IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 22, Issue 6 Ser.8 (June. 2023), PP 06-12
www.iosrjournals.org

Comparison Of Restrictive Use Of Episiotomy Versus Routine Episiotomy In Primigravida Undergoing Vaginal Birth At Tertiary Care Hospital

Dr.Ashwini P Jadhav[1], Dr. Bhaurao B Yadav[2], Dr.Tarse Vishnu [3], *Dr.Nagesh Murthy [4]

[1] *(Department of Obstetrics and Gynecology, Jagjivan Ram Hospital, Mumbai Central, Maharashtra, India)*
[2] *(Department of Obstetrics and Gynecology, Government Medical College, Latur, Maharashtra, India)*
[3] *(Department of Obstetrics and Gynecology, Government Medical College, Latur, Maharashtra, India)*
[4] *(Department of Medicine, Jagjivan Ram Hospital, Mumbai Central, Maharashtra, India)*

ABSTRACT:
INTRODUCTION: Episiotomy is a common practice for all women delivering for the first time. The routine episiotomy, once considered by obstetricians as a vanguard to protect the perineum, the pelvic floor, and the fetus from injuries of parturition, gradually has become less and less used in modern obstetrics.
MATERIAL & METHODS – A Prospective cohort study conducted from January 2019 to June 2020 included every 5th Primigravida who consented & fulfilled inclusion criteria, admitted in the labor room at Govt Medical College, Latur.
RESULTS: 140 cases were included in both the study and control groups. Maximum cases belong to the age group between 21-24 years in both the case group and study group. In 10% of cases in the study group restrictive episiotomy was converted into routine episiotomy due to maternal exhaustion, fetal distress, or unyielding perineum. No statistically significant difference was noted between the perineal length and duration of the second stage of labor between the two groups and in the converted group. Maximum cases of 1st-degree perineal tears were found in the study group without episiotomy, the proportion of fourth-degree perineal tears among control group cases was 1.4% (02), and no cases in the study group. The baby's weight between 2.5 to 2.9 kg had caused maximum perineal tear in the study group than the control group. The proportion of perineal tears was more in cases having perineal length less than 3 cm but there was no statistically significant difference between the control group and the study group. The percentage of anterior vaginal wall tears in the control group was 1.4%; whereas lateral vaginal wall tears were 15.71%. The study group reported 3.17% anterior vaginal wall tears and 9.5% lateral vaginal wall tears. Proportions of healing complications were around 8 % in the control group and 7.14 % in the converted group.
CONCLUSION: With the restricted use of episiotomy using precise clinical judgment, unnecessary episiotomies can be avoided, giving better care and patient satisfaction with minimum maternal morbidity. Hence, it should be adopted and advocated for all vaginal deliveries.
KEYWORDS: EPISIOTOMY, PERINEAL TEAR, RESTRICTIVE USE, ROUTINE USE.

Date of Submission: 05-06-2023 Date of Acceptance: 15-06-2023

I. INTRODUCTION:

Episiotomyisacommonpracticeforallwomendeliveringforthefirst time. The reasonforitspopularityincludedsubstitutionofastraightsurgicalincision, which was easier to repair, for the ragged laceration that might result in its absence.Episiotomy, incision of the perineum at the time of vaginal childbirth, is a common surgical procedure experienced by women.(1)TherationaleforRoutineprophylacticepisiotomyistoprotectthepelvicfloor, minimizingtheriskofurinaryincontinenceandpelvicfloor dysfunction.

To facilitate delivery and to avoid perineal lacerations, episiotomy has been widely used to enlarge the birth canal. Although there is a global trend for reducedepisiotomy rates,(2) these continue to be very high in some centers and areas of the world, with ratesupto60 and 80%inIndiaand China, respectively.(3, 4)The latest Cochrane review on the other hand reports a rate of28% in the restrictive episiotomy group.(5)A rate somewhere in the middle seems right.The need to reduce episiotomy rates seem from evidence that episiotomies cause serious perineal lacerations, rather than prevent them.(6) Midline episiotomy is a strong independent risk factor for third –and fourth-degree perineal lacerations.(7)

There is some evidence that women with a prior episiotomy have a two-foldincreasedriskof2nddegreelacerationsinsubsequentvaginaldeliveries.(8)Inaddition, there is evidence that episiotomy may be associated with a decrease in pelvic floor musculature strength,(9) more perineal pain, and future dyspareunia, when comparedwithspontaneouslaceration. Episiotomy should be reserved for situations where there is a clear indication. Selective use of episiotomy can result in a 30% reduction in vaginal and perineal injury. Mediolateral episiotomy is associated with a lower risk of obstetrical injuries, when comparedwithmidlineepisiotomy.(8)Several strategies have been evaluated to reduce episiotomy rates and to decrease the incidence of perineal trauma. Digital perineal massage applied before and during the second stage of labor, and warm compresses on the perineum appear to be helpful in decreasing perineal trauma (10,11)

Anupright position duringthesecondstageoflaboralsodecreasestheepisiotomyrate but appears to increase 2nd degree lacerations and postpartum hemorrhage.(12)Forvaginalbreech delivery, the uprightpositionalsoseemstobeassociatedwithasignificantreductionintheepisiotomyratewhencomparedwithvaginal deliveryinthedorsal position.FIGO endorses the restrictive use of episiotomy. Action needs to be exercised to decrease the rate of unnecessary episiotomies, which have potential for short-and long-term complications.(13)

With the advent of evidenced-based medicine, obstetricians have come to realize that the risks of maternal damage outweigh the possible benefits; rather than protecting the pelvis, it has been shown to increase postpartum perineal pain, dyspareunia, blood loss, anal sphincter laceration, rectal damage, and anal incontinence while doing nothing to reduce urinary incontinence or improve neonatal outcome.(14–16)

So this study was designed to compare benefits of restrictive use of episiotomy over routine use of episiotomy. As there are less number of studies and previous studies has many conflicts, keeping these in mind, the study was done with the aim to assess the effects of restrictive use of episiotomy during vaginal birth. A study was conducted with the objective of comparing the outcome of restrictive use of episiotomy over routine episiotomy and to assess the reduction in maternal morbidity due to perineal laceration.

Parameters evaluated: Occurrence of vaginal/perineal tears/extension of episiotomies, Requirement of suturing, Requirement of analgesia, Wound complication.

The patients discharged 48 hours after delivery. In case of any maternal healing complications patients retained in the hospital treated and discharged after conservatively managed for wound complications.

II. MATERIAL AND METHODS:

The study commenced after written approval from Institutional Ethics committee. A Prospective cohort study was planned in the OBGY wards at a tertiary care centre. The duration of the study was 1.5 years (January 2019 to June 2020). The study population included every 5th primigravida that fulfilled the inclusive criteria, admitted in the labor room.

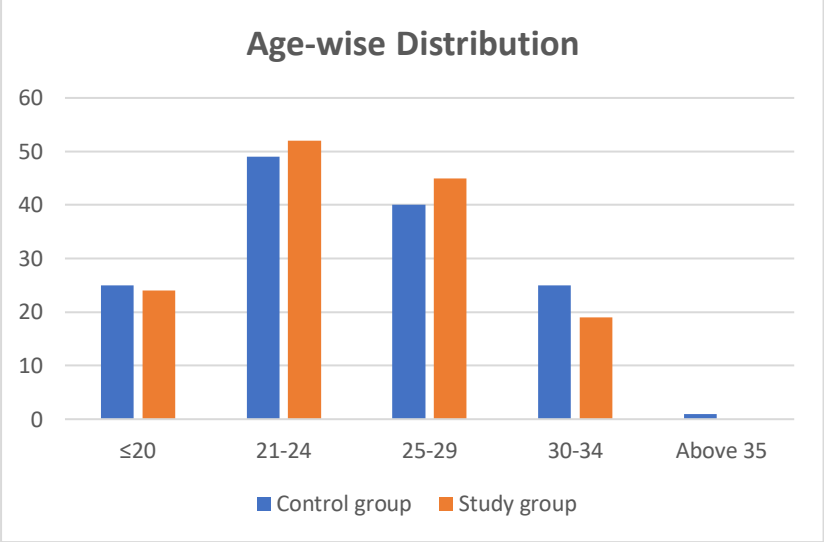
Inclusion criteria were - adequate pelvis, gestational age between 37 to 41 completed weeks, cephalic presentation while exclusion criteria were instrumental deliveries, preterm deliveries, abnormal presentations, vaginal birth after caesarean section (VBAC), multiple gestations, expected large fetus. The data was collected after obtaining informed verbal consent from all primigravida admitted to labor ward.

By systematic randomization, every 5th primigravida fulfilling all inclusive criteria considered as control and subsequent 5th primigravida considered as case and included in the study. The sample size was decided to be 275. A predesigned proforma used included age, gravida& parity status, chief complaints, past history, general examination, systemic examination, detailed obstetric examination, gestational age, birth weight, and perineal length complications if any.

Final enrolment of patients was done at the time of crowning and two cohorts were formed; 140 women who were managed with routine use of episiotomy formed control cohort and 126 with restrictive use of episiotomy comprised the study cohort. Out of 140 in the study cohort, 14 cases needed episiotomy due to certain factors at the time of delivery. The estimated birth weight of the fetus calculated using third trimester ultrasound; progress of labour and delivery monitored. Both the cohorts were evaluated during labour, immediate postpartum period and first postnatal day. In conditions like unduly prolonged second stage of labour $\geq$ 2 hrs with an unyielding perineum, episiotomy was given in control cohort.

III. RESULTS AND OBSERVATIONS:

GRAPH 1: AGE WISE DISTRIBUTION OF CASES IN CONTROL GROUP AND STUDY GROUP.



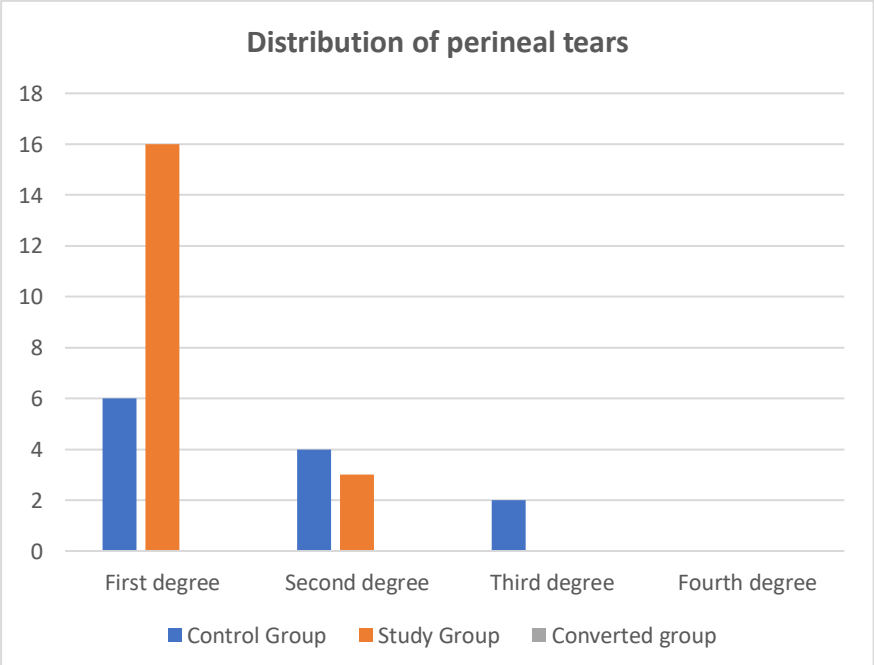
Maximum cases belong to the age group between 21-24 years in both case group and study group followed by maximum cases in age group 25-29 years.(Graph-1)

TABLE-1: DISTRIBUTION OF EPISIOTOMY IN CONTROL GROUP AND STUDY GROUP.

Primigravida	Control Group	Study Group
Total number of patients	140	140
Episiotomy given	140 (100%)	14 (10%)

Total normal delivery cases were 140 in control group and 140 in study group. Proportion of episiotomy among control group cases was 100 %(140) and 10 %(14) in study group cases where restrictive episiotomy was converted in to routine episiotomy; for reasons like maternal exhaustion (4), fetal distress (8) and unyielding perineum (2).(Table-1& Table-6) In rest 126 cases episiotomy was not given.There was no statistically significant difference between the duration of second stage of labour of these groups. The mean time required for second stage of labour for control group was 60 minutes while the study group (with and without episiotomy) was 62 minutes.

GRAPH- 2: DISTRIBUTION OF PERINEAL TEARS



In present study out of 140 control cases 14 sustained perineal tear and 20among 140 in study group had perineal tear.(Graph-2) The chi-square statistic is 3.2231. The P value is 0.199579. The result is not significant at P value >0.05. Therewasno significantdifferencebetweenboth groups in comparison of perineal tear.

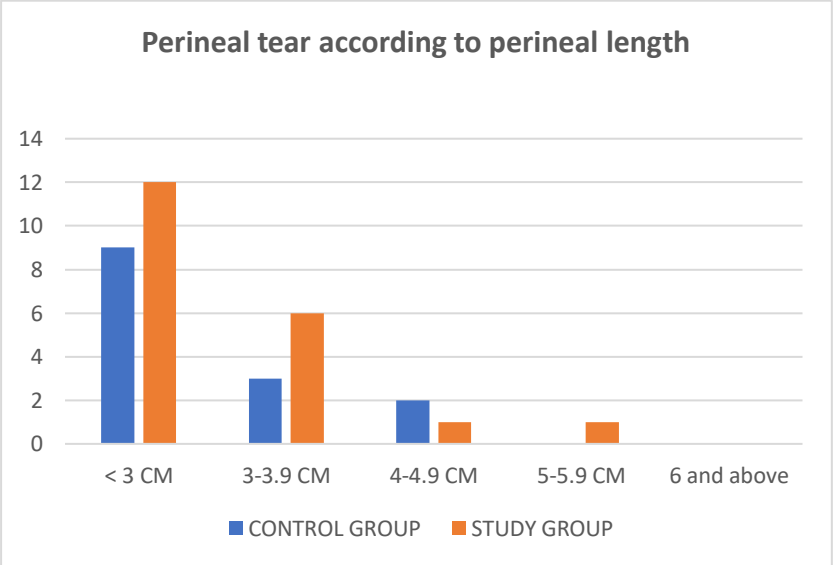
TABLE-2: DISTRIBUTION OF PERINEAL TEAR ACCORDING TO BIRTHWEIGHT

BIRTHWEIGHT	CONTROL GROUP	STUDY GROUP
<2.5 KG	0	2
2.5 KG - 2.9 KG	3	10
3 KG - 3.4 KG	7	6
3.5 KG AND ABOVE	4	2

The chi-square statistic is 5.2482. The P value is 0.072505.The result is not significant at P value >0.05. It shows that the baby weight between 2.5 to 2.9 kg had caused maximum perineal tear and it was found that there were a greater number of tears in study group in birth weight of 2.5 kg to2.9 kg. (Table-2)

It was observed that need for analgesia was more in control group and converted group and proportion of use of analgesia in study group was only 20% compared to 60% in control group. Restrictive use of episiotomy does not need analgesia in many cases and thus complications like anaphylaxis are avoided.

GRAPH- 3: PERINEAL TEAR ACCORDING TO PERINEAL LENGTH



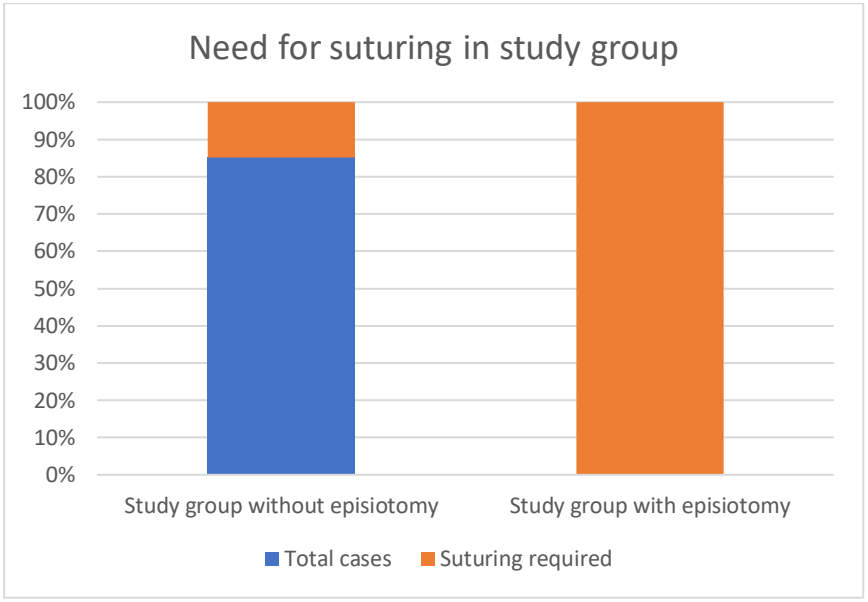
This shows proportion of perineal tear is more in cases having perineal length less than 3 cm.(Graph-3) **The chi-square statistic is 2.0951. The P value is 0.14812. The result is not significant at P value <0.5** so, there was no significant difference between control group and study group.

TABLE-3: DISTRIBUTION OF ANTERIOR VAGINAL WALL TEAR AND LATERAL WALL TEAR

Type of vaginal wall tear	Anterior vaginal wall tear	Lateral vaginal wall tear
Control group	2(1.4%)	22(15.71%)
Study group without episiotomy	4(3.17%)	12(9.5%)
Study group with episiotomy	00	00

Proportion of anterior vaginal wall tear in control group was 1.4% and lateral vaginal wall tear was 15.71%. Proportion of anterior vaginal wall tear in study group was 3.17% and lateral vaginal wall tear was 9.5%. (Table-3)There was significant difference between control and study group in regard to posterior vaginal wall tear.

GRAPH -4: NEED FOR STURING IN STUDY GROUP



The proportion of suturing in case study group is only 17%, as there were so many patients with lateral vaginal wall tear or laceration did not need suturing. But it was 100 % required in control group.(Graph-4) The proportion of healing complications were more in control group and converted group as episiotomy was given to each case. It was around 8% in control group and 7.14%in converted group respectively. (Table-4)

TABLE-4: SHORT TERM COMPLICATION OF EPISIOTOMY

Complications	Control group	Converted group
Extension of episiotomy	29	0
Perineal laceration	1	0
Hemorrhage	4	1
Wound site edema	2	0
Wound site infection	1	0
Hematoma formation	2	0
Episiotomy dehiscence	1	0

The above table shows short term complications of episiotomy in control group and in converted group and that there were more number of complications in the control group.

IV. DISCUSSION:

The current study shows that the rate of conversion to episiotomy in restrictive group was minimal. In addition, the rate of maternal complications such as perineal laceration and significant pain was less in restrictive episiotomy group. The results of this study indicated that primigravida patients have increased chance of retaining an intact perineum if episiotomy is carried out only when considered to be inescapable. The findings were in accordance with studies that have compared restrictive and routine episiotomy. In the present study, 280 cases where studied and comparison of restrictive use of episiotomy and routine episiotomy in primigravida undergoing vaginal birth was done.The control group had 140 women in whom episiotomy was given routinely. The study group without episiotomy included 126 women in whom episiotomy was not given while study group with episiotomy had 14 women who needed episiotomy due to certain factors at the time of delivery.

Study was done in primigravida only so that fair conclusion was made.

AzarDanesh et al(17) in 2008 studied 80 primigravida and it was found that mean agewas26.4years incontrolgroupand 26years instudy group.In a study by Venus D et al(15) 2017, out of 100, 50 were included incontrol group and 45 included in study group and 5 in converted group where inepisiotomy was given. They found that there was no significant difference betweenmean age of control group and study group and it was 23.34 years and 23.20 yearsrespectively.

M Amorim et al(18) 2017studied a total of 227 patientswherethe mean age of control group and study group and it was23years and therewasnosignificant difference.In the present study, mean age group for both

control and study groupwas24years withno significantdifferencebetweenthe ages.

In present study including 280 cases, 140 cases were given episiotomy andamong remaining 140 cases 126 were delivered without episiotomy and 14 weredeliveredwithepisiotomy. In present study, out of 14 cases among study group 8 cases given episiotomy in view of fetal distress, 4 cases were given episiotomy for maternal exhaustion and 2 were given for rigid perineum. (Table-6)

TABLE 6: Reasontouseepisiotomyin the studygroups of other studies:

Author	Fetal Distress	Maternal Exhaustion	Rigid Perineum	Prolonged Second StageArrest	NeedFor InstrumentalDelivery
Azardet al(17)	**8**	**8**	**4**	**0**	**0**
Venous D et al(15)	**3**	**1**	**1**	**0**	**0**
M Amorim et al(18)	**0**	**0**	**0**	**2**	**0**
Sharma et al (19)	**0**	**0**	**0**	**0**	**24**
Thakur et al(20)	**6**	**0**	**15**	**3**	**3**
Presentstudy	**8**	**4**	**2**	**0**	**0**

The normal perineal length is between 3cm to 6cm. According to Venus D et al(15) both the group had 3.4cm as mean perineal length among100cases studied. According to present study it was found that mean perineal length for control group was 3.1cm and for study group it was 3.18cm.Thus, there was no significant difference between the perineal lengths of both the groups. Present study shows time required for second stage of labour in control group is 60 min and that for study group is 62 min, thus, it can be concluded that therewasnosignificantdifferencebetweenboththegroups.The studies byVenus D et al(15), M Amorim et al(18), Thakur et al(20) showed similar results.

TABLE 7: Distribution of perineal tears according to birthweight

Author	Controlgroup	Studygroup
VenusD etal(15)	**2.76kg**	**2.69kg**
SaxenaRajiv et al(10)	**3-3.5kg**	**2.5kg -2.99kg**
M Amorim et al(18)	**3.2kg**	**3.2kg**
Present study	**3-3.4kg**	**2.5-2.9kg**

In present study, baby weight between 3 to 3.4 kg sustained maximum perineal tear in control group and 2.5kg to2.9kg in study group. Similar results were obtained in the studies conducted by Venus D et al(15), Saxena Rajiv et al(10) and M Amorim et al(18); so, there were more chances of perineal tear with lesser baby weight in study group.(Table-7)

M Amorim et al(18) performed suturing in105cases in which episiotomy was given and in 89 cases in study group among 122 cases due to lacerations and tear. In present study all 140 cases with episiotomy needed suturing but only 36 cases in study group needed suturing due tears. Thus it concludes that use of episiotomy restrictively causes less need for suturing and unease suturing is avoidable and so the complications due to episiotomy wound can be prevented.

Venus D et al(15)concluded that among 50cases 25 required analgesia and only10 among study group needed analgesia. Present study also concluded that 84cases among control groupof 140cases required analgesia and only 32 cases among study group needed analgesia. Routine use of episiotomy can lead to use to analgesia and can cause anaphylaxis in patient. Its requirement in study group is much lesser comparative to control group.

This study found that out of 140 cases 11 had healing complications and 4 cases among 140 study group had healing complications. It is observed that with each episiotomy complications related to it will increase so restrictive use of episiotomy is better to avoid suture related complications. Similar results were deducted by Venus D et al(15) and M Amorim et al(18).

V. CONCLUSION:

This study identified fair good evidence suggesting that immediate outcomes following routine use of episiotomy are no better than those of restrictive use. Indeed, routine use is harmful to the degree that some proportion of women who would have lesser injury instead had a surgical incision. Due to low maternal complications of restrictive episiotomy in unnecessary conditions increase the rate of intact perineal and minor perineal trauma and reduces postpartum pain with no adverse effects on maternal morbidities. It is necessary to establish some documented protocols to decide in which cases, when and how to perform episiotomy.

From these observations, we can conclude that with the restricted use of episiotomy using precise

clinical judgment, the unnecessary episiotomies could be avoided, giving better care and patient satisfaction with minimum maternal morbidity. Hence, it should be adopted and advocated for all vaginal deliveries.

The time has come to take professional responsibility of setting and achieving goals for reducing episiotomy use. It suggests that obstetricians develop guideline for performing episiotomies. The goals for quality of care must remain focused on both optimizing safety for the infants and minimizing harm to themother.

CLINICAL SIGNIFICANCE: Adoption of the policy of restricted use of episiotomy would result in considerable reduction in the maternal morbidity, decreased patient hospital stay, and thus reduce overall cost besides giving better patient satisfaction level.

Funding: No funding sources.

Conflict of interest: None declared.

Ethical approval: The study was approved by the Institutional Ethics Committee.

BIBLIOGRAPHY:

[1]. Weber AM, Meyn L. Episiotomy use in the United States, 1979-1997. Obstet Gynecol. 2002 Dec;100(6):1177–82.
[2]. Friedman AM, Ananth CV, Prendergast E, D'Alton ME, Wright JD. Variation in and factors associated with use of episiotomy. JAMA. 2015 Jan 13;313(2):197–9.
[3]. Singh S, Thakur T, Chandhiok N, Dhillon BS. Pattern of episiotomy use & its immediate complications among vaginal deliveries in 18 tertiary care hospitals in India. Indian J Med Res [Internet]. 2016 Apr [cited 2023 May 23];143(4):474–80. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4928554/
[4]. Graham ID, Carroli G, Davies C, Medves JM. Episiotomy rates around the world: an update. Birth Berkeley Calif. 2005 Sep;32(3):219–23.
[5]. Sleep J, Grant A, Garcia J, Elbourne D, Spencer J, Chalmers I. West Berkshire perineal management trial. Br Med J Clin Res Ed [Internet]. 1984 Sep 8 [cited 2023 May 23];289(6445):587–90. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1442865/
[6]. Carroli G, Mignini L. Episiotomy for vaginal birth. Cochrane Database Syst Rev. 2009 Jan 21;(1):CD000081.
[7]. Selective versus routine use of episiotomy for vaginal birth - Jiang, H - 2017 | Cochrane Library [Internet]. [cited 2023 May 23]. Available from: https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD000081.pub3/full
[8]. Melamed N, Gavish O, Eisner M, Wiznitzer A, Wasserberg N, Yogev Y. Third- and fourth-degree perineal tears--incidence and risk factors. J Matern-Fetal Neonatal Med Off J Eur Assoc Perinat Med Fed Asia Ocean Perinat Soc Int Soc Perinat Obstet. 2013 May;26(7):660–4.
[9]. Shiono P, Klebanoff MA, Carey JC. Midline episiotomies: more harm than good? Obstet Gynecol. 1990 May;75(5):765–70.
[10]. Saxena RK, Sandhu GS, Babu KM, Bandol H, Sharma GV. Restricted use of episiotomy. J Obstet Gynecol India [Internet]. 2010 Oct 1 [cited 2023 May 23];60(5):408–12. Available from: https://doi.org/10.1007/s13224-010-0067-3
[11]. Macarthur AJ, Macarthur C. Incidence, severity, and determinants of perineal pain after vaginal delivery: a prospective cohort study. Am J Obstet Gynecol. 2004 Oct;191(4):1199–204.
[12]. Signorello LB, Harlow BL, Chekos AK, Repke JT. Postpartum sexual functioning and its relationship to perineal trauma: a retrospective cohort study of primiparous women. Am J Obstet Gynecol. 2001 Apr;184(5):881–8; discussion 888-890.
[13]. FIGO Statement: Restrictive use rather than routine use of episiotomy - Nassar - 2019 - International Journal of Gynecology & Obstetrics - Wiley Online Library [Internet]. [cited 2023 May 23]. Available from: https://obgyn.onlinelibrary.wiley.com/doi/10.1002/ijgo.12843
[14]. Episiotomy | GLOWM [Internet]. [cited 2023 May 23]. Available from: http://www.glowm.com/section-view/heading/Episiotomy/item/128
[15]. Venus D, S RP, Prajwal S. Comparison of use of restrictive episiotomy versus routine episiotomy in primigravidae undergoing vaginal birth at a tertiary care hospital. Int J Reprod Contracept Obstet Gynecol [Internet]. 2017 Apr 27 [cited 2023 May 23];6(5):1770–6. Available from: https://www.ijrcog.org/index.php/ijrcog/article/view/2586
[16]. Levaillant M, Legendre G, Rebmann Jr E, Hamel JF, Venara A. Obstetrical anal sphincter injury and unnecessary episiotomy are both associated with anal incontinence 8 years after childbirth: A nationwide database analysis. Int J Gynecol Obstet [Internet]. 2022 [cited 2023 May 23];159(1):284–9. Available from: https://onlinelibrary.wiley.com/doi/abs/10.1002/ijgo.14101
[17]. Shahraki AD, Aram S, Pourkabirian S, Khodaee S, Choupannejad S. A comparison between early maternal and neonatal complications of restrictive episiotomy and routine episiotomy in primiparous vaginal delivery. J Res Med Sci Off J Isfahan Univ Med Sci [Internet]. 2011 Dec [cited 2023 Jun 3];16(12):1583–9. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3434900/
[18]. M. Amorim M, Coutinho IC, Melo I, Katz L. Selective episiotomy vs. implementation of a non-episiotomy protocol: a randomized clinical trial. Reprod Health [Internet]. 2017 Apr 24 [cited 2023 Jun 3];14:55. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5402639/
[19]. Sharma A, Hooja N, Dadhich B, Aseri S, Sharma A, Kumawat B. Restricted Use of Episiotomy. J South Asian Fed Obstet Gynaecol [Internet]. 2013 Apr 1 [cited 2023 Jun 3];9(3):260–2. Available from: https://www.jsafog.com/abstractArticleContentBrowse/JSAFOG/6/9/3/7477/abstractArticle/Article
[20]. Thakur M, Bal H, Tambe V, Singireddy N. Evaluation of Episiotomy in Present Day Obstetric Practice. Med J Dr Patil Univ [Internet]. 2020 Oct [cited 2023 Jun 3];13(5):529. Available from: https://journals.lww.com/mjdy/Fulltext/2020/13050/Evaluation_of_Episiotomy_in_Present_Day_Obstetric.18.aspx