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Episiotomy Rate and Obstetric Anal Sphincter Injuries among Vaginal Deliveries: A Retrospective Cohort at a Teaching Hospital, Sri Lanka

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Abstract

Background: Routine episiotomy remains common in Sri Lanka, despite evolving guidelines advocating selective use. This study assesses episiotomy prevalence, complications, and the incidence of obstetric anal sphincter injuries (OASIS) among 200 vaginal deliveries.

Methods: Retrospective review of labour-room records from January 2020 backwards. Data captured: maternal age, parity, birthweight, episiotomy status, documented OASIS, and immediate episiotomy outcomes. Rates stratified by parity and birthweight; complications recorded included infection, hematoma, re-suturing, and theatre repair.

Results: Episiotomy rate was 99% overall (100% in primiparas; ~98% in multiparas). Across all birth weights episiotomy exceeded 96%. No OASIS was documented. Complications included one theatre repair (0.5%), five infections (2.5%), one hematoma (0.5%), and one re-suturing (0.5%). Fourteen instrumental deliveries-all with episiotomy (100%).

Conclusion: Episiotomy was nearly universal regardless of risk profile; benefits in preventing OASIS could not be assessed. Routine use exposes women to unnecessary morbidity. Policies should emphasize selective use, technique standardization, and adherence to evidence-based guidelines.

Keywords: *Obstetric Anal Sphincter Injuries (OASIS); Vaginal Deliveries; Episiotomy*

Introduction

Obstetric anal sphincter injuries (OASIS), defined as third- and fourth-degree perineal tears, are significant complications of vaginal birth, potentially resulting in anal incontinence, dyspareunia, and pelvic floor dysfunction [1]. Globally, OASIS incidence is reported between ~0.25% and 6%, with around 1 - 2% in low and middle income countries [2].

Mediolateral episiotomy (MLE) is often performed to reduce perineal trauma; a meta analysis showed a reduction in OASIS (RR 0.67; 95% CI 0.49 - 0.92) [3]. However, population-based data indicate that routine episiotomy may increase OASIS risk in spontaneous births (adjusted RR ≈2.06), though may offer protection in nulliparous operative deliveries (adjusted OR ≈0.17) [4,5].

In Sri Lanka, episiotomy remains nearly universal: audits report ~97.8% among primiparas and ~94% among multiparas at Castle Street Hospital, and 85% and 29.9% respectively at Anuradhapura Teaching Hospital [6,8]. National guidelines now promote selective episiotomy [6].

Technique matters: audits found only 13% of episiotomies achieved the recommended post-repair angle (~45°), often starting too close to midline [8]. Reported OASIS rates in Sri Lankan teaching hospitals range from ~0.4% to 0.7% [9].

This study examines episiotomy prevalence, complications, and OASIS incidence in a Sri Lankan teaching hospital. Objectives: (i) quantify episiotomy by parity and birthweight; (ii) report OASIS incidence; (iii) assess associations between episiotomy and maternal complications.

Objectives of the Study

1. Quantify episiotomy rate by parity and birthweight among vaginal deliveries at a Sri Lankan Teaching Hospital.
2. Assess incidence of obstetric anal sphincter injuries (OASIS) in this cohort.
3. Evaluate associations between episiotomy and maternal complications (infection, hematoma, theatre repair).

Methodology

A retrospective observational analysis of 200 consecutive vaginal deliveries recorded from January 2020 going backwards. Data extracted: maternal age, parity, birthweight, episiotomy performance, and documented maternal outcomes (OASIS, infection, hematoma, re-suturing, theatre repair). Additional context included instrumental deliveries, twin births, VBACs, and singleton breech vaginal births.

Results

Maternal demographics

Age Group	**Number of Women**
≤20 years	5
21 - 25 years	45
26 - 30 years	66
31 - 35 years	58
≥36 years	26
Total	200
Parity	**Number of Women**
Primiparous (P1)	89
P2C1	83
P3C2	26
P4C3	2
Total	200

Table 1

Episiotomy rates by parity

Among multiparas, episiotomy rate was 98.2% (109/111). Only the two P4C3 women did not receive episiotomy.

Parity	Women	Episiotomies	Rate
Primipara (P1)	89	89	100%
P2C1	83	83	100%
P3C2	26	26	100%
P4C3	2	0	0%
Total	200	198	99%

Table 2

Episiotomy rates by birthweight

Birthweight (kg)	Number of Births	Episiotomy Rate
≤2.5	20	100%
2.6 - 3.0	54	100%
3.1 - 3.5	96	98.9%
>3.5	30	96.7%
Total	200	99%

Table 3

Maternal outcomes and complications

Outcome	Number of Cases	Percentage
OASIS (3^{rd}/4^{th} degree tears)	0	0%
Episiotomy requiring operation theatre repair	1	0.5%
Episiotomy-related infection within six weeks	5	2.5%
Episiotomy hematoma diagnosed before discharge	1	0.5%
Re-suturing required	1	0.5%
Instrumental deliveries	14	7%
Twin vaginal births	3	1.5%
VBAC	1	0.5%
Singleton breech vaginal delivery	1	0.5%

Table 4

Discussion

This cohort exhibited almost universal episiotomy application (99% overall; 100% in primiparas and most multiparas), reflecting patterns seen in other Sri Lankan tertiary centers [6,8].

No OASIS events were documented; this aligns with low institutional rates (~0.4-0.7%) in Sri Lanka [9]. However, given lack of a non-episiotomy comparison group and zero events, protective conclusions are not supported.

Episiotomy rates remained consistently high (>96%) across birthweight strata, implying indiscriminate clinical practice rather than objective risk-based decision-making. Such patterns raise concern as episiotomy has been associated with increased maternal morbidity without clear benefit in low-risk deliveries [3-5].

Recorded maternal complications-5 infections (2.5%), one hematoma (0.5%), one re-suturing, and one theatre repair-are consistent with emerging evidence showing episiotomy can contribute to short-term morbidity even when performed frequently [8].

Technique audits from Sri Lanka have demonstrated only 13% of episiotomies achieve a safe post-repair angle (~45°), with many initiated too close to the midline-potentially undermining any protective effect [8]. Moreover, episiotomies are commonly performed without anesthesia, adding pain and potential procedural trauma [8].

These findings support global and national calls-including WHO and SLCOG-for selective rather than routine episiotomy, with standardized technique, training, and auditing systems [7].

Conclusion

Episiotomy was nearly universally performed in this cohort, unaffected by parity or birthweight. While no OASIS occurred, episiotomy-related morbidity was non-zero. Routine application in low-risk deliveries is not supported by evidence and could be reduced through selective practice supported by better training, technique auditing, and guideline alignment.

Limitations of the Study

- Absence of a comparison group precludes inference of protective effect.
- Sample size (n = 200) with zero OASIS events limits statistical power.
- No data on quality measures such as episiotomy angle, length, depth, or anesthesia.
- Retrospective design poses risk of incomplete documentation and follow-up.

Recommendations

1. Conduct prospective or matched cohort studies comparing selective vs routine episiotomy.
2. Introduce technique audits focusing on incision angle, length, and starting point, with training tools such as angle-cutters or episiometer devices [10].
3. Encourage adherence to selective episiotomy protocols per SLCOG and international recommendations [6,7].
4. Ensure analgesia is provided for episiotomy procedures.
5. Strengthen postpartum follow-up to monitor complications and maternal well-being.

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