

# Association and Outcome of the Primary Repair of Obstetric Perineal Injuries

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To study the association and outcome of the primary repair obstetric perineal injures.

**Design:** Cross sectional study.

**Methods:** Patients presenting with third and fourth degree tears were included, factors associated with injures were studied. Primary repair was performed and outcome was looked after three months of repair.

**Results:** Sixty Four (64) patients were studied in 18 months 59% were having their first pregnancy. Instrumental deliveries an macrosomia are strong associations. Primary repair with end to end approximation was done which was successful.

**Conclusion:** Prevention is important Mediolateral episiotomy and skill of instrumental deliveries can minimize the risk of obstetrics perineal injures.

**Key Words:** erineal tears, fecal incontinence, instrumental deliveries, mediolateral episiotomy.

## Introduction

Anal Sphincter injury (Third and forth degree tears) at vaginal delivery is the most common cause of fecal incontinence in otherwise healthy women. Obstetric injures complicate 0.5 -15% of vaginal deliveries.<sup>1</sup>

However, prevention of injury would obviate the need for surgical repair and associated short term morbidity.<sup>2</sup>

Patients and obstetrician have the universal desire to limit the incidence of injuries. It is however an unfortunate paradox that most of the risk factors for anal sphincter injures (primiparity, instrumental deliveries birth weight 7.4 kg) are components of normal labour and delivery process.<sup>3</sup> The Majority of the women with these risk factors deliver vaginally, and sustain injures.

Several studies have identified a number of obstetric risk factors associate with sphincter injury. These include, nulliparty, large birth weight more than 4000 gms, forceps delivery, ventous delivery, epidural, induction of labour, delay in second stage of labour and persistent occipito posterior position of the fetus. Episiotomy appeared to be protective against sphincter injury, but evidences indicates that this may not be so.<sup>4</sup>

Recognized obstetric anal sphincter injures (OASIS) occur in 0.4 – 19% of vaginal delivery in centers practicing mediolateral and midline episiotomies respectively.<sup>1,5</sup>

Previously there was confusion in classification of anal sphincter injures. After having an audit on concept of classification, now a new classification was suggested,<sup>6</sup> and this has now been accepted by the RCOG<sup>7</sup> and the international consultation on incontinences (Table 1) OASIS therefore represent third and fourth degree tear.

## Methods

Cross Sectional study was carried out at women and children hospital of district Dera Ismail Khan, from 1<sup>st</sup> July 2005 – 31 December 2006. Midline episiotomy is not practiced in this institution and over all 3<sup>rd</sup> degree perineal tear is proximally 2%.

Patients with sphincter injures delivered outside the institution were also included in the study patients with injury but repaired outside the institute were not included.

Tears were repaired with vicry No. 1 by end to end approximation technique. Hospital stay was for 5 days and remained catheterized for 5 days. All women who have sustained recognized third degree tears, and repaired, return for follow up after 3 months of delivery.

## Results

	No of Case	% age
Third degree tear 4 <sup>th</sup> degree tear	61 3	95% 5%
Primigravida Multigravida	38 26	59% 41%
Meditaleral Episiotom	16	25%
No Episiotomy	48	75%
Hospital delivery	15	24%
Home delivery	49	76%

MODE OF DELIVERY		
Spontaneous deliveries	49	76%
Assisted deliveries	15	24%

Assisted Delivery		
• Forceps	13	
• Vaccume	2	
Birth weight		
3.5-4kg	43	67%
> 4 kg	21	33%

Induction of Labour		
Yes	18	28%
No	46	72%

**Table 1:** *Classifications of Perineal Tear.*

Intact Perinem	No visible tears
First Degree Tear.	Injury to Skin Only
2 <sup>nd</sup> Degree Tear.	Injury to perineal muscle but not anal sphincter
Third degree Tear	Injury to the perineal involving the anal sphincter complex. i. 3a- less than 50% ext sphincter torn. ii. 3b- More than 50% ext. sphincter torn. iii. 3c IAS Torn.
Forth Degree Tear	Injury to perinem involving the anal sphincter & anal epithelium.

A total of 64 patients were found in 18 Month. Majority of the patients (59%) were having their first pregnancy. Among total patients, only 3 patients were having 4 degree tears, and all of them were referred from periphery and were delivered by midwife with history of injections and handling at home. In remaining 61 patients (95%) only 16 Patients (25%) were having mediolateral episiotomy. In hospital delivery 15 patients had instrumental deliver in which majority (85%) were having forceps delivery. Most of the babies were having forceps delivery. Most of the babies were having birth weight of 3.5 – 4kg. In total 18 patients (28%) labour was induced with vaginal prostaglandin pessary. The patient with 4<sup>th</sup> degree perineal tears were giving history of spontaneous onset of labour as they all were mishandled by local midwife.

### Discussion

Our data confirmed that nulliparity, induction of labour, instrumental delivery (forceps, ventouse), birth weight > 4 Kg may be contributing factors for anal sphincter injuries. However the protective effect of episiotomy remains unclear. As the attitude of protecting perineal injury differs among obstetrician and midwife. On the other hand, protective interventions are either c/sections or routine episiotomy, but the protective effect of episiotomy is not clearly demonstrated in different studies.

Several authors have demonstrated a protective effect of mediolateral episiotomy<sup>8,9</sup> smaller angle of episiotomy likely? To lead to anal sphincter injury. It was unsurprising that majority of hospital deliveries sustaining tears vaginal deliveries. It is a widely held belief that forceps, assisted delivery is more traumatic to the continence mechanism than vacuum extraction?

The range of birth weight was wide, and several women delivered macrosomic babies. This emphasizes that fetal size has a subsidiary influence acting in combination with other intrapartum factors. The most devastating fact is that majority of sphincter injuries and those of 4<sup>th</sup> degrees, they are delivered by untrained birth attendants either at home or some other place. These people use oxytocin injudiciously and most of them, even, cant perform episiotomies. Injudicious use of oxytocin and bad handling during labours lead to severe trauma and the another dark aspect of the fact is that, they are not referred in time for proper repair of the injury. Induction of Labour was also found having association with anal sphincter injury. As majority of the induced labour end up in instrumental deliveries, so it may also be contributing factor in increasing the risk for perineal trauma.

It is definitely necessary to demonstrate that clinical examination at the time of delivery remains the cornerstone of diagnoses of anal sphincter damage. In each case, careful examination of perineum and vagina is mandatory along with rectal examination to exclude rectal or anal sphincter injury.

Visual inspection combined with palpation by performing a pill rolling motion between index finger in the rectum and the thumb over the anal sphincter, improves the detection rate of OASIS.<sup>10</sup> This can more be sophisticated by supplementing endoanal ultrasound performed immediately postpartum, prior to suturing and then repeating several weeks later.<sup>11</sup> This can help in detecting occult injuries because occult injuries also have risk of fecal incontinence after a subsequent vaginal delivery. Fecal incontinence, fecal urgency, dysparenia and perineal pain have been reported in 30-50% of women, who sustain such tears and symptoms may persist for several year after primary repair.<sup>12</sup>

Traditionally, anal sphincter tears have been repaired at the time of injury by using the technique of end to end approximation of the torn anal sphincter. Recently a retrospective cohort study by Sultan et al<sup>13</sup> suggested better outcomes using the overlap with end to end approximation found no significant difference in outcome<sup>14</sup>.

### Conclusion

The most important aspect of the anal sphincter injury is prevention<sup>15</sup>. Though most of the risks for injury are the components of birth process but skill and experience of the obstetricians while using instruments for delivery and mediolateral episiotomy can minimize the extent of injury. Not only 3<sup>rd</sup> and 4<sup>th</sup> degree tear, large number of occult injuries are missed at delivery. Therefore it is important that doctors and midwife must under go more focused intensive trainings to recognize these tears at delivery, along with this proper training in repair of sphincter injury is also mandatory.

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