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PATWARDHAN TECHNIQUE IN DEEPLY ENGAGED HEAD : A REVOLUTION IN OBSTETRIC SKILL

Gynaecology

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ABSTRACT

Introduction :- Arrest of head in 2nd stage of labour in often disappointing situation for every obstetrician and whatever the cause, extracting a deeply impacted head is a real challenge, often associated with many problems for mother & child too. Hence using the Patwardhan technique in C.S. offers sigh of relief to the obstetrician.
Objective :- To study outcome of maternal & fetal morbidities associated with Patwardhan technique.
Material & Method :- Total no of cases consists of 164 LSCS done with Patwardhan Technique admitted in Labour room P.M.C.H, Patna.
Inclusion Criteria :- Women with term pregnancy, single fetus with obstructed labour and deeply impacted in Pelvis & needing C.S. were included.
Exclusion Criteria :- Congenitally malformed, multiple pregnancy, Rupture uterus, preterm fetus, previous c.s., fetal head >2/5 palpable.
Observation :- Maternal morbidities as PPH, Uterine incision extension, post operative complication etc. were studied where as Neonatal outcome in terms of their, morbidities & NICU admission & residuals of trauma observed.
Conclusion :- For reducing morbidities in 2nd stage C.S. delivery of baby by Patwardhan Technique (Shoulder 1st) in LSCS has brought revolution in obstetric skill. It needs expertise but it is easy to learn. It is safe with minimal complication.

KEYWORDS

Patwardhan technique, Maternal morbidity & NICU

INTRODUCTION :-

Arrest of labour in 2nd stage is diagnosed when cervix is fully dilated but descent of head is delayed.

Normally mean duration of second stage 50 min in Nulli, 20 min in Multi.

2nd Stage is said prolonged >2hr in Nulli, >1 hr in Multi According to ACOG – If Regional anesthesia is given – 1 hr more is permitted in both groups.

Descent is prolonged – If presenting part takes <1cm/hr in Nulli & <2cm/hr in multi.

Arrest of descent – When no progress is observed for 1 hr.

Causes :- For arrest of head in deep pelvis.

- Fault in power – Uterine Inertia.
- Fault in Passage – Contracted Pelvis, CPD soft tissue tumour.
- Fault in Passenger – Malposition & Malpresentation.
- Common causes for obstructed labour that usually met in LRE.
- CPD
- DTA
- OSA
- Cx dystocia
- Fetal distress in late 1st stage of labour.
- Failed ventouse/ Forcep delivery.

Many method, have been tried by many obstetricians since long i.e. Push method by introducing hand through vagina & pushing the presenting part upwards to disimpact from pelvic cavity, Pull method done per abdomen as reverse breech. But all these have their own maternal & fetal morbidity.

Patwardhan Technique was given by Dr. B. D. Patwardhan in 1957 to case the delivery of impacted head into deep pelvis. This is the technique in which shoulders is taken first.

In OA/LOA/ROA when incision is given, anterior shoulder is delivered 1st by hooking arm at elbow then posterior shoulder is delivered followed by delivery of trunk of the baby by holding the trunk & keeping the thumb parallel to spine. Simultaneourly fundal pressure given by assistant. After that both legs are delivered and lastly head is lifted out gently from the pelvis.

Modified Patwardhan Technique I – Done in occipito transverse position (OTA) in which anterior shoulder is delivered first after that fetal trunk is rotated to bring the back of fetus anteriorly followed by delivery of posterior shoulder by hooking at the elbow. Trunk is delivered by traction by the surgeon, simultaneously fundal pressure is given by assistant. After that both legs are delivered and lastly fetal head is lifted out from pelvis.

Modified Patwardhan Technique II - (Also called Reverse Breech Extraction). After giving the incision over LUS, the surgeon insinuates the palm towards upper part of uterine cavity and catch hold the fetal leg at its ankle and pulls it down followed by second leg, then trunk is pulled followed by both hands delivered by hooking at elbow. Lastly head is delivered by pulling out from pelvic cavity.

Modified Patwardhan Technique III – (In DOP, ROP/LOP) First of all, anterior arm is delivered then same side leg is delivered then other side leg is delivered followed by fetal trunk. After that second arm is taken out and lastly head is lifted from pelvic cavity.

Advantages :-

- No much extension of uterine incision.
- Blood loss is less.
- No pressure over fetal skull.
- No injury to Bladder.
- Less injury/laceration to LUS
- Less chances of sepsis.

Disadvantages :-

- Inexperience surgeon.
- Delay in delivery.
- Injury to fetal abdominal organ.
- Fracture of humerus, femur.
- Erb's, Klumpke's palsy.

MATERIALS & METHODS: -

Total no. of cases 164 cases taken who underwent delivery of baby with Patwardhan Technique during a time period of 1 year from October 2017 to September 2018 in LRE. PMCH.

Inclusion Criteria :-

Women with term pregnancy single fetus with obstructed labour needing C.S.

Exclusion Criteria :-

Congenitally malformed, Multiple pregnancy, Preterm pregnancy, Prev. C.S., Rupture uterus, fetal head >2/5 Palpable.

OBSERVATION

Table 1 - Total no. of LSCS from October 2017 to September 2018 = 2826. LSCS done for arrest in 2nd stage – 164 = 5.8%

Table 2 - Distribution of cases according to Parity

Parity	No. of Cases	Percentage (%)
1	92	56.09
2	22	13.41
>2	50	30.48

Table 3 - Distribution of cases according to Maternal Complication

Parity	No. of Cases	Percentage (%)
Post op. abd. Distention	133	81.09
Bladder complication	149	90.85
Uterine incision extension	47	28.65
Sepsis	84	51.21
Delayed wound healing	31	18.90
Mortality	3	1.82

Table 4 - Distribution of cases according to Neonatal outcome.

Baby status	No. of Cases	Percentage (%)
Alive	128	78.04
Dead	17	10.37
Deeply asphyxiated	19	11.59

Table 5 - Distribution of cases according to Neonatal Morbidities.

Baby status	No. of Cases	Percentage (%)
HIE	86	52.43
RDS	59	35.97
MAS	63	38.41
Neonatal Sepsis	21	12.8
Neonatal Jaundice	48	29.26
Fracture	3	1.83
Erbs palsy	1	0.61

Table 6 - Distribution of cases according to NICU stay.

NICU stay	No. of Cases	Percentage (%)
<2 day	24	14.63
2-5 day	65	39.63
>5 day	48	29.27
NICU Mortality	11	6.7

DISCUSSION :-

- About 6% of cases of LSCS done for Arrest in 2nd stage of labour.
- Most of cases were primi gravida followed by multi.
- In most of the cases with thin meconium stained liquor, alive baby was delivered, where as in patients thick meconium, babies either died or were deeply asphyxiated.
- Almost all babies were given Pediatrician consultation & admitted to NICU when indicated.
- Regarding maternal morbidities in most of pt. had odemetous bladder or hematuria needing indwelling catheterization for 7-10 days. Post operative abdominal distension were also seen in most of cases which were managed conservatively, some of cases also needed nasogastric tube application & aspiration.
- Uterine incision were extended in some of cases either downwards or laterally which was managed by taking ligature.
- Sepsis was seen in mostly handled cases & needed higher antibiotic.
- Mortality seen in 3 cases in which 1 was due to puerperal septicemia & other 2 were associated with APE & Heart disease.
- Most babies were seen having HIE followed by RDS & MAS.
- National data for perinatal mortality due to birth asphyxia & infection is 28% & 33% respectively where as we had 17.07%.

Key Massages :

Patwardhan Technique is safe, easy, can be easily learnt by practice and an appropriate method of delivery during LSCS in Pt. with deeply impacted head.

Important Points :-

Be gentle & patience

- Always give "" Smiley incision over LUS.
- Avoidance of hyperextension of fetal neck & avoidance of forceful pull on neck while disimpacting fetal head are the key points to avoid fetal injury.

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