

# Assessment of Functional Outcome Following an Episiotomy

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## Abstract:

**Introduction:** Episiotomy is a surgical procedure which became a common practice only from beginning of 20<sup>th</sup> century with the intent to reduce duration of second stage of delivery and avoid perineal tear. Study aims at assessing functional activity limitation and level of dependency in patients who underwent episiotomy. This could guide towards early intervention and better functional outcome

**Methodology:** 50 women, including both primiparous and multiparous who underwent episiotomy, participated in study. Normal delivery without episiotomy and caesarean section were excluded. The study was carried out in tertiary care Hospital, at Navi Mumbai. The study tool had information related to demography and pain of participants. Level of dependency was assessed using Barthel index and WHO QOL-BREF scale immediate on second day and one month after delivery.

**Result:** All the subjects in study were found to have pain as major symptom. Certain physical activities like bathing, transfer, and ambulation were significantly affected. Level of moderate dependency has gradually reduced in one month. ( $P < 0.0001$ ). Independence level has increased significantly after one month ( $P < 0.0014$ )

**Conclusion:** Significant pain was observed in study population, which has affected dependency level. Though gradual decline seen in dependency with medical interventions, it is advisable to increase use of rehabilitation techniques and enhance functional outcome

**Keywords:** Barthel index, Episiotomy, Quality of life

## Introduction

Episiotomy was introduced in early 1920 to reduce second stage of labour. Though developed countries like Australia, Canada have gradually started using it in selected cases, developing countries were having increased rate of episiotomy<sup>1</sup> Episiotomy are usually performed only when indicated as in cases like fetal distress, complicated birth presentations such as face to pubis delivery, breech presentation and shoulder dystocia, prolong 2nd stage of labour, forceps or vacuum delivery, large baby, preterm baby<sup>2</sup>

Population study conducted by B.W.C. Sathiyasekaran et al in 2007 concluded that rate of episiotomy is high in Chennai. Probably similar high rates are found in other parts of India. Study found high probability of episiotomy when doctors conducted the delivery and when place of delivery is private medical college hospital<sup>3</sup> Morbidity following episiotomy includes perineal damage by tear, pain at the perineum and dyspareunia. This study concluded that restricted use of episiotomy use can reduce maternal morbidity to great extent<sup>4</sup> There are four types of episiotomies in practice namely; medio-lateral episiotomy, median episiotomy, lateral episiotomy and J shaped episiotomy. Medio-lateral episiotomy or median episiotomy is commonly performed due to their own merits. Study conducted by V Kalis suggested that there are no common consensus seen on defining types of episiotomy incisions, hence recommendations were given to propose a standardised classification system in terms of the origin of the incision, the direction (e.g. the angle of the cut in the case of mediolateral episiotomy), and the length, based upon current research evidence<sup>5</sup> Study conducted by Shalini Singh et al in year 2016 observed, all hospitals performed mediolateral episiotomy and none of the hospitals had a policy of selective episiotomy use.<sup>1</sup>

Functional outcome following any of the operative procedure can be assessed using tool like Barthel index .This measure gives indication about extent of functional involvement following any kind of disease or an operative procedure .Primiparous or multiparous women need to deal with physical comorbidities after episiotomy .As work related demands are high in case of female population in India ,lot of them would like to join work activity as early as possible whether household or job related .Episiotomy were reported to influence physical functions though there are no significant literature available in this area.Activities of daily living are essential to be done independently which can be assessed using BARTHEL Index WHO QOL-BREEF can guide towards health domain involvement in study population. Hence our study aims at assessing functional outcome following an episiotomy. This would guide towards need of early rehabilitative interventions.

### Methodology:

Study conducted after obtaining Institutional ethics approval. Data collected from 50 females involving primiparous and multiparous women from immediate second day of delivery and a period of one month following episiotomy. Participants with vaginal deliveries without episiotomy, cesarean section were excluded from study. Sampling method used were convenient sampling The tools used demographic information of subjects like name, age, parity and pain related to episiotomy. The study was preceded with Barthel index The Barthel Index (BI) was developed in 1955 as a useful, easy index of independence to score the ability of a patient. It checks ability of the patient with a neuromuscular or musculoskeletal disorder to care for him. Repeating this test periodically would guide towards assessing improvement pattern <sup>6</sup>In our study assessment of Barthel index components were done immediately on second day post-delivery and a month after delivery.WHO QOL-BREEF SCALE was also used in our study. WHOQOL-BREF enables health professionals to assess changes in quality of life over the course of treatment. This scale derives four domain score of study population, mainly physical health, psychological health, social relationship and environmental<sup>7</sup>.Participants were assessed using WHO QOL-BREEF SCALE, on a second day post-delivery and one month post-delivery. statistical analysis was done using Graph Pad instat software.

### Results and observations:

54% of the subjects were multiparous while 46% were primiparous. Medio-lateral episiotomy was a common type of episiotomy observed in our study population (100%).100% subjects complaint of pain at the episiotomy site on 2<sup>nd</sup> day following delivery, 52% of the study population rated pain as hurts a little more and 24% rated hurts a little and hurts even more on faces scale. 42% experienced dull aching pain (Table 1)

Activities of daily living assessed through Barthel index showed involvement of some of the components like Transfers-chair and bed and ambulation to 100% followed by dressing (86%) and bathing ( 38%),toilet training and stair case climbing ( 12%).All the activities return to normal after one month whereas dressing (24%)and transfer from chair to bed(70%) still had not regained significantly (Table 2)According to WHO QOL-BREEF SCALE all domains were found to be affected in our study population ,irrespective of subjects being primiparous or multiparous (Table 3).No significant difference observed in level of dependency for severely dependent population, while moderately dependent population has shown significant reduction of dependency level Change in dependency level observed for mildly dependent population was extremely significant but as there were no population in this category this is not considered (Table 4)

#### Table 1: Pain profile of study population

#### Table 2: Effect on activities of daily living seen in study population

#### Table 3: Domain affected on WHO-QOL BREEF scale.

#### Table 4: Comparison of level of dependency in study population

### Discussion

In Indian population, antenatal and post natal care awareness is gradually increasing .Field of community physiotherapy gives training in enhancing mother and child health. WHO QOL-BREEF

SCALE assess four important domains which refers to rehabilitation in primiparous and multiparous female population. Significant involvement in any of the domain helps rehabilitation specialists to intervene as per specific goals possible. Tools like Barthel index further helps to explore specific activity limitations. Planning early ambulation or training in episiotomy may be a goal but pain associated with episiotomy makes it difficult for professionals to intervene at an early stage. Literature available previously aims more towards assessing efficiency of appropriate physiotherapeutic modes to treat pain component. Use of medical intervention helps speeding up the process of healing the episiotomy site. Hot water wash increasing the blood flow to the episiotomy site which helps in fastening the healing process and level of dependency decreases over a month. Use of absorbable material as well as better suturing technique also is benefit for the subjects. Medical intervention and probable counselling from the medical personnel about the care of the episiotomy site act as a boon and improve the functional ability of the study population over a period of one month.

It was observed that the entire study population underwent a medio-lateral incision in our study. Pain being a common symptom observed in entire study population (100%) (Table 1) dull aching, stretching and throbbing pain was common type of pain experienced in our study. Population and intensity observed were significant (Table 1).

On assessing the study population on Barthel index, it was observed that activities like bathing, dressing, transfer and ambulation was significantly affected (Table 2). These physical activities are asymmetrical activities, which put stress over suture site and pain makes it difficult for women to continue activities or abandon specific activity itself. This pattern of restriction was observed in primiparous as well as multiparous subjects. Cross leg sitting is the ideal and preferred position by the women during breast feeding the child. Also, it is one of the comfortable positions for the everyday life. Sitting crossed leg stretches and pulls the episiotomy site which hinders the healing process. Subjects in our study were not taking any kind of physiotherapeutic treatment. Restriction pattern has still shown its existence one month after episiotomy. This guides us towards intervention and modification needed for specific physical tasks.

The entire study population, primiparous and multiparous reported of involvement of physical, psychological domain and, environmental domain on QOL-BREF scale. Social relationship is a significant domain for Indian population which was found to be significantly affected (Table 3). Perineum is a sensitive area. Sutures at the site was found to associate with lot of psychological attributes.

The level of severe dependency decreased ( $p$  value=0.1258) though significance was not observed as percentage of severely dependent subjects were less (Table 4). The level of moderate dependency significantly decreased over a period of a month ( $p$  value= $<0.001$ ). Mild dependency was not observed on second day post-delivery but it became significantly evident after one month ( $p$  value= $<0.001$ ) (Table 4). This could be attributed to gradual healing leading to fibrosis and pain at the site of suture which might have restricted activities. Also, it was observed that the study population became independent ( $p$  value=0.0014) by one month (Table 4). As the maximum of our study population were multiparous with previous deliveries in assistance with episiotomy, they were well aware of its care and complications. This too helped in reducing the level of dependency.

Sustained dependency and less available independent subjects necessitate to start early intervention in cases of episiotomy. Though Episiotomy is a common practice today, lot of professionals are challenging its use and insist towards lesser use of episiotomy. Restricted use of episiotomy for avoiding perineal tear is recommended by previous literatures.<sup>8</sup> Complications of episiotomy like increased blood loss, high risk pain and difficult repair can be avoided with the practice of restricted episiotomy. Involvement of all specific domains mentioned in this study needs special attention. Along with medical intervention physiotherapeutic modalities do contribute towards faster recovery. Mother and child bonding needs to develop in early few months and breast feeding is an essential component. Episiotomy scar and pain related to it should not affect this essential aspect.

Electrotherapeutic modalities like infrared lamps, hot water wash can have better healing effect on

episiotomy scars<sup>9</sup>. Kegels exercises are known to improve circulation to perineal area and enhance healing<sup>10</sup>. Dry heat is recommended over moist heat<sup>11</sup>. Kakade S et al assessed .an effectiveness of Infrared Lamp Therapy on Healing of episiotomy wound among Post Natal Mothers. Alternative breastfeeding position like long sitting can be practiced by the subject to prevent stretching and pulling of the episiotomy site. If long sitting position is not comfortable for the subjects modified crossed leg sitting can be initiated with pillows beneath the knees as this causes less stretch and pull the episiotomy site. Eating lots of fibres will also help<sup>12</sup>. Awareness related to episiotomy and care of scar should be utmost priority among rehabilitation professionals.

## Conclusion

Pain was observed to affect dependency level in women after episiotomy. Multidisciplinary approach.

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**Table 1: Shows presence of pain, intensity of pain on faces scale and type of pain experienced by the study population.**

Pain ( in % )	Yes	100%
	No	0%
Intensity ( in % )	No hurt	0%
	Hurts a little	24%
	Hurts a little more	52%
	Hurts even more	24%
	Hurts a whole a lot	0%
	Hurts worst	0%
Type of pain	Dull aching pain	42%

( in % )	Throbbing pain	10%
	Stretching pain	40%
	Stabbing pain	8%

**Table 2: Changes in the domain of ADL’S over a period of one month in study population on Barthel’s index.**

ADL’S	On 2 <sup>nd</sup> or 3 <sup>rd</sup> day(%)	After one month(%)
Feeding	0%	0%
Bathing	38%	0%
Personal toilet	0%	0%
Dressing	86%	24%
Bowels	12%	0%
Bladder	8%	0%
Toilet transfer	12%	6%
Transfers-chair and bed	100%	70%
Ambulation	100%	0%
Stair climbing	12%	0%

**Table 3: Domain affected on WHO-QOL BREEF scale.**

Domain	Primiparous (%)	Multiparous (%)	Entire population
Physical	53	56	55
Psychological	64	65	65
Social relationship	77	78	78
environmental	66	71	70

**Table 4: comparison of level of dependency in study population**

Level of dependency	Primiparous (%)		Multiparous (%)		Entire population (%)		Entire population
	2 <sup>nd</sup> or 3 <sup>rd</sup> day	After a month	2 <sup>nd</sup> or 3 <sup>rd</sup> day	After a month	2 <sup>nd</sup> or 3 <sup>rd</sup> day	After a month	
Total dependent	0%	0%	0%	0%	0%	0%	
Severe dependent	0%	0%	19%	0%	8%	0%	0.1258#
Moderate dependent	100%	52%	81%	63%	92%	42%	<0.0001*
Mild dependent	0%	26%	0%	15%	0%	36%	<0.0001*
Independent	0%	22%	0%	22%	0%	22%	0.0014^

# Not significant, \* extremely significant, ^ very significant.