

Does a routine use of episiotomy really reduce the rate of severe perineal tears?

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Perineal trauma is any type of injury to the female genital tract during childbirth, which may occur iatrogenically or spontaneously. Given the controversial reports as to whether episiotomy increases or decreases the risk of severe perineal tears (OASIS), different approaches exist that advocate for either routine or restrictive use of episiotomy.

The aim of this study was to determine the incidence and type of birth injuries, the trend of these incidences over the years, as well as the incidence of perineal tears occurring in deliveries where episiotomy was already performed, which would result in a recommendation in favor of a more restrictive or a more liberal use of episiotomy.

Our study included 55.374 births, of which 40.553 were vaginal deliveries, from the obstetrical database of the labor ward of a tertiary care center from 2008 to 2024. A comparative analysis of the annual incidence of birth injuries (episiotomy, first- to fourth-degree perineal tears, vaginal tears, and cervical tears) was performed according to parity and association of perineal tears and episiotomy.

The results of our study suggest a change in the pattern of birth injuries during the observed period. The incidence of episiotomy has been steadily decreasing without leading to an increase in the incidence of severe birth injuries. The incidence of OASIS has traditionally been very low because of our obstetric practice, which include the concept of active manual perineal protection, the use of mediolateral episiotomy at a 60° angle, and the preference for vacuum extraction over forceps, when instrumental delivery is required.

Keywords: episiotomy; obstetrical anal sphincter injury; perineum; perineal tear; vaginal delivery

Da li liberalnija upotreba epiziotomije zaista smanjuje rizik od teških rascepa međice?

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Perinealna trauma predstavlja bilo koju vrstu oštećenja ženskog genitalnog trakta tokom porođaja, a može se dogoditi jatrogeno ili spontano. S obzirom na kontroverzna saopštenja u odnosu na to da epiziotomija povećava ili smanjuje rizik od ozbiljnih perinealnih rascepa (OASIS), postoje različiti stavovi koji zastupaju rutinsku ili restriktivnu primenu epiziotomije.

Cilj ovog rada je da utvrdi incidenciju i vrstu porođajnih povreda, trend ovih incidencija kroz godine, kao i incidenciju perinealnih rascepa pri već načinjenoj epiziotomiji, iz čega bi proizašla preporuka u prilog restriktivnijoj ili liberalnijoj primeni epiziotomije.

Naše istraživanje je obuhvatilo 55.374 porođaja, od kojih je 40.553 vaginalnih, iz baze podataka porodilišta tercijarnog centra od 2008 do 2024. godine. Načinjena je komparativna analiza godišnjih incidencija porođajnih povreda (epiziotomija, rascepi perineuma od prvog do četvrtog stepena, rascepi vagine i grlića) u odnosu na paritet, kao i uz prisustvo ili odsustvo epiziotomije.

Rezultati našeg istraživanja ukazuju na promenu obrasca porođajnih povreda tokom ispitivanog perioda. Iako je incidencija epiziotomije imala opadajući trend, to nije dovelo do povećanja učestalosti teških perinealnih povreda. Incidencija OASIS je konstantno niska zahvaljujući našoj akušerskoj praksi koja se odnosi na aktivnu zaštitu međice, upotrebu mediolateralne epiziotomije pod uglom od 60° i prednost vakuum ekstrakcije nad forcepsom, kada je indikovao asistirani instrumentalni porođaj.

Ključne reči: vaginalni porođaj; epiziotomija; međica; opstetrička povreda analnog sfinktera; rascep međice

Introduction

Perineal trauma is any type of injury to the female genital tract during childbirth, which may occur iatrogenically or spontaneously. Anterior perineal trauma refers to injuries of the anterior vaginal wall, urethra, clitoris, and labia. Posterior perineal trauma affects the posterior vaginal wall, perineal muscles, perineal body, external and internal anal sphincter, and the wall of the anal canal. Pregnancy and vaginal delivery are the main risk factors for pelvic floor dysfunction later in life (1). Pelvic floor dysfunction leads to pelvic organ prolapse, pelvic floor pain, urinary and anal incontinence, as well as sexual dysfunction. At least 25% of all women develop some of these symptoms later in life (2), highlighting the importance of this issue.

Spontaneous injuries can be very severe, complicating postpartum recovery, and in subsequent years, due to damage to the pelvic floor muscles, they may lead to pelvic organ prolapse. Particular attention of the professional community is directed toward the prevention of severe perineal tears, third- and fourth-degree, which involve obstetric injuries of the anal sphincter and the terminal rectal wall (Obstetric Anal Sphincter Injuries – OASIS), as these have the most serious consequences. Understanding the mechanisms of birth injuries requires good knowledge of the anatomy and histological structure of the genital organs and other structures of the pelvis, as well as the course and mechanism of physiological childbirth, particularly the mechanisms of delivery in cases of malrotation and malposition of the fetal head, which are of particular importance as risk factors for birth injuries. Operative delivery, especially forceps delivery in primiparous women, is associated with an increased risk of anal sphincter injury (3). The greatest risk of anal sphincter injury occurs with operative delivery in occiput posterior presentation, where understanding the mechanism of labor in this presentation and correct technique of the direction of traction during operative delivery is crucial (4). Vacuum extraction has advantages over forceps in terms of lower risk of perineal trauma (5).

Episiotomy is an obstetric surgical procedure which, unlike perineal tear that occurs spontaneously, represents a deliberate surgical incision of the perineum. Arguments in favor of episiotomy, in the interest of the mother, include shortening of the second stage of labor (less cardiovascular and respiratory burden, lower increase in intracranial pressure), prevention of severe spontaneous injuries of the soft tissues of the birth canal such as vaginal tears and third- and fourth-degree perineal tears, as well as prevention of hematoma formation. It is also considered that episiotomy leads to a lower degree of pelvic floor muscle relaxation, lower risk of fecal and urinary incontinence, better preservation of sexual function, and, being a precise incision, it is easier to repair and heals better. Potential negative effects of episiotomy include: extension of the incision, which may also lead to anal sphincter injury, unsatisfactory anatomical or visual outcomes (scar, asymmetry, vaginal prolapse, rectovaginal fistula formation), greater blood loss, hematoma formation, pain and swelling in the episiotomy region, infection and wound dehiscence, and sexual dysfunction. The potential benefit for the fetus relates to the shortening of the expulsion phase,

thereby potentially reducing fetal distress, and lowering the risk of fetal injuries, as the outlet of the birth canal is widened, e.g., in breech presentation or shoulder dystocia.

Given the controversial reports as to whether episiotomy increases or decreases the risk of OASIS, different approaches exist that advocate for either routine or restrictive use of episiotomy (only in strictly indicated cases). Episiotomy is performed to prevent severe perineal tears, but its routine use remains questionable.

Aim

The aim of this study was to determine the incidence and type of birth injuries, the trend of these incidences over the years, as well as the incidence of perineal tears occurring in deliveries where episiotomy was already performed, which would result in a recommendation in favor of a more restrictive or a more liberal use of episiotomy.

Patients and Methods

This retrospective–prospective study was conducted at the Clinic for Gynecology and Obstetrics of the University Clinical Center in Niš. Data were collected from the obstetrical database of the labor ward of a tertiary care center from 2008 to 2024. The clinical material analyzed included delivery records comprising 55.374 births, of which 40.553 were vaginal deliveries. Between 2008 and 2024, 40.553 vaginal deliveries were included.

A comparative analysis of the annual incidence of birth injuries (episiotomy, first- to fourth-degree perineal tears, vaginal tears, and cervical tears) was performed at five-year intervals and for the last two years—specifically for 2008, 2013, 2018, 2023, and 2024 – in order to assess the trend of these injuries over time. For a six-year period, the incidence of birth injuries was analyzed according to parity. For the last six years (2019–2024), the incidence of spontaneously occurring birth injuries (vaginal and perineal tears) in the presence of an episiotomy was also determined.

The diagnosis of the type of injury was based on clinical examinations at delivery. In our clinic, assisted delivery refers to the use of vacuum extraction, forceps are not used, and a metal cup was the preferred device. Maternal birth position: all women were laying on their back during the expulsion phase. Mediolateral episiotomy was the preferred method. We apply the Finnish concept of active perineal protection: one hand supports the perineum, while the other is placed on the fetal head to control the speed of fetal expulsion.

The results were systematized and grouped in the database, presented in tables and graphs. Statistical analysis was performed using the Statistical Package for Social Sciences software (SPSS, Inc., Chicago, IL, USA). Linear regression analysis was used to evaluate the trend in the incidence of cesarean sections. Qualitative variables are presented by frequency and percentage. Comparison of absolute frequencies of categorical variables was performed by the Chi-square test and its variants, depending on sample size.

Results

Table 1 shows the number of deliveries by year for the period 2008–2024, as well as the number and percentage of cesarean sections, demonstrating a continuous increase in cesarean section rates. By 2024, the incidence was approximately 16% higher compared to 2008, reaching 37.87%. The increase in cesarean sections between the periods 2008–2015 and 2016–2024 was statistically significant ($p < 0.05$). The regression model indicated a statistically significant upward trend from 2008 to 2024. A more rapid increase in cesarean rates was particularly evident after 2020. As illustrated in Figure 1, the total annual number of deliveries remained approximately constant throughout the study period, whereas the number of vaginal deliveries significantly declined after 2019, in favor of an increasing number of cesarean sections.

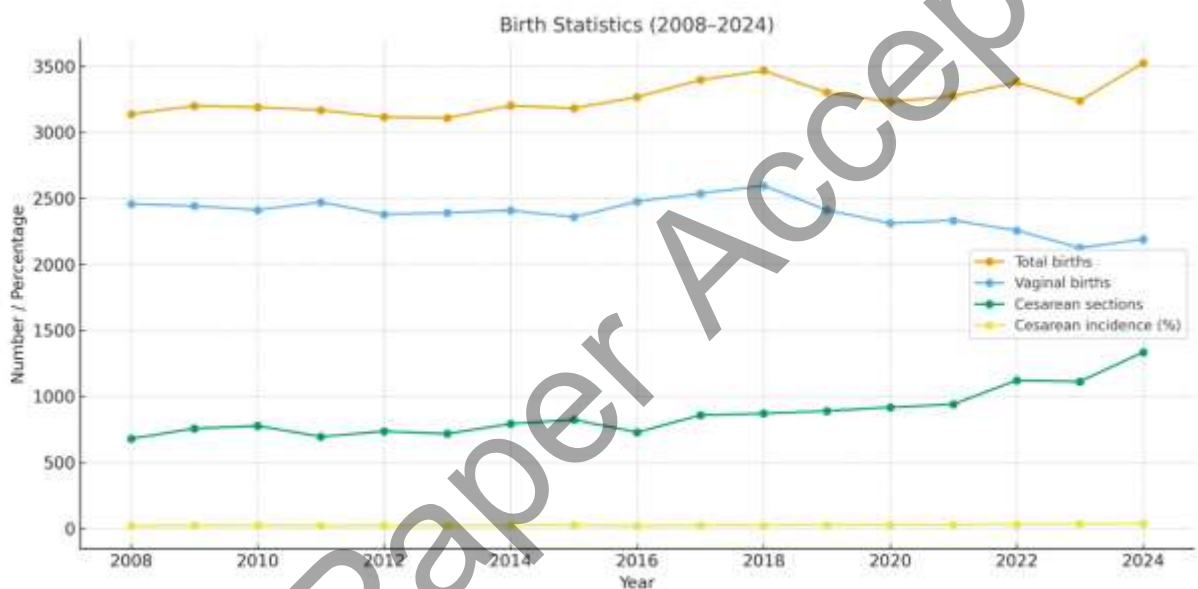


Figure 1. Trends in the total number of deliveries, vaginal deliveries, and cesarean sections (2008–2024)

Table 2 presents the trend in birth injuries at five-year intervals from 2008, as well as for the last two years. The incidence of episiotomy showed a markedly significant decrease, from 76% in 2008 to approximately 52% in 2024 ($p < 0.0001$). Inversely, the incidence of first-degree perineal tears significantly increased from 10% in 2008 to 18% in 2024 ($p < 0.0001$). The incidence of second-degree perineal tears remained around 1% in 2013, 2018, and 2023, but dropped to 0.55% in 2024. The incidence of OASIS remained mostly below 0.1%. For both second-degree perineal tears and OASIS, no statistically significant change in frequency was observed between the studied years ($p > 0.05$). In the year when the incidence of episiotomy was at its lowest, approximately 42%, there were no cases of severe perineal tears (OASIS), and no significant increase in the incidence of second-degree perineal tears was observed. The incidence of vaginal tears showed a significant rise from

about 2% in 2008 to 7% in 2024 ($p<0.0001$), while cervical tears showed a significant decline from nearly 18% in 2008 to 13% in 2024 ($p<0.0001$).

Tables 3a and 3b provide a more detailed overview of the incidence of birth injuries in 13,626 vaginal deliveries during the last six years (2019–2024). The frequency of birth injuries and episiotomy showed statistically significant changes during this period. The incidence of episiotomy displayed a decreasing trend from about 60% to 52% ($p<0.001$). At the same time, there was a statistically significant increase in first-degree perineal tears from about 15% to 18% ($p<0.001$), whereas the incidence of second-degree perineal tears remained approximately constant, ranging from 1% to 2%. OASIS occurred only sporadically (0–4 cases per year), remaining below 0.2%, and its incidence did not show significant changes between the studied years. The incidence of vaginal tears remained stable at about 4%, except in the final year, when a significant rise to 7% was noted ($p<0.001$). Deliveries without any birth injuries accounted for 16–20% of women, showing a slight but statistically significant decrease from 2019 to 2024 ($p<0.05$).

Despite episiotomy, 2–4% of women also had vaginal tears, and fewer than 1% had perineal tears. Variation in the incidence of combined injuries with episiotomy was present during the study period. Cervical tears ranged from 14% to 20%, with a declining trend. Of all OASIS cases, 61.5% occurred in association with episiotomy. Based on the number of deliveries with episiotomy and the incidence of OASIS in this group, compared to deliveries without episiotomy, the risk of OASIS among women with episiotomy was 0.10%, compared to 0.09% among women without episiotomy. The calculated relative risk (RR) was 1.19 (95% CI: 0.39–3.63), and Fisher's exact test did not demonstrate statistical significance, suggesting that in this sample, episiotomy was not a risk factor for OASIS.

Table 4 shows the distribution of birth injury frequency according to parity for the period in which 12,188 vaginal deliveries were recorded (5,643 primiparous and 6,545 multiparous). Among primiparous, episiotomy rate was significantly higher (88.8%) compared to multiparous women (33.7%) ($p<0.0001$). However, primiparous had significantly fewer first-degree perineal tears (4.2% vs. 25.5%), second-degree tears (0.3% vs. 1.9%), and vaginal tears (2.8% vs. 6.9%), as illustrated in Figure 2. During this period, 4% of primiparous and 32% of multiparous had no birth injuries. On average, about one-fifth of women had no injuries.

Table 1. Total number of deliveries and number of cesarean sections from 2008 to 2024.

Year	Total number of births	Number of vaginal births	Number of cesarean sections	Incidence of cesarean sections (%)
2008	3137	2457	680	21.68
2009	3200	2442	758	23.69
2010	3189	2412	777	24.37
2011	3167	2471	696	21.98

2012	3115	2379	736	23.63
2013	3109	2391	718	23.09
2014	3202	2409	793	24.77
2015	3182	2358	824	25.90
2016	3266	2475	729	22.32
2017	3396	2537	858	25.27
2018	3467	2596	871	25.12
2019	3301	2411	890	26.96
2020	3229	2311	918	28.43
2021	3274	2333	941	28.74
2022	3378	2256	1122	33.21
2023	3238	2125	1113	34.37
2024	3525	2190	1335	37.87

Table 2. Incidence of birth injuries from 2008 to 2024 at five-year intervals, and for the last two years (2008, 2013, 2018, 2023, and 2024).

Year	Vaginal Episiotomy****			Perineal tear I degree****		Perineal tear II degree		OASIS		Vaginal tear****		Cervical tear****	
	N	N	%	n	%	n	%	n	%	n	%	n	%
2008	2457	1868	76.03	253	10.30	15	0.61	2	0.08	54	2.20	441	17.95
2013	2391	1515	63.36	367	15.35	22	0.92	2	0.08	105	4.39	424	17.73
2018	2596	1088	41.91	415	15.99	25	0.96	-	-	154	5.93	465	17.91
2023	2125	1182	55.62	393	18.49	23	1.08	4	0.19	105	4.94	301	14.16
2024	2190	1137	51.92	406	18.54	12	0.55	2	0.09	159	7.26	286	13.06

**** p<0.0001

Table 3a. Incidence of birth injuries in vaginal deliveries during the last six years (2019–2024).

Year	Vaginal Episiotomy***			Perineal tear I degree***		Perineal tear II degree		OASIS		Vaginal tear***		No birth injuries*	
	N	n	%	n	%	n	%	n	%	n	%	n	%
2019	2411	1429	59.27	358	14.85	22	0.91	3	0.12	109	4.52	493	20.45
2020	2311	1409	60.97	356	15.40	30	1.30	4	0.17	77	3.33	439	19.00
2021	2333	1364	58.47	378	16.20	34	1.46	-	-	100	4.29	457	19.59
2022	2256	1303	57.76	385	17.07	39	1.73	-	-	109	4.83	420	18.62
2023	2125	1182	55.62	393	18.49	23	1.08	4	0.19	105	4.94	402	18.92
2024	2190	1137	51.92	406	18.54	12	0.55	2	0.09	159	7.26	358	16.35

*** p<0.001; * p <0.05

Table 3b. Incidence of birth injuries in vaginal deliveries during the last six years (2019–2024).

Year	Vaginal births	Episiotomy with vaginal tear		Episiotomy with perineal tear I degree		Episiotomy with perineal tear II degree		Episiotomy with OASIS		Cervical tear***	
	N	n	%	n	%	n	%	n	%	n	%
2019	2411	76	3.15	9	0.37	4	0.17	2	0.08	505	20.95
2020	2311	91	3.94	6	0.26	6	0.26	3	0.13	438	18.95
2021	2333	48	2.06	8	0.34	9	0.39	-	-	426	18.26
2022	2256	42	1.86	3	0.13	4	0.18	-	-	354	15.69
2023	2125	63	2.96	11	0.52	8	0.38	2	0.09	301	14.16
2024	2190	83	3.79	17	0.78	2	0.09	1	0.05	358	16.35

*** p<0.001

Table 4. Incidence of birth injuries by parity during a five-year period 2017–2021 (12.188 vaginal deliveries).

Birth injury	Primiparous women		Multiparous women	
	n	%	n	%
Episiotomy	5012	88.82****	2205	33.69
Perineal tear I degree	240	4.25	1670	25.52****
Perineal tear II degree	19	0.34	123	1.88****
OASIS	3	0.05	6	0.09
Vaginal tear	157	2.78	450	6.88****
No birth injuries	234	4.15	2119	32.38****

**** p<0.0001

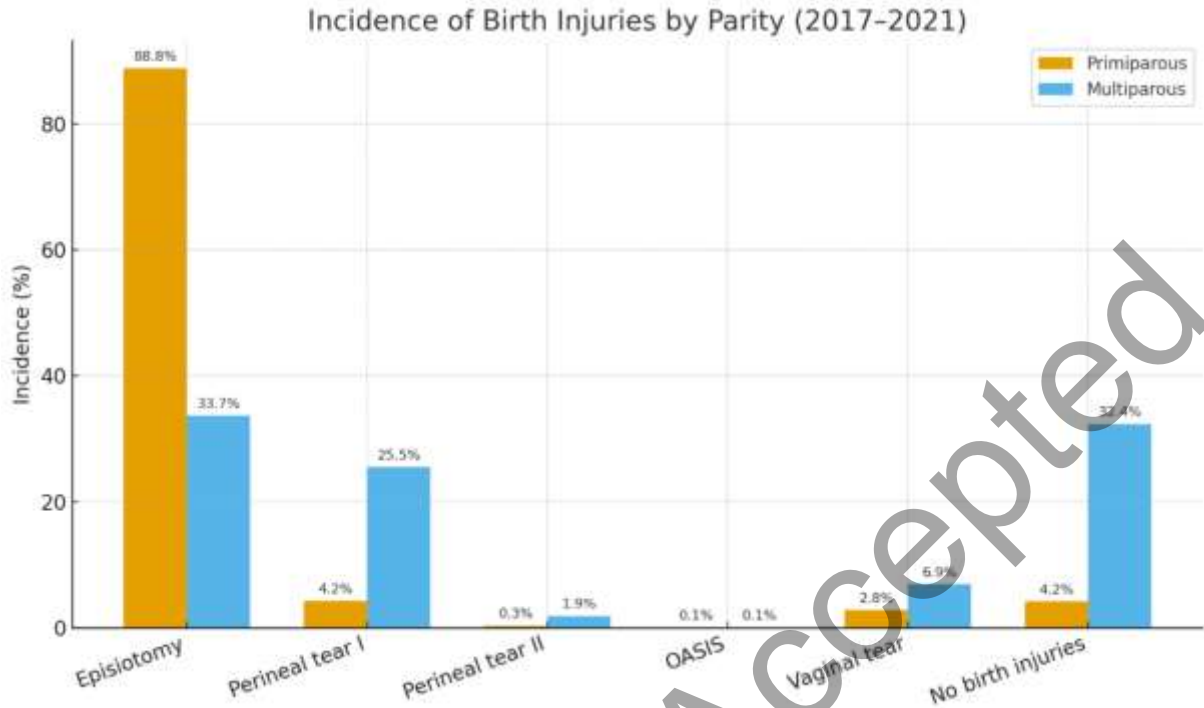


Figure 2. Incidence of birth injuries according to parity.

Discussion

Over the 17-year study period, the annual number of deliveries at our clinic remained approximately constant, but the number of cesarean sections steadily increased, reaching nearly 38% in 2024. This trend is not without indirect significance, as it influences the incidence of birth injuries in vaginal deliveries. The average annual growth rate of cesarean sections was about 0.8–1.0 percentage points per year. Model projections suggest that if this trend continues, and if no significant changes occur in medical practice or delivery policy, the incidence of cesarean sections could reach approximately 45% by 2030.

The analysis of vaginal deliveries concluded that the incidence of episiotomy at our institution demonstrated a highly significant decrease, from 76% in 2008 to about 52% in 2024. In modern obstetrics worldwide, episiotomy is applied with varying frequency, depending on the obstetric tradition. Reported episiotomy rates vary greatly, from low (9.7% in Sweden) to high (100% in Taiwan). In Argentina, episiotomy is routinely performed in nearly all primiparous women, while global rates are about 62% in the United States and 30% in Europe (6), and 22% in the United Kingdom (7). According to traditional practice in Serbia, often referred to as the Belgrade school of obstetrics, episiotomy remains common as a method of perineal protection, with incidence rates among primiparous reaching up to 90%. In the United Kingdom, the United States, and Serbia, mediolateral episiotomy is most widely practiced, as midline episiotomy is considered to carry a higher risk for OASIS and anal incontinence (8).

Conversely, the incidence of first-degree perineal tears significantly increased during the study period, from 10% in 2008 to 18% in 2024, while the incidence of second-degree tears remained around 1%. The incidence of OASIS remained below 0.1%. For second-degree perineal tears and OASIS, no statistically significant changes in frequency were noted, indicating stability of these parameters.

Overall, the results of our study suggest a change in the pattern of birth injuries during the observed period. The reduction in episiotomy rates was accompanied by an increase in the incidence of minor spontaneous tears (first-degree perineal and vaginal tears), whereas the frequency of more severe tears (second-degree perineal and OASIS) remained stable. The trend of decreasing episiotomy rates aligns with the recommendations of leading international gynecological associations. As an intrapartum intervention with uncertain indications, benefits, and outcomes, episiotomy has long been debated. Controversies regarding its use have been reflected in wide international variations in current obstetric practice. The most recent guidelines support restrictive rather than routine use of episiotomy. FIGO recommends selective episiotomy, to be performed when a tear has already started or when there is imminent danger of perineal rupture, as well as in urgent deliveries (9). NICE also supports restrictive use, limited to instrumental deliveries (vacuum extraction and forceps) or when fetal hypoxia is suspected (10). RCOG recommends selective episiotomy, always in vaginal deliveries requiring instruments, with emphasis on the type and angle of incision (11). ACOG also advises selective episiotomy, indicated when it reduces fetal or maternal stress or when non-extensible perineum impedes progress (12). Restrictive use is recommended due to possible complications, such as increased risk of OASIS, perineal pain, sexual dysfunction, dyspareunia, and adverse psychological effects (13). Opondo et al. found an association between perineal trauma and postpartum psychological manifestations, including depression, anxiety, and symptoms of post-traumatic stress (14). Complications of wound healing following perineal trauma include infection rates from 0.1–23.6% and wound dehiscence rates of 0.21–24.6% (15). With restrictive use of episiotomy, posterior trauma (posterior vaginal wall, perineal muscles, anal sphincter) is less frequent, suturing is less often required, and wound complications are less common, without differences in pain levels or severe vaginal/perineal trauma. However, restrictive episiotomy is associated with higher risk of anterior trauma (labia, anterior vaginal wall, urethra, clitoris). Anterior trauma is usually associated with low morbidity.

Second-degree perineal tears are associated with greater perineal pain and reduced sexual function compared to women with intact perineum or superficial injuries (16). Most research has focused on the consequences of third- and fourth-degree tears, while few studies address second-degree tears (17, 18). When comparing episiotomy and second-degree perineal tears, their effects on dyspareunia and postpartum sexual function are similar. However, episiotomy delays resumption of sexual activity compared to second-degree tears (19).

In our cohort, 16–20% of women had no birth injuries, similar to results reported by most studies. According to Frohlich et al., more than 85% of women experience some degree of perineal

trauma during vaginal delivery (20), and according to ACOG, this percentage ranges from 50% to 90% (12, 21).

Our analysis of injuries occurring in the presence of episiotomy revealed some variation in the frequency of combined injuries across the study period. Of all OASIS cases, 61.5% occurred with episiotomy. However, given the number of deliveries with episiotomy and the incidence of OASIS in this group compared to those without episiotomy, the relative risk of OASIS with episiotomy was 1.19. This indicates that in our sample, episiotomy itself was not a risk factor for OASIS. Despite the large number of deliveries analyzed, the very low incidence of OASIS limits the statistical power of the study.

It must also be considered that episiotomy may act as a marker of higher intrapartum risk (confounding by indication) – it is more likely to be performed in deliveries already at increased risk of OASIS (macrosomia, instrumental delivery, shoulder dystocia), complicating causal inference. The effect of episiotomy should be separated from the effect of the indications for which it is performed. Some studies suggest that episiotomy reduces OASIS even in spontaneous vaginal deliveries (8, 22). However, prevailing conclusions are that episiotomy may actually contribute to severe perineal tears rather than prevent them, particularly among multiparous women (23). Episiotomy should therefore be performed selectively (24), in cases such as occiput posterior position, deflexed fetal presentation, fetal macrosomia, shoulder dystocia, assisted deliveries, and breech presentation (25).

In general, the incidence of OASIS has traditionally been very low at our institution, not exceeding 0.2%, and it did not increase with declining episiotomy rates. This is among the lowest reported OASIS rates. According to ACOG, OASIS incidence ranges from 4 – 11% (12), in Australia from 0.5 – 5% (26), according to Villot et al. from 0.6 – 11% (27), and in the UK it is 3.5% (7). Based on an analysis of 7 million deliveries, Friedman et al. reported incidences of 3.3% for third-degree and 1.1% for fourth-degree tears in the US (28). Possible reasons for the low OASIS rate in our setting include the use of mediolateral episiotomy at an angle closer to lateral (60°), which RCOG guidelines recommend (11). The incision angle and technique are important modifiers of risk (10). Deliveries in our institution are performed with all women in the supine position during the expulsion phase, with manual perineal support according to the Finnish concept of active perineal protection. Implementation of Finnish-style manual perineal support and lateral episiotomy, when indicated, reduced OASIS incidence in Norway (4). Another factor may be that when instrumental delivery is indicated, vacuum extraction is used rather than forceps, which are associated with higher OASIS risk.

Ethnicity is also considered to influence predisposition to severe perineal tears. In a Swedish study, OASIS incidence among women born in Sweden was 3.5%, whereas women of Central and South American origin had lower rates, and women of East/Southeast Asian and Sub-Saharan African origin had higher rates, despite all giving birth under the same conditions in Sweden (29).

Risk factors for OASIS include nulliparity, persistent occiput posterior position, midline episiotomy, Asian ethnicity, short perineal body length, fetal macrosomia, and assisted vaginal

delivery (30–32). The most important and well-established among these are fetal macrosomia, primiparity, and instrumental delivery (33).

By parity, our results indicate that episiotomy is far more common in primiparous (89%), while multiparous, due to lower episiotomy incidence (34%), more often experience spontaneous injuries (perineal and vaginal tears), but also more frequently have intact perineum. No differences were noted in OASIS incidence by parity. Among multiparas, first-degree tears predominated (93% of all perineal tears), which is with minimal negative consequences. In multiparas without episiotomy, the incidence of all perineal tears of second to fourth degree was only about 3%. Overall, perineal injury (episiotomy or tear) occurred in 96% of primiparous and 68% of multiparous, results comparable to those reported by Smith et al. (90.4% vs 68.8%) (34). In populations with highly restrictive episiotomy use, the likelihood of second-degree tears is nearly twice as high in primiparous, with an incidence of 40% (35).

Prevention of perineal trauma during delivery can be achieved in several ways. We consider manual perineal support in the second stage of labor particularly important, especially when the perineum is rigid and high. Studies have demonstrated significant reduction of perineal trauma after staff training in manual perineal support in the UK, Norway, and Denmark (24). Perineal massage with lubricant during delivery may also facilitate fetal head passage (25). Prevention may also be applied during pregnancy through perineal massage beginning in the third trimester, increasing perineal elasticity and stretchability, thereby reducing the risk of tearing or the need for episiotomy. Maternal position during delivery is also important. No consensus exists on protective effects of specific maternal positions. Upright positions are traditionally considered beneficial, but in developed countries, although common in home births, hospital deliveries are more often performed with women in supine positions. A US population-based study of 2,400 women found that more than two-thirds delivered lying in bed, while one-third were in semi-lying positions. This may be explained by easier access for monitoring fetal heart rate and the possibility of active perineal protection for healthcare providers.

The WHO 2020 guidelines on physical activity recommend that all pregnant women without obstetric contraindications should be advised to begin or continue moderate-intensity exercise for at least 150 minutes per week, including both cardiorespiratory and strength training (36). Although some have suggested that pelvic floor muscle training during pregnancy may impede vaginal delivery by tightening the pelvic floor muscles, studies have demonstrated fewer perineal tears (both first- and second-degree), without negative effects on vaginal delivery outcomes (37). Improved circulation and greater flexibility of the pelvic floor muscles may explain these benefits. Pelvic floor muscle training during pregnancy is therefore considered an effective preventive measure to reduce the risk of urinary incontinence and third- and fourth-degree perineal tears (38).

Conclusion

We can conclude that the incidence of episiotomy in our setting has been steadily decreasing over the past seventeen years, without leading to an increase in the incidence of more severe birth

injuries. The incidence of OASIS has traditionally been very low and should remain so with the continuation of the basic principles of our obstetric practice, which include the concept of active manual perineal protection and perineal massage with lubricants during the expulsion phase, the use of mediolateral episiotomy at a 60° angle when indicated, and the preference for vacuum extraction over forceps when instrumental delivery is required.

Restrictive use of episiotomy has numerous advantages compared to a routine approach. However, one limitation of this conclusion is that the long-term impact of performing or avoiding episiotomy on pelvic floor statics and function has not been addressed, and such outcomes would require decades of patient follow-up.

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