GSC Biological and Pharmaceutical Sciences

eISSN: 2581-3250 CODEN (USA): GBPSC2

Cross Ref DOI: 10.30574/gscbps

Journal homepage: https://gsconlinepress.com/journals/gscbps/

(REVIEW ARTICLE)

Check for updates

Episiotomy and repair

Onah Livinus Nnanyereugo *

Department of Obstetrics and Gynaecology, Enugu State University Teaching Parklane, Enugu, Nigeria.

GSC Biological and Pharmaceutical Sciences, 2026, 34(01), 059-062

Publication history: Received on 28 November 2025; revised on 06 January 2026; accepted on 08 January 2026

Article DOI: https://doi.org/10.30574/gscbps.2026.34.1.0529

Abstract

Background: Episiotomy is a surgically planned incision made on the perineum and posterior vaginal wall during second stage of labour to widen the vaginal outlet, facilitate delivery and minimize perineal tear and its complications. Episiotomy is also called perineotomy. It has been in practice in our low reset setting and around the world during vaginal delivery for several decades and one of the commonest minor surgical procedures done in obstetrics practice. Episiotomy is no longer a routine procedure, it is performed when medically necessary to facilitate a difficult birth, such as when the baby needs to be delivered quickly or a vacuum or forceps is needed.

Objective: To Provide a concise overview of the Episiotomy, Repair, indication, Complications in contemporary obstetrics practice in our low resources setting.

Methodes: A narrative review of recent literature on episiotomy was conducted, focusing on indications, repair and complications.

Keywords: Episiotomy; Repair; Indications; Complications

1. Introduction

An episiotomy is a planned surgical incision made on the perineum and posterior vaginal wall during second stage of labour to widen the vaginal outlet and facilitate delivery and minimize perineal tear (1,2,3). It has been in practice during vaginal delivery for several decades around the world. This procedure is known to relieve pressure on the perineum during difficult deliveries, leading to smaller incision when compared to uncontrolled vaginal trauma. (3) The episiotomy is classified as follows the midline (or median), which starts near the center of the perineum and extends straight downward, and the mediolateral, which starts similarly but angles 60 degrees to the side. (4,5). Others includes J-shaped incision which Starts at center of the fourchette, extends posteriorly along the midline for 1.5cm and directed downwards and outwards along 5 or 7 O' clock position(6). Lateral, starts from about 1cm away from the center of the fourchette and extends laterally. It causes injury to Bartholin's duct and not in practice in obstetrics. An episiotomy was a widely used technique in USA until 2006, when the American College of Obstetricians and Gynecologists (ACOG) advised against routine use unless indicated. Although, episiotomy is still in use in obstetrics practice in our environment and is performed based on clinical judgment and maternal or fetal factors to avoid serious damage to the perineum and easy delivery during a difficulty delivery. A midline Episiotomies is associated with increased risk of obstetric anal sphincter injuries in obstetrics practice especially in untrained hand. (4,5)

* Corresponding author: Onah Livinus Nnanyereugo

2. Indications

An episiotomy is currently not a routine practice due to its associated complications (e.g., perineal pain, dyspareunia, and sexual dysfunction, injury to anal sphincter). (7,3) Episiotomy was previously considered important in obstetrics practice in certain cases where rapid delivery in the second stage was required (e.g., fetal distress, shoulder dystocia, or operative vaginal delivery).(8) Other indications includes in an Inelastic{rigid} perineum; women with certain female genital mutilation{FGM}, Anticipated perineal tear as showed by over-stretched skin with cracks as seen in primigravida and cases of macrosomic babies, Operative vaginal deliveries like forceps and vacuum deliveries. History of previous perineal tear, Breech delivery, Preterm delivery, Malposition and mal-presentation like occipito-posterior position and face presentations. (2)

The studies done showed no difference in urinary problem, anal incontinence, or painful intercourse (i.e., dyspareunia) between the spontaneous lacerations and episiotomy groups. Despite this, evidence remains limited, and more researches are required to prove the important of episiotomy in difficulty deliveries. (9) American College of Obstetricians and Gynecologists (ACOG) revealed that no definite indications for episiotomy have been established. The current recommendation is to utilize restrictive episiotomy, in which episiotomy is considered based on clinical factors, including nonreasoning fetal heart tones and assisted vaginal births with vacuum or forceps, particularly in nulliparous patients. Studies have shown that mediolateral episiotomy significantly reduces the risk of obstetrical anal sphincter injuries. (7,10)

3. Complications

An episiotomy is associated with immediate and late complications. The immediate complications include as follows, Bleeding, vulva hematoma. Throbbing perineal pain, Extension into rectum and anal sphincter, Infections. (1). The late complications include, Episiotomy breakdown/wound dehiscence, Fecal incontinence from anal sphincter injury, Recto-vaginal fistula {RVF}, very rare, Necrotizing fasciitis in the immune depressed, rare (11). Dyspareunia, Risk of perineal lacerations in subsequent vaginal delivery, Scar endometriosis, rare, RVF and fecal incontinence if not treated when diagnosed earlier

4. Episiotomy repair

4.1. Step-by-step, conduct of episiotomy

- First is to identify indication, counsel and get consent and ensure good timing
- Wear sterile gloves, swab the vulva with antiseptics, empty bladder, drape
- Give local anesthesia with 1% lignocaine in fan-shaped pattern along the incision line Procedure;
- Index and middle fingers of non-dominant hand inserted into vagina between the presenting part and the vaginal wall.
- Episiotomy scissors held with dominant hand, blunt blade inserted between the fingers inside vagina while the sharp blade is on the skin.
- Deliberate{one-time} incision is made at the peak of uterine contraction from the center of the fourchette mediolaterally at 60° from the midline.
- Blood ooze is controlled with gauze pressure on the incision (12). Immediate repair after third stage of labour

4.2. Post procedure

- Remove vaginal pack {if inserted}
- Clean the vulva and ensure hemostasis
- Do digital rectal examination
- Used instruments put in chlorine solution, gloves discarded, patient debriefed and documentation made.
- Analgesics,
- Prophylactic antibiotics if in the local protocol (13).

4.3. Structures cut during episiotomy

- Vaginal mucosa, skin and subcutaneous tissue
- Superficial and deep transverse perineal muscles
- Bulbospongiosus and parts of the levetor ani

- Fascia covering those muscles
- Transverse perineal branches of pudendal vessels and nerves (1).

4.4. List of materials needed for episiotomy Episiotomy scissors

- Sterile gloves, drapes, sterile gauze
- Needle holder, Sponge holder, toothed forceps, artery forceps
- Episiotomy couch, trash bin, apron, screen, light source
- 1% Lignocaine, chlorhexidine, 0.5% chlorine solution, 10ml syringe,
- When performing an episiotomy and its subsequent repair, the following equipment and preparation are necessary:
- Surgical scissors: Surgical or angled scissors are typically used to perform the episiotomy.[7]
- Lighting and tissue exposure: Adequate lighting and proper visualization are crucial for thorough examination and repair.[5]

4.5. Anesthesia

- First and second-degree lacerations: Local anesthetic infiltration is usually sufficient.
- Obstetric anal sphincter injuries: Regional or general anesthesia may be required.[5]
- Disinfection: Use of Betadine or chlorhexidine solution to clean the perineal area before the episiotomy and the repair [5]
- Instruments and supplies, Surgical glue, Sutures, Needle drivers, Allis clamps, Forceps, Sterile gloves, Sponges, Suture scissors
- Foley catheter (for third- and fourth-degree lacerations) [5]
- Suture material: based on laceration type
- First-degree: 2-0 or 3-0 polyglactin or poliglecaprone
- Second-degree: 2-0 or 3-0 polyglactin
- Third-degree: 2-0 polyglactin, 3-0 polyglactin or polydioxanone
- Fourth-degree: 3-0 or 4-0 polyglactin or poliglecaprone [5]
- Monofilament sutures: Often preferred due to a reduced risk of infection.[5]
- Operating room access: May be required depending on the severity of the laceration [5]

4.6. Personnel required.

The following personnel may be involved during episiotomy procedures:

Obstetric clinicians, Midwives, Labor and delivery nurses, Anesthesiology clinicians

4.7. Preventions of complications following episiotomy

The complications associated with episiotomy can be prevented if routine episiotomy is avoided. Other preventive measures include avoid extensive episiotomy, avoid giving episiotomy too early during second stage labour, Ensure the apex is gotten during suturing, Close dead spaces, avoid too tight suturing, avoid perineal injury, give prophylactic antibiotics, Ensure perineal hygiene (14).

4.8. Contraindications

The routine episiotomy is not recommended in obstetrics practice in our environment and the World Health Organization and ACOG advised to be used if indicated. [15][4] A Routine episiotomy was Supported initially that it prevents complicated severe tears.[3] Studies revealed that not all women suffer significant perineal trauma during vaginal birth, and the routine use of episiotomy exposes patients to unnecessary surgical incisions and their associated complications. Even in emergent cases (e.g., shoulder dystocia or instrumental-assisted deliveries), the evidence does not consistently support episiotomy's ability to prevent severe tears. In some cases, severe perineal tears were found to occur despite episiotomy. Therefore, the selective use of episiotomy is recommended based on specific clinical considerations rather than routine practice.[4]

5. Conclusion

Episiotomy is an important surgical procedure during vaginal delivery when indicated and helps to ease delivery of baby, and reduces perineal injuries to the mother and also reduces risk of intra-cranial injury in some babies.

When given, it should be immediately and promptly repaired and properly cared for in other to reduce associated complications and ensure a good outcome.

References

[1] Dr. Alka Mukherjee & Dr. Apurva Mukherjee MS. Episiotomy, AI enhanced description; 2020; www.slideshare.net/episiotomy-slideshare

[2] Sapna Jaggi Markan. Episiotomy and its repair, AI enhanced description 2020; www.slideshare.net/slideshow/episiotomy-and-repair

[3] Jiang H, Qian X, Caroli G, Garner P. Selective versus routine use of episiotomy for vaginal birth. Cochrane Database Syst Rev. 2017 Feb 08;2(2):CD000081. [PMC free article] [PubMed]

[4] Committee on Practice Bulletins-Obstetrics. ACOG Practice Bulletin No. 198: Prevention and Management of Obstetric Lacerations at Vaginal Delivery. Obstet Gynecol. 2018 Sep;132(3): e87-e102. [PubMed].

[5] Schmidt PC, Fenner DE. Repair of episiotomy and obstetrical perineal lacerations (first-fourth). Am J Obstet Gynecol. 2024 Mar;230(3S): S1005-S1013. [PubMed].

[6] Schmidt PC, Fenner DE. Repair of episiotomy and obstetrical perineal lacerations (first-fourth). Am J Obstet Gynecol. 2024 Mar;230(3S): S1005-S1013. [PubMed]

[7] Operative Vaginal Birth: ACOG Practice Bulletin Summary, Number 219. Obstet Gynecol. 2020 Apr;135(4):982-984. [PubMed.

[8] Choudhari RG, Tayade SA, Venurkar SV, Deshpande VP. A Review of Episiotomy and Modalities for Relief of Episiotomy Pain. Cureus. 2022 Nov;14(11): e31620. [PMC free article] [PubMed.

[9] Okeahialam NA, Sultan AH, Thakar R. The prevention of perineal trauma during vaginal birth. Am J Obstet Gynecol. 2024 Mar;230(3S): S991-S1004. [PubMed].

[10] Okeahialam NA, Wong KW, Jha S, Sultan AH, Thakar R. Mediolateral/lateral episiotomy with operative vaginal delivery and the risk reduction of obstetric anal sphincter injury (OASI): A systematic review and meta-analysis. Int Urogynecol J. 2022 Jun;33(6):1393-1405. [PMC free article] [PubMed].

[11] Choudhari RG, Tayade SA, Venurkar SV, Deshpande VP. A Review of Episiotomy and Modalities for Relief of Episiotomy Pain. Cureus. 2022 Nov;14{11}: e31620. {PMC free article} {PubMed.

[12] Shmidt PC, Fenner DE. Repair of Episiotomy and Obstetrical perineal laceration {first degree}. Am J Obstet Gynecol. 2024 Mar;230{3S}: S1005-S1013. {PubMed.

[13] Ejegard H, Ryding EL, Sjogren B 17 Jan 2008. Sexuality after delivery with episiotomy: a long-term follow-up. Gynecological and obstetrics investigation 66[1]: 1-7. doi:10.1159/000113464 PMID.

[14] Committee on Practice Bulletins-Obstetrics. ACOG Practice Bulletin No. 198: Prevention and Management of Obstetrics Laceration at Vaginal Delivery. Obstet Gynecol. 2018 Sept;132{3}: e87-e102. {PubMed}.

[15] Goh R, Goh D, Ellepola H. Perineal tears – A Review. Aust J Gen Pract. 2018 Jan-Feb;47{1-2}:35-38. {PubMed}.