 2000; 16, 204-212.
28. Ratchadawan sooklim, Jadsada Thnkhamrop, etc; The outcomes of midline versus mediolateral episiotomy; Department of obstetrics and Gynecology, facult of medicine; Khon Kaem University, Khon Kaen, Thailand. 2007.
29. Rf. Harrison, M.Brennan, etc; Is routine episiotomy necessary; Department of obstetrics and Gynecologist, Trinity college unit at the Rotunda Hospital, Dublin 1 , Ireland. British medical journal volume 688;30 June ,2001.
30. B. Chigbu, S. onwere, C. Aluka, C. Kamanu and E. ADIBE factors influencing the use of episiotomy during vaginal delivery in south Eastern Nigeria, East African medical Journal vol.85 No 5 may 2008.
31. Nazimah Idris; Routine versus selective mediolateral episiotomy for the prevention of third or fourth degree lacerations in nulliparous women; Department of obstetrics and Gynecology, Malaysia.
32. Maria .W. ; A two years retrospective review of episiotomy at Jimma Teaching Hospital, South western Ethiopia, Department of obstetrics and Gynecology , facult of Medicine, Addis Ababa University. P.O .Box 9086 . Addis Ababa, Ethiopia.

Table 1- Association of Socio-demographic of respondents with episiotomy practice at Mizan Aman General Hospital from January 1 to March 30/2013.

Characteristics		Episiotomy practice		Chi-Square value(p value)
		Yes (%)	No (%)	
Residence of respondents	Mizan aman town	29(30.5)	32(14.9)	10.20(0.001)
	Outside Mizan aman town	66(69.5)	183(85.1)	
Occupation	House wife	37(20.6)	143(79.4)	40.398(<0.001)
	Farmer	26(74.3)	9(25.7)	
	Merchant	27(33.8)	53(66.2)	
	Government Employer	5(33.3)	10(66.7)	
Age	<18 years	19(20)	38(17.7)	2.081(0.353)
	18-30 years	76(80)	177(82.3)	
Marital status	Married	70(73.7)	186(86.5)	5.316(0.15)
	Divorced	14(14.7)	18(8.4)	
	single	1(1.1)	2(.9)	
	Widowed	10(10.5)	10(4.65)	
Education	Illiterate	45(47.4)	94(43.7)	0.977(0.807)
	Primary level	32(33.7)	85(39.5)	
	Secondary level	13(13.7)	26(12.1)	
	Certificate and above	5(5.3)	10(4.65)	

Table 2- Association of variables with episiotomy practice of the respondents of Mizan Aman General Hospital from January 1 to March 30/2013 G.C.

Characteristics		**Episiotomy practice**		**X^2 value(p value)**
		Yes	No	
ANC follow up	Yes	65(68.4)	149(69.3)	4.526(0.033)
	No	30(31.6)	66(30.7)	
Gravidity	Primigravida	57(60)	86(40)	26.072(<0.001)
	Multigravida	38(40)	83(38.6)	
Gestational Age	<37 weeks	6(6.3)	29(13.5)	3.564(0.168)
	37-42 weeks	81(85.3)	172(80)	
	>42 weeks	8(8.4)	14(6.5)	
Cephalic presentation	Yes	77(81)	187(87)	1.83(0.176)
	No	18(19)	28(13)	
Breech presentation	Yes	18(19)	38(17.7)	0.072(0.789)
	No	77(81)	177(82.3)	
Weight of Neonate	1500-2499 g	13(28.3)	33(71.7)	7.569(0.023)
	2500-3999 g	65(28.1)	166(71.9)	
	>=4000 g	17(51.5)	16(48.5)	
Birth	Induced	10(31.2)	22(68.8)	25.203(<0.001)
	Stimulated	59(45.4)	71(54.6)	
	Spontaneous	26(17.6)	122(82.4)	

Table 3- Association of episiotomy practice with selected variables in pregnant mothers who attending MAGH labor ward from January 1 to March 30, 2013 G.C.

Characteristics		Episiotomy practice		COR[95%CI]
		Yes (%) N=95(30.6)	No (%) N=215(69.4)	
Residence of respondents	Outside Mizan aman	66(26.5)	183(73.5)	2.51[1.41,4.464]*
Occupation	Farmer	26(74.3)	9(25.7)	11.165[4.821,25.857]*
	Merchant	27(33.8)	53(66.2)	1.969[1.094,3.544]*
	Government Employer	5(33.3)	10(66.7)	1.932[0.623,5.999]
ANC follow up				
	No	41(38.3)	66(61.7)	1.714[1.041,2.823]*
Gravidity				
	multigravida	38(31.4)	83(68.6)	0.691[0.415,1150)
Weight of Neonate				
	2500-3999g	65(28.1)	166(71.9)	0.994[0.492,2.008]
	>=4000 g	17(51.5)	16(48.5)	2.697[1.057,6.884]*
Birth				
	Stimulated	59(45.4)	71(54.6)	1.828[0.802,4.165]
	Spontaneous	26(17.6)	122(82.4)	0.469[0.199,1.107]

* significant probability value at less than 5%,

Table 4- Crude and adjusted associations of selected variables with episiotomy practice at Mizan Aman General Hospital from January 1 to March 30/2013G.C

Characteristics		Episiotomy practice		Adjusted OR (95%CI)
		Yes (%) N=95(30.6)	No (%) N=215(69.4)	
Residence of respondents	Outside Mizan aman	66(26.5)	183(73.5)	3.460(1.69,7.083)*
Occupation	Farmer	26(74.3)	9(25.7)	0.548(0.147,2.042)
	Merchant	27(33.8)	53(66.2)	3.15(0.683,14.540)
	Government Employer	5(33.3)	10(66.7)	0.578(0.150,2.232)
Gravidity	multigravida	38(31.4)	83(68.6)	0.642(0.357,1.155)
Birth	Stimulated	59(45.4)	71(54.6)	1.201(0.4165,3.469)
	Spontaneous	26(17.6)	122(82.4)	3.237(1.635,6.408)*

* Significant probability value at less than 5%,

Table 5- Relative frequency of Observational part of the study during the episiotomy practice at Mizan Aman General Hospital for pregnant mothers attending labor ward from January 1 to March 30/2013 G.C.

Characteristics		**Frequency**	**Percent**
Prepared necessary equipment	Yes	42	44.2
	No	53	55.8
Tell the woman what is going to be done and encourage them	Yes	31	32.6
	No	64	67.4
Provide continual emotional support and reassurance, as feasible	Yes	40	42.1
	No	55	57.9
Ask about allergies to antiseptics and anesthetics	Yes	8	8.4
	No	87	91.6
Put on personal protective barriers	Yes	38	40
	No	57	60
Put on sterile surgical gloves.	Yes	95	100
The perineum cleaned with antiseptic solution	Yes	31	32.6
	No	64	67.4
LA administration (draw 10ml lydocaine)	Yes	13	13.7
	No	82	86.3
Episiotomy performed Baby's head visible during contraction	1-2cm	41	43.2
	3-4cm	51	53.7
	1cm	3	3.1
Two fingers inserted into the vagina b/n baby's head &perineum	Yes	95	100
	No	0	0
Pressure applied on the episiotomy site	Yes	84	88.4
	No	11	11.6
Controlled delivery of the head to avoid extension	Yes	90	94.7
	No	5	5.3

Table 6- Relative frequency of repairing episiotomy and types of birth attendant at Mizan Aman General Hospital from January 1 to March 30/2013 G.C.

Characteristics		Frequency	percent
The first bite during procedure	1cm above the apex of incision	77	81.1
	1cm below the apex of incision	1	1.1
	At the apex of incision	17	17.9
Used a continuous suture from the apex downward to repair the vaginal incision	Yes	3	3.2
	No	92	96.8
At the vaginal opening, brought the cut edges together	Yes	93	97.9
	No	2	2.1
Brought the needle under the vagina opening and out through the incised and tied	Yes	63	66.3
	No	32	33.7
Interrupted sutures used to repair the perineal muscle	Yes	66	69.5
	No	29	30.5
Place a clean pad on the woman's perineum	Yes	95	100

Figure 1- Gestational age in weeks of respondents in Mizan Aman General Hospital from January 1 to March 30/2013G.C

Figure 2- Types of labor of respondents in Mizan Aman General Hospital from January 1 to March 30/2013 G.C

Figure 3- ANC follow up and presenting part of the fetus to maternal pelvis during delivery of the respondents from January 1 to March 30/2013 G.C.