

Episiotomy wound haematoma: Recognition, management and healing assessment by REEDA scale in postpartum period

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Abstract :

Introduction: Episiotomy wound haematoma extending into paravaginal soft tissue is a serious and not uncommon obstetric complication. It is a formidable contributor to puerperal morbidity with delayed convalescence.

Aims and Objectives:

1. Early recognition and usage of corrugated rubber drain in the management of episiotomy wound haematoma.

2. To assess the healing of episiotomy wound haematoma thus treated by REEDA (Redness, Odema, Ecchymosis, Discharge, Approximation) scale in postpartum period.

Material and methods: A retrospective descriptive study carried at New Alma Hospital, Mannarkkad, Kerala, India during April 2012 to April 2015. The hospital records of all patients with episiotomy wound haematoma were collected.

Results: Total deliveries 12558. Of these 48 patients developed episiotomy wound haematoma. Incidence was 0.38%. 62.5% primigravida, 58.33% of them presented with mass/swelling, 25% had pain, 12.5% had urinary retention, 4.17% presented with shock. 41.67% had normal delivery and 58.33% had vacuum delivery.

37.5% of them delivered babies weighing 2.5 to 3.5 kg and 62.5% of them delivered babies weighing >3.5 kg.

66.67% of them were diagnosed with haematoma within 1 hour of delivery while 33.33% were diagnosed after 1 hour of delivery/shifting out of labour room.

85.42% of the haematomas were managed in the labour room, 14.58% of them were managed in operation theatre under anaesthesia. 18.75% of them developed fever and infection, 22.92% of them had uterine atonicity, 12.5% had cervical tears, 16.67% had vaginal wall tears away from the site of episiotomy, 2.08% of them had third degree perineal tear, 18.75% required blood transfusion and 8.33% of the cases developed gaping of episiotomy wound in puerperal period. 87.5%, 70.83%, 79.16%, 93.75% of the cases had points 0 to 1 on REEDA scale during 1st, 2nd, 3rd and 4th postpartum assessment respectively which indicate good healing. 58.3%, 62.5%, 50%, 41.6% of cases had points 1 to 2 on REEDA scale during postpartum assessments. 10.41%, 12.5%, 8.3%, 4.16% of the cases had points >3 on REEDA scale during postpartum assessments.

Conclusion: Early recognition of episiotomy wound haematoma is the key in its management. Use of corrugated rubber drain in the muscle layer before closure of episiotomy helps to drain out blood thus reducing the need for reexploration, pain, infection and thus aids in better healing of episiotomy.

Keywords: Episiotomy wound haematoma, corrugated rubber drain, REEDA scale.

I. Introduction

The word episiotomy derives from the Greek episton-pubic region-plus-tomy-to cut. In a strict sense, episiotomy is incision of pudendum- the external genital organs. Perineotomy is the incision of the perineum. In common parlance, however, the term episiotomy often is used synonymously with perineotomy[1]. The only types of episiotomy with any place in current obstetric practice are the midline and mediolateral procedures[2]. The prevalence of episiotomy has been reported to be 43% TO 100% in primiparous women in Asia[3].

Episiotomy has been associated with increased risk of severe perineal trauma[4][5][6][7]. Restrictive use of episiotomy is preferable than routine use of episiotomy[8]. Episiotomy is associated with increased blood loss at the time of delivery. Other complications include haematoma formation, infection and rarely abscess and rectovaginal formation[8]. Paravaginal haematoma is an avoidable obstetrical complication usually due to the traction and rupture of paravaginal veins by the oncoming presenting part[9].

Pain, swelling, ecchymosis and urinary retention are the usual symptoms if the haematoma is located below the levator plate, while supralelevator haematomas give no external manifestations[9]. Episiotomy wound haematoma is classified under infralevator haematoma.

In the present study the recommendations of National Institute for Clinical Excellence.(NICE 2007) were followed for perineal repair. In addition a corrugated rubber drain was used in muscle layer of episiotomy after closure of vaginal mucosa. Repair of the perineum should be undertaken as soon as possible to decrease the risk of infection and blood loss[10]

Active surgical intervention is advocated to avert needless destruction of tissue, prolonged morbidity and delayed recovery.

II. Aims And Objectives

Early recognition and usage of corrugated rubber drain in the management of episiotomy wound haematoma.

To assess the healing of episiotomy wound haematoma thus treated by REEDA scale in postpartum period.

III. Material And Methods

This study is a retrospective descriptive study conducted from April 2012 to April 2015, 3years study carried out at New Alma Hospital, Mannarkkad, Kerala, India. There were a total of 12558 deliveries during our study period. Of these 48 patients were detected to have episiotomy wound haematoma. The hospital records of all patients with episiotomy wound haematoma were collected .All the patients were given right mediolateral episiotomy during delivery. Data on parity wise distribution, mode of presentation, mode of delivery, birth weight, time of diagnosis, place of management, associated co-morbidities and REEDA scale assessment in postpartum period were obtained and analysed.

In the present study the recommendations of NICE 2007 were followed for perineal repair. On recognition of episiotomy wound haematoma, per vaginal examination was carried out to know the extent of haematoma. The patient was haemodynamically stabilized. Bladder was catheterized with Foleys catheter. Episiotomy wound sutures were removed. Blood clots were evacuated.Adequate haemostasis by ligation of bleeding points were done. Vicryl Rapide 2-0 was used in this study. First suture was taken 1cm beyond the apex of episiotomy obliterating dead space below the apex. Vaginal mucosa was sutured with continous locking sutures. A corrugated rubber drain was placed in the dead space in muscular layer. The length and breadth of the drain was decided depending on the dead space measured with left index finger of the operator. Deep sutures were taken at the base of haematoma. Dead space was obliterated by interrupted sutures.

Care was taken to prevent needle passing through the drain to prevent entanglement. Skin was sutured with mattress sutures. Counter pressure was given by packing the vagina. Intravenous antibiotics and analgesics were started. Corrugated drain , vaginal pack and Foleys catheter were removed after 24hours. Episiotomy healing was assessed among the participants of the study using REEDA(Redness, Odema, Ecchymosis,Discharge,Approximation) scale at four different periods in the postpartum period; at four different periods in the postpartum period; after 6to10 hours(1st evaluation), from 20 to 24 hours(2nd evaluation), from 40 to 48hours(3rd evaluation) and between 7 to 10days after birth(4th evaluation)[11].

Points	Redness	Oedema	Ecchymosis	Discharge	Approximation
0	None	None	None	None	Close
1	Within 0.25cm of the incision bilaterally	Perineal, less than 1 cm from incision	Within 0.25cm bilaterally or 0.5cm unilaterally	Serum	Skin separation 3mm or less
2	Within 0.5cm of the incision bilaterally	Perineal and/or between 1 to 2 cm from the incision	Between 0.25cm to 1cm bilaterally or between 0.5to 2cm unilaterally	Serosanguinous	Skin and subcutaneous fat separation
3	Beyond 0.5cm of the incision bilaterally	Perineal and/or vulvar, greater than 2cm from incision	Greater than 1cm bilaterally or 2cm unilaterally	Bloody,purulent	Skin, subcutaneous fat and fascial layer separation
Score					
				Total	

Figure1- Redness,oedema,ecchymosis,discharge and approximation of the edges of the lesion assessment scale(REEDA)

The REEDA(Redness, Odema, Ecchymosis, Discharge, Approximation) scale is a total that assess the inflammatory process and tissue healing in the perineal trauma; through the evaluation of five items of healing :redness(hyperaemia), odema,ecchymosis, discharge and approximation of the wound. For each assessed item a score ranging from 0 to 3 can be assigned by healthcare provider. A higher score indicates a greater level of tissue trauma. The maximum value of 15 indicates the worst perineal healing outcome[11][12][13].

IV. Results

There were a total of 12558 deliveries during our study period. Of these 48 were diagnosed to have episiotomy wound haematoma. Incidence was found to be 0.38%.

TABLE 1:Parity wise distribution

Parity	Number	Percent(%)
Primigravida	30	62.5
Multigravida	18	37.5
Total	48	100

TABLE 2:Mode of presentation

Mode of presentation	Number	Percent(%)
Mass or Swelling	28	58.33
Pain	12	25
Urinary retention	06	12.5
Shock	02	4.17
Total	48	100

TABLE 3:Mode of delivery

Mode of delivery	Number	Percent(%)
Normal delivery	20	41.67
Vacumm delivery	28	58.33
Total	48	100

TABLE 4: Birth weight

Birth weight	Number	Percent(%)
2.5 to 3.5kg	18	37.5
>3.5kg	30	62.5
Total	48	100

TABLE 5: Time of diagnosis

Time of diagnosis	Number	Percent(%)
<1 hour of delivery	32	66.67
>1 hour of delivery/after shifting out of labour room	16	33.33
Total	48	100

TABLE 6: Place of management

Place of management	Number	Percent
Labour room	41	85.42
Operation theatre under Anaesthesia	07	14.58
Total	48	100

TABLE 7:Associated co-morbidities

Associated Co-morbidities	Number	Percent (%)
Fever and infection	09	18.75
Uterine atonicity	11	22.92
Cervical tear	06	12.5
Vaginal wall tears	08	16.67
3 rd degree perineal tear	01	2.08
Blood transfusion	09	18.75
Gaping of the episiotomy Wound	04	8.33
Total	48	100

TABLE 8: REEDA scale and postpartum assessment of episiotomy

REEDA Points		1 st 6-10 hours	2 nd 20-24hours	3 rd 40-48hours	4 th 7-10days
0-1	No.of patients / Percent	42 (87.5%)	34 (70.83%)	38 (79.16%)	45 (93.75%)
1-2	No.of patients / Percent	28 (58.33%)	30 (62.5%)	24 (50%)	20 (41.6%)
>3	No.of patients / Percent	5 (10.41%)	6 (12.5%)	4 (8.3%)	2 (4.16%)

V. Discussion

There were a total of 12558 deliveries during our study period. Of these 48 women developed episiotomy wound haematoma. Incidence being 0.38% ie 1.9 in 500 deliveries as compared to 1 in 500 – 700 deliveries in Hankins G et al.,[14]

In our study 62.5% of them were primigravidas(TABLE 1), this evidence is supported by Hamilton[15].

In our study 58.33% of women presented with mass or swelling, 25% of them had pain, 12.5% had

urinary retention, 4.17% presented with shock. (TABLE 2).

In our study 41.67% had normal delivery and 58.33% had vacuum delivery (TABLE 3).

37.5% of women delivered babies weighing between 2.5 to 3.5kg, 62.5% of them delivered babies weighing >3.5kg (TABLE 4).

66.67% of women were diagnosed with haematoma within 1 hour of delivery, 33.33% were diagnosed after 1 hour of delivery/ after shifting out of labour room (TABLE 5).

85.42% of episiotomy wound haematoma were managed in the labour room while 14.58% of them needed management in operation theatre under anaesthesia (TABLE 6).

In our study, 18.75% of women developed fever and infection, 22.92% of them had concomitant uterine atonicity, 12.5% of them had cervical tears, 16.67% of them had vaginal wall tears away from the site of episiotomy wound haematoma, 2.08% of them had 3rd degree perineal tear, 18.75% of the cases required blood transfusion and 8.33% of the cases developed gaping of the episiotomy wound (TABLE 7).

87.5%, 70.83%, 79.16%, 93.75% of the cases had points 0-1 on REEDA scale during 1st, 2nd, 3rd and 4th postpartum assessment respectively which indicates good healing. (TABLE 8).

58.33%, 62.5%, 50%, 41.6% of cases had points 1-2 on REEDA scale during 1st, 2nd, 3rd and 4th postpartum assessments respectively (TABLE 8).

10.41%, 12.5%, 8.3%, 4.16% of the cases had points >3 on REEDA scale during 1st, 2nd, 3rd and 4th postpartum assessments respectively (TABLE 8).

VI. Conclusion

Early diagnosis of episiotomy wound haematoma is the key in its management. Early diagnosis can be made more often if digital examination of the pelvis was routinely done after third stage of labour and before shifting the patient out of labour room and done more frequently in postpartum patients with pelvic complaints. Active surgical intervention is advocated to avert needless destruction of tissue, prolonged morbidity and delayed recovery. Use of corrugated rubber drain in the muscular layer before closure of episiotomy helps to drain blood out of haematoma cavity thus reducing the need for reexploration, pain, infection and aids in better healing of episiotomy. As always, regular assessments, clear documentation, a proactive approach and early intervention are vital to obtain a good outcome.

References

- [1]. Cunningham, Leveno, Bloom, Sponge, Dashe, Hoffman, Casey, Sheffield, Williams Obstetrics, 24th edition, (Mc Graw Hill Education, 2014) 27, 550
- [2]. Michael W. Varner. Episiotomy: Techniques and Indications. Clinical Obstetrics and Gynecology, Vol. 29, No. 2, June 1986
- [3]. Graham ID, Carroli G, Davies C, Medves JM. Episiotomy rates around the world: an update. Birth. 2005; 3(23): 219-223
- [4]. Dudding TC, Vaizey CJ, Kamm MA (2008). Obstetric anal sphincter injury; risk factors, and management. Annals of Surgery 247(2): 224-37
- [5]. Easton E, Labrecque M, Wells G, et al. (2000) Preventing perineal trauma during childbirth: a systematic review. American Journal of Obstetrics and Gynecology **95**: 464- 471
- [6]. Renfrew MJ, Hannah W, Albers L, et al. (1998) Practices that Minimize Trauma to the Genital Tract in Childbirth: A Systematic Review of the Literature. Birth **25**: 143-60
- [7]. Albers L, Gracia J, Renfrew M, et al. (1999) Distribution of the genital tract trauma in childbirth and related perineal pain. Birth **26**(1): 11-17
- [8]. Carroli G, Mignini L. Episiotomy for vaginal birth. **Cochrane Database of Systematic Reviews**. 2009 (1). Available from: <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD000081.pub2/pdf>
- [9]. Melody, George F. California Medicine 1995;82(1):16-18
- [10]. National Institute for Clinical Excellence. **Intrapartum care. Care of healthy women and their babies during childbirth**. London; 2007.
- [11]. Episiotomy healing assessment. Redness, Oedema, Ecchymosis, Discharge, Approximation (REEDA) scale reliability. Rev. Latino-Am. Enfermagem 2015 Jan.-Feb.;23(1):162-8
- [12]. Davidson N. REEDA: evaluating postpartum healing. J Nurse Midwifery. 1974; 19:6-9.
- [13]. Carey ILP. Healing of the perineum, a follow up study [thesis of the internet]. Utah: University of Utah; 1971. [accessed 28 nov 2013]. Disponivel em: <http://content.lib.utah.edu/utils/getfile/collection/etd1/id/1182/filename/1579.pdf>
- [14]. Hankins G, Zahn C. Puerperal haematomas and lower genital tract lacerations. In Hankins G, et al., eds. Operative Obstetrics. Connecticut: Appleton & Lange, 1995:57-72
- [15]. Hamilton, H. G. (1940): Amer. J. Obstet. Gynec., **39**, 642.