

Fetomaternal Outcome in Post Caesarean Pregnancy.

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Abstract: Introduction: One Of The Oldest Controversies In Obstetrics Is Over Optimal Management Of The Pregnant Women With Previous Lower Segment Caesarean Section (Lscs). With The Increasing Trends In Caesarean Section Rate A Large Expanding Population Of Women With Caesarean Sections Being Confronted With Various Problems In Their Future Pregnancies Particularly To Their Mode Of Delivery. There Are Conflicting Reports Regarding The Safety Of A Trial For Vaginal Birth After Caesarean Delivery (Vbac) In Terms Of Uterine Rupture, Maternal And Perinatal Morbidity. **Aims And Objective:** To Evaluate The Obstetric And Fetal Outcomes Of Women With Post Caesarean Pregnancy With The History Of Previous Lscs. **Materials And Method:** 541 Pregnant Women Admitted In The Labour Room Satisfying Inclusion Criteria Were Enrolled After Obtaining Their Consent For Participation For This Study, Which Is Done Over A Period Of 2 Years (Oct-2012 To Oct-2014) In The Department Of Obstetrics And Gynaecology, Vssimsar, Burla, Sambalpur. The Obstetric And Fetal Outcomes Of These Patients In The Present Pregnancy Were Noted And Tabulated. A Descriptive Analysis Of These Outcomes Was Carried Out. **Results:** 541 women with previous LSCS were studied. Of these, trial for a VBAC was attempted by 155 patients (women) and 96 (61.93%) had a successful VBAC. 309 (57.11%) women underwent emergency caesarean section & 77 (14.23%) underwent an elective repeat caesarean delivery. 65.71% of the patients (women) who had a history of previous vaginal delivery (s) had a successful VBAC. Out of 18 patients (women) who were induced with PGE2 gel, only 4 (22.22%) delivered vaginally. Scar dehiscence was seen in 3.55% of the patients (women) who opted for a trial for VBAC. The birth asphyxia (APGAR < 8) was lower in cases of repeat caesarean delivery than in those who had a successful VBAC (5.84% Vs 6.25%). Maternal complications were also higher in patients who had a repeat LSCS compared to those who had a successful VBAC (18.61% Vs 6.25%). Average post partum hospital stay in VBAC group was 1.9 days in contrast to 8.5 days in repeat caesarean section (RCS). **Conclusion:** As Pregnancy After Prior Caesarean Section Is In Increasing Trend, It Is Important To Provide Them Proper Antenatal Counseling Regarding Trial Of Labour After Caesarean Section (Tolac). Maternal Morbidity And Mortality Is Not Only Higher In Repeat Section But Also It Requires Prolonged Hospital Stay With Its Accompanying Expenditure Which Cannot Be Ignored In A Population Belonged To Low Socio Economic Group And A Successful Vbac Is Associated With A Lower Perinatal And Maternal Morbidity Than Repeat Caesarean Delivery. So A Well Defined Management Protocol Should Be Instituted In An Effort To Increase The Number Of Vbacs And Bring Down The Overall Caesarean Rates.

Key Words: Post Caesarean Pregnancy; Trial Of Labour, Vbac; Repeat Caesarean Section; Maternal Outcomes; Fetal Outcomes. **Abbreviations:** Tolac- Trial Of Labour After Caesarean Section; Vbac- Vaginal Birth After Caesarean Section; Rcs- Repeat Caesarean Section; Sncu- Special Newborn Care Unit

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I. Introduction:

One Of The Oldest Controversies In Obstetrics Is Over Optimal Management Of The Pregnant Women With Previous Caesarean Section. Caesarean Section Has Been An Integral Part Of Modern Obstetrics During Last Decade. (Nielson Tf) This Is Mainly Due To Concomitant Advances In Introduction Of Newer Antibiotics, Improved Anaesthesia, Blood Transfusion, Good Surgical Techniques; Making The Operation Very Safe And Ever Increasing Indication Of Primary Section Especially For Non-Recurrent Causes Like Fetal Distress, Antepartum Hemorrhage, Uterine Inertia, Abnormal Presentation Etc. Early Detection Of Antepartum And Intrapartum Complications By Improved Obstetrical Methods And Sophisticated Diagnostic Tools Like Ultrasonography (Usg), Cardiotocography (Ctg) And Fetal Scalp Blood Ph Estimation Have Also Added To It.

As A Result Of This, Large Expanding Population Of Women With Caesarean Sections Being Confronted With Various Problems In Their Future Pregnancies Particularly To Their Mode Of Delivery.

The Mode Of Delivery Of A Post Caesarean Case Depends On Careful Selection Of Cases And Judicious Judgment Of Obstetrician.

There Can Be A Lots Of Difficulties During Repeat Caesarean Section Because Of Omental, Bowel And Bladder Adhesion And Inadvertent Injury To Other Viscera, Which Are Likely To Be Encountered. There Can Also Be Extension Of Uterine Incision During Delivery Of The Fetus. The Incidence Of Low Apgar Score Is More If The Time Taken For Uterine Incision To Delivery Of Fetus Is More Than Three Minutes Which Is Likely To Occur In Repeat Caesarean Section.(2-Danforth D.N)

Trial Of Labour Appears To Be A Reasonable Alternative To Repeat Section In Post Caesarean Pregnancies. Vaginal Delivery Is Not Only Associated With Significantly Low Maternal Mortality And Morbidity But Also Requires A Short Hospital Stay, Which Is Beneficial Both To The Patient And The Country As Well.

A Successful Vaginal Delivery Depends On Various Modifiable And Non-Modifiable Factors Of Both Previous And Present Pregnancy. In This Study These Factors Are Correlated And The Different Aspects Of Fetal And Maternal Outcome Of Labour In Post Caesarean Pregnancies Are Evaluated.

Aims And Objective:

The Aim Of The Present Study Is To Evaluate The Different Aspects Of Fetal And Maternal Outcome Of Labour In Post Caesarean Pregnancies.

II. Materials And Method:

Study Design: The Study Entitled “Feto-Maternal Outcome In Post Caesarean Pregnancy” Was A Prospective Observational Study Carried Out In The Department Of Obstetrics And Gynaecology ,Vssimsar Burla,Sambalpur During The Period From October 2012 To October 2014.

Study Population: 541 Cases Of Post-Caesarean Pregnancies Admitted In This Department For Confinement Are Included In This Study.

Study Method And Statistical Analysis:

Detailed History Of The Patient With Special Attention To Past Obstetric History Was Taken Emphasizing Indication, Number, Type, Place Of Cs And Whether Trial Was Given Prior To Operation And Post Operative Events Till Discharge From The Hospital.

Number Of Vaginal Delivery Before Or After Cs And Condition, Sex And Weight Of The Baby And Whether Alive Or Dead, If Dead Then The Probable Cause Of Death Was Ascertained.

Similarly A Detailed History Of The Present Pregnancy Was Taken With Emphasis On Any Complications In Different Trimesters.

Detailed General Examinations Of These Patients Were Done Including Height And Weight.

Obstetrical Examination Was Done To Correlate Gestational Age Of The Fetus. Condition Of The Scar Was Noted As A Clue To The Type And Indications Of Previous Previous Section And Post Operative Period. Height Of The Fundus, Abdominal Girth, Presentation, Position, Engagement Of Fetus And Fetal Heart Rate Were Noted Carefully. Uterine Scar Was Palpated To Elicit Scar Tenderness.

Pelvis Was Assessed Clinically And Cephalopelvic Disproportion Was Ruled Out. Fetal Presentation And State Of The Cervix Were Noted.

Basing On History, General, Abdominal And Pelvic Examination Patient Were Selected Carefully To Undergo Tol Where There Was No Other Contraction For Vaginal Delivery.

Patients With History Of Previous Two Cs, Markedly Contracted Pelvis And Abnormal Presentation Were Not Allowed For Tol.

Relevant Routine Investigations Were Done In All Cases. Most Of The Patients Were Allowed To Undergo Spontaneous Labour.

The Progress Of Labour Was Monitored Carefully Using Partogram As Follows:

Uterine Contraction – In Some Cases Arm Was Also Done For Augmentation.

Descent Of The Fetal Head Every ½ Hourly.

Cervical Dilatation, Effacement, Station Of The Presenting Part Noted Every 4 Hourly.

Condition Of The Fhr Noted At Every 15 Min Interval

Time Of Rupture Membrane And Colour Of The Liquor Amni.

Scar Integrity Was Tested Clinically By Suprapubic Pressure For Tenderness, Maternal Pulse Rate, Bp And Vaginal Bleeding.

Early Detection Of Labour Abnormality, Scar Dehiscence, Maternal And Fetal Distress Was Done.

Emergency Repeat Cs Was Done When Indicated.

Prophylactic Low Forceps And Ventouse Application Done In Second Stage Of Labour.

3rd Stage Was Managed By Prophylactic Oxytocin And Any Complication Arise Were Treated And Noted In The Record.

Following Delivery Of The Baby And Placenta, Uterus Was Explored To Note The Condition Of The Old Uterine Scar. Condition Of The Baby Such As Living Or Dead, Birth Weight, Apgar Score, Sex, Any Congenital Anomalies Were Noted Following Delivery, Followed By Any Morbidity Or Mortality During The Hospital Stay. Maternal Morbidity Like Pph, Fever, Sepsis And Mortality Were Recorded Both In Vaginal Delivery And Repeat Cs. During Repeat Cs – Adhesion, Condition Of The Lower Uterine Segment Scar And Injury To Other Viscera Were Determined. Placental Situation And Morbid Adhesion Were Also Recorded. The Above Findings Were Recorded In A Proforma Designed For This Study.

III. Results:

541 Women Of Post Caesarean Pregnancy Who Had Been Admitted In The Department Of O&G Of Vssimsr, Burla From October 2012 To October 2014 Were Taken For The Study.

Table-1 : Age Distribution Of Women

Age In Years	No. Of Cases	Percentage
16-20	6	1.10%
21-25	235	43.43%
26-30	220	40.66%
31-35	69	12.75%
>36	11	2.03%
Total	541	100

The Maximum Number Of Women Belongs To The Age Group Of 21-25 Years (43.43%).

Table- 2 : Parity Distribution Of Women.

Parity	Number Of Cases	Percentage
P1	439	81.14%
P2	84	15.51%
P3	15	2.77%
>P4	4	0.73%
Total	541	100

Out Of 541 Cases Maximum Number Of Women Are Primipara Constituting 81.14%.

Table-3: Antenatal Complications

Antenatal Complications	No. Of Cases	Percentage
Nil	385	71.16%
Placenta Previa	6	1.01%
Hdp	82	15.15%
Rti	14	2.58%
Uti	25	4.62%
Scd With Crisis	6	1.01%
Hypothyroidism	2	0.36%
Gdm	2	0.36%
Chd	2	0.36%

(Hdp- Hypertensive Disorders Of Pregnancy, Gdm- Gestational Diabetes Mellitus, Uti- Urinary Tract Infection Scd- Sickle Cell Disease, Chd- Congenital Heart Disease)

Hypertensive Disorders Of Pregnancy Was The Most Common Complication Found In 15.15% Of Women.

Table-4 : Interval Between Last Cs To Present Delivery.

Interval In Years	No. Of Cases	Percentage
<2	66	12.19%
2-3	128	23.65%
3-5	252	46.58%
>5	95	17.56%
Total	541	100

This Study Showed That Maximum Number Of Cases I.E 252(46.58%) Had An Interval Of 3-5 Years Between The Last Caesarean To Present Delivery.

Table -5: Successful Vaginal Delivery (Vbac) In Relation To Interval Between Last Cs To Present Delivery

Interval In Years	Vbac	Percentage
<2	16	16.66%
2-3	17	17.70%
3-5	42	43.75%
>5	21	21.87%
Total	96	100

More Number Of Successful Vbac Was Achieved After 3-5years Interval Period Between Previous Cs To Present Delivery I.E(43.75%).

Table 5: Number Of Previous Caesarean Section

Number Of Previous Cs	No. Of Cases	Percentage
1	514	95.01%
2	27	4.99%
Total	541	100

Most Of The Women I.E. 514(95.01%) Were Having One Previous Cs And Only 27 (4.99%) Were Having History Of Two Previous Cs.

Table 6: Mode Of Delivery In Pos T Caesarean Pregnancy

Mode Of Delivery	No. Of Cases	Percentage
Rcs	445	82.36
Vbac	96	17.74
Total	541	100

(Vbac- Vaginal Birth After Caesarean Section, Rcs- Repeat Caesareansection)
Out Of 541 Post Caesarean Mothers 82.26% Cases Undergone Repeat Cs And The Vbac Rate Is 17.74%.

Table-7 : Selection Of Women And Their Mode Of Delivery

Group Of Women	No. Of Women	Percentage(%)
Elective Repeat Cs	77	14.23
Emergency Repeat Cs	309	57.11
Selected For Tol	155	28.65
A Successful Vbac	96	61.93
B Repeat Section After Tol	59	38.07
Total	541	100

Vbac-Vaginal Birth After Caesarean Section Tol- Trial Of Labour
Out Of 541 Women 77 (14.23%) Were Selected For Elective Repeat Cs And 309 (57.11%) Women Required Immediate Repeat Cs, Who Were Admitted As Referred Cases In Late Labour.155 (28.65%) Were Selected For Tol, Of Which 96(61.93%) Women Delivered Vaginally.

Table 8: Mode Of Delivery In Post Caesarean Pregnancy

Mode Of Delivery	No. Of Cases	Percentage
Rcs	445	82.26%
Vbac	96	17.74%
Total	541	100

Rcs- Repeat Caesarean Section Vbac- Vaginal Birth After Caesarean Section
Out Of 541 Post Caesarean Pregnant Women , 445(82.26%) Undergone Repeat Cs And The Vbac Rate Is 17.74%.

Table 9: Mode Of Delivery In Relation To Number Of Previous Caesarean Section

No. Of Previous Cs	Vbac	Rcs	Total
One	96 (18.67%)	418 (81.33%)	514
Two	0	27 (100%)	27
Total	96 (17.74%)	445 (82.36%)	541

96(18.67%) Women Out Of 514 Having One Previous Cs Delivered Vaginally Where As No Women Had Vaginal Delivery With Previous Two Cs.

Table-10: Mode Of Delivery With History Of Previous Vaginal Delivery.

History Of Vaginal Delivery	Total No. Of Cases	Cases Undergone Rcs	Vbac
Present	70 (12.93%)	24(34.29%)	46 (65.71%)
Absent	471(87.07%)	421(89.39%)	50 (10.61%)
Total	541(100%)	445 (82.44%)	96 (17.56%)

Out Of 541cases, 70 (12.93%) Cases Had History Of Vaginal Delivery Prior Or Subsequent To Cs, Out Of Which 46 (65.71%) Delivered Vaginally And 24 (34.29%) Required Rcs.

Table 11: Relation Of Mode Of Delivery With Presentation

Presentation	Vbac	Rcs	Total
Vertex	90 (17.37%)	428(82.63%)	518(95.74%)
Breech	6 (31.57%)	13(68.43%)	19(3.51%)
Shoulder	0	4(100%)	4(0.73%)
Total	96	441	541(100%)

Commonest Presentation Was Vertex(95.74%) And Vbac Was Seen In 17.37%.

Table12: Correlation Of Gestational Age With Mode Of Delivery

Gestational Age	Total No. Of Cases	Vbac	Rcs
28-32wk	28(5.17%)	14(50%)	14(50%)
33-37wk	139 (25.69%)	27(19.42%)	112(80.58%)
38-40wk	278 (51.38%)	47(16.9%)	231(83.10%)
>40wk	92(17.00%)	8 (8.69%)	84(91.31%)
Total	541		

Most Of The Women Admitted During The Gestational Age Between 38-40weeks And Maximum Percentage(50%) Of Vbac Was Seen In Mothers Admitted Between 28-32weeks Of Gestation.

Table-13: Mode Of Delivery In Relation To The Indication Of Previous Cs.

Indication Of Previous Caesarean Section	Rcs	Vbac	Total
Cephalo-Pelvic Disproportion	201(91.78%)	18(8.22%)	219(40.48%)
Fetal Distress	127(73.84%)	45(26.16)	172(31.79%)
Abnormal Presentation	54(80.60%)	13(19.40%)	67(12.38%)
Oligohydramnios	52(76.46%)	16(23.52%)	68(12.56%)
Placenta Previa	2(66.66%)	1(33.33%)	3(0.55%)
B.O.H	7(77.77%)	2(22.22%)	9(1.66%)
Eclampsia	2(66.66%)	1(33.33%)	3(0.55%)

Boh- Bad Obstetric History

Most Common Indication Of Previous Cs Was Cephalo-Pelvic Disproportion (Cpd) I.E 219(40.84%) Followed By Fetal Distrees.I.E 172 (31.79%).The Incidence Of Vbac Was Higher With Fetal Distrees(26.16%) And Oligohydramnios(23.52%).

Table 14: Indications Of Emergency Repeat Cs

Indication	Number Of Cases	Percentage
Fetal Distress	98	31.71%
Scar Tenderness	74	23.94%
Impending Rupture	26	8.41%
Cpd	84	27.18%
Oligohydramnios	19	6.14%
Placenta Previa	4	1.29%
Transverse Lie	3	0.97%
Cord Prolapse	1	0.18%
Total	309	100%

Out Of 541cases, 309(57.11%) Cases Were Admitted In Late Labour And Undergone Emergency Rcs , Most Common Indication Being Fetal Distress(31.71%).

Table 15: Indication Of Repeat Section In Failed Tol

Indication	No. Of Cases Needed Rcs	Percentage(%)
Fetal Distress	32	54.23%
Scar Tenderness	19	32.20%
Impending Rupture	8	13.55%
Total	59	100

Out Of The 155 Women Selected For Tol , Repeat Cs Was Done In 59 (38.06%) With Fetal Distress As The Commonest Indication (54.23%) Followed By Scar Tenderness And Impending Rupture.

Table 16: Induction Of Labour With Pg-E₂ Gel

Outcome	Number Of Cases	Percentage (%)
Successful Vd	4	22.22%
Repeat Lscs	14	77.77%
Total	18	100

Out Of The Total 18 Cases Of Women Only 4 (22.22%) Had Successful Vaginal Delivery And 14 (77.77%) Women Needed Repeat Lscs.

Table 17: Type Of Vaginal Delivery

Type Of Delivery	No.Of Cases	Percentage(%)
Nvd	14	14.58%
Vd With Episiotomy	51	53.12%
Low Forceps Application	20	20.83%
Ventouse Application	11	11.45%
Total	96	100%

Nvd- Normal Vaginal Delivery

Out Of 96 Cases Vd With Episiotomy Contemplated In 51 Women (53.12%) Followed By Prophylactic Instrumental Delivery In 31(32.29%) Cases And 9 (14.58%) Cases Delivered Normally.

Table 18: Duration Of Labour In Vbac Group

Categories	No. Of Cases	Percentage	Mean Duration Of Labour In Hours
Without Prior H/O Vaginal Delivery	50	52.09%	10
With Prior H/O Vaginal Delivery	46	47.91%	7.88
Total	96	100%	
Mean Duration Of Labour In All Cases = 8.61hrs			

Table 19: 3rd Stage Complications And Intra-Operative Findings

Complications & Findings	Rcs	Vbac
Pph	9 (2.02%)	5(5.20%)
Extensive Adhesion	43(9.66%)	0
Bladder Injury	2(0.44%)	0
Congenital Anomaly Of Uterus	13(2.92%)	2(2.08%)
Retained Placenta	0	1(1.04%)
Placenta Acreta	3(0.67%)	0
Scar Rupture	15(3.37%)	0
Caesarean Hysterectomy	8(1.81%)	0
Total	87(19.55%)	8(8.33%)

Out Of 541 Cases,Pph Was Seen In 9(2.02%) Cases In Rcs Groups And 5(5.20%) Cases Of Vbac Group.15 Cases Of Scar Rupture Were Seen,9 Of Them Required Repair Of Scar During Repeat Cs And In 6 Cases Cs Hysterectomy Was Done. Extensive Adhesion Between Bladder And Uterus Was Found In 43(9.66%) Cases In Rcs Groups.

Table 20: Need For Blood Transfusion

Need For Blood Transfusion	Percentage
Vbac	9 (9.37%)
Rcs	59 (13.25%)
Total	68 (12.56%)

Out Of 541 Cases , Total 68(12.56%) Women Needed Blood Transfusion.9(9.37%) Cases Out Of 96cases In Vbacgroups And 59(13.25%) Out Of 445 Cases In Rcs Groups Needed Blood Transfusion.

Table 21: Post Operative Complications

Complications	Rcs	Vbac	Total
Fever (Without Uti)	48(10.78%)	3(3.12%)	51 (9.42%)
Wound Infection	16(3.59%)	1(1.06%)	17(3.14%)
Abdominal Distension	4(0.89%)	0	4(0.73%)
Uti	29(6.51%)	2(2.08%)	31(5.71%)
Uvf	2(0.44%)	0	2(0.36%)
Death	2(0.44%)	0	2(0.36%)
Total	101(18.61%)	6(6.25%)	107(19.77%)

Uvf- Utero-Vesical Fistula, Uti- Urinary Tract Infection

Among The 445 Cases Of Rcs Groups Morbidity Was Seen In 99(22.24%) Cases In Different Forms Where As It Is 6(6.25%) In Vbac Groups. Fever (9.42%) And Uti (5.71%) Were The Major Causes Of Morbidity.2(0.44%) Cases Of Utero-Vescical Fistula(Uvf) Seen In Rcs Group.2(0.44%) Cases Of Maternal Death Was Met In Rcs Groups.

Table 22 : Preference Of Contraception

Category	Btl	Ppiucd
Vbac	0	4
Rcs	77	45

Btl-Bilateral Tubal Ligation Ppiucd- Post Partum Intra Uterine Contraceptive Device Out Of 445 Cases Of Rcs Group 77 Post Caesarean Mothers Preferred Btl And 41 Preferred Ppiucd During Caesarean Section.4 Cases Among Vbac Group Preferred Ppiucd After Vaginal Delivery.

Table 23: Correlation Between Birth Weight Of Newborn Baby And Mode Of Delivery

Weight Of Newborn Baby(Kg)	Vbac	Rcs	Total
1.6- 2	17(30.9%)	38(69.10%)	55(10.16%)
2.1-2.5	25(16.02%)	131(83.98%)	156(28.83%)
2.6-3.0	32(15.02%)	181(84.98%)	213(39.37%)
3.1-3.5	20(22.72%)	68(77.28%)	88(16.26%)
3.6-4.0	2(8.69%)	21(91.31%)	23(4.25%)
>4.0	0	6(100)	6(1.10%)
Total	96	445	541 (100%)

Maximum Number Of Babies Having Birth Weight Between 2.6-3.0kg I.E. 213(39.37%) Of Which 32(15.02%) Delivered Vaginally And 181 (84.98%) By Rcs. Maximum Percentage Of Vbac Occurred In Babies Having Birth Weight Of 1.6-2.0kg I.E. 17(30.90%).

Table 24: Perinatal Outcome

Condition Of Baby	Vbac	Rcs	Total
Normal	77(80.20%)	346(77.76%)	423(78.18%)
Birth Asphyxia	6(6.25%)	27(6.06%)	33(6.09%)
Iugr	4(4.16%)	28(6.29%)	32(5.91%)
Neonatal Jaundice	2(2.08%)	15(3.37%)	17(3.14%)
Neonatal Infections	0	4(0.89%)	4(0.73%)
Congenital Anomalies	0	2(0.44%)	2(0.36%)
Still Born	6(6.25%)	22(4.94%)	28(5.17%)
Neonatal Death	1(1.08%)	1(0.22%)	2(0.36%)
Total	96	445	541(100%)

Majorities Of Babies 421(77.82%) Were Healthy, Others Having Complications Like Birth Asphyxia 33(6.09%), Iugr 32(5.91%), Neonatal Jaundice 17 (3.14%), Neonatal Infection 4(0.73%) And Congenital Anomalies In 4(0.73%).Perinatal Death Was Found In 30 (5.54%) Cases, 28(5.17%) Of Them Are Still Born And Other 2(0.36%) Cases Were Early Neonatal Death.

Table 25: The Apgar Score Less Than 8

Apgar Score <8	No. Of Cases	Percentage
Vbac	6	6.25%
Rcs	26	5.84%

The Apgar Score Of Newborn At 5 Minutes Of <8 Was Seen In 6(6.25%) In Vbac Groups And 26(4.84%) In Rcs Groups.

Table 26: Duration Of Hospital Stay

Post Partum Stay(Days)	Rcs(Mean)	Vbac(Mean)
With Complications	11	3
Without Complications	6	1.5
Average Mean	8.5	1.9

The Average Period Of Hospitalization For Res With Or Without Complication Is 8.5 And That For Vbac Group Cases Is 1.9 Days.

IV. Discussion:

The Old Dictum Of **Cragin (1916)**, “Once A Caesarean Always A Caesarean” Is No More Tenable And The Popularity Of The Recommendation Of National Institute Of Health Consensus Development Conference Usa For Vbac Reframes The Dictum To Be “Once A Caesarean –Always A Hospital Delivery And Twice A Caesarean Preferably A Caesarean.” Various Factors Do Regulate The Outcome Of Tol And Successful Vbac. A Policy Of Individual Evaluation Is Strongly Advocated By Different Obstetricians. (I) Age Group Of Patients

In The Present Study , The Age Group Of Women With Post Cs Pregnancy Varies From 18-40years. Majority Of The Patients Were In The Age Group Of 21-25 Years (235 Women) Constituting 43.43%. 84.09% Were In The Age Group Of 21-30years, Similar To Study Conducted By **Nahar K, Akhter L, Chowdhury S Bal (2008)** Who Reported Maximum Patients I.E 78% To Be In The Age Group Of 21-30years.

(Ii) Parity Distribution:

In The Present Study Out Of 541 Post Caesarean Pregnancy Majority Are Of Primipara 439 (81.14%), Which Is Nearly Similar To The Data Given By **Arora, Oumachigui (1992)** (80%-Primipara).

(Iii) Antenatal Complications - Majority Of Women (71.16%) Had No Significant Antenatal Complication. 156 Cases (28.84%) Had Some Associated Complications. Gestational Hypertension Was The Most Common Antenatal Complication (15.15%). Rti In 2.58%. Placenta Previa Was In 1.1%. Uti In 4.62%. Sickle Cell Disease In 1.01% And Sickle Cell Trait In 3.32%.

(Iv) Interval B/W Last Section & Present Pregnancy :- 252 (46.58%) Patients Were Admitted Within 3-5 Years Of The Last Section. In 128 (23.65%) Cases The Interval Was 2-3 Years. **Bengtsson** Reported That 2/3rd Of The Women Came For Safe Confinement Within 4 Yearsof Previous Section Which Is Similar To The Present Study. (V) Number Of Previous Section And Modes Of Delivery:- Present Study Shows That 514 (95.01%) Women Undergone One Previous Section And 27 (4.99%) Had Undergone Two Prior Sections , Also Reported By **Nahar K, Akhter L, Chowdhury Sb (2008)** With 88% & 12% Cases Had History Of Previous One & Two Cs Respectively. The Average Incidence Of Vbac Was 17.4% & Rate Of Repeat Cs Was 82.36% In These 541 Women. 96 (18.67%) Out Of 514 Women With H/O One Cs Delivered Vaginally And Rest 418 Undergone Repeat Section Either Electively Or During Labour. No Patient With H/O Two Cs Delivered Vaginally. Repeat Section Was Done In Them. **S.N Goswami (1982)** Had Strongly Advocated Not To Allow Tol In Women With H/O Prior Two Cs. (Vi) H/O Previous Vaginal Delivery:- 108 Women With Post Cs Pregnancy 70 (12.93%) Had A H/O Previous Vaginal Birth. 65.71% With H/O Previous Vaginal Delivery And 10.61% Without Prior Vaginal Delivery, Delivered Vaginally. **Gristead & Groman (2004), Hendler And Co-Workers (2006), Cahill And Co-Worker (2006)** Opined That A History Of Prior Vaginal Delivery Is A Favorable Factor For Vbac. Our Study Also Proved The Same. (Vii) Presentation Of Foetus:- Vertex Presentation Was The Commonest Presentation Constituting 518 (95.74%) , Followed By Breech 19 (3.51%) And Shoulder In 4 (0.73%) Cases. 90 (17.37%) Cases With Vertex Presentation Delivered Vaginally. 6 (31.57%) Breech Delivered Vaginally Out Of Total 19 Breech Presentation. Though We Preferred Elective Cs In Breech Presentation 6 Delivered Vaginally By Assisted Breech Delivery As They Came Late In The Labour. **Kishore Et Al** Showed 14 (7.57%) Vaginal Breech Delivery In 685 Women Without Affecting The Fetomaternal Outcome. (Viii) Correlation Of Gestational Age With Mode Of Delivery:- Most Of The Post Cs Mothers Admitted Between 38-40 Weeks Of Gestation (51.38%). Most Of The Vbac Occurred In The Gestational Age 28-32 weeks. As Gestational Age Increased The Number Of Vbac Decreased. We Selectively Allowed Tol In 21 (22.82%) Cases Out Of Total 92 Cases Of Post Cs Women With Ga Greater Than 40 weeks., Among Them 8 (38.09%) Delivered Vaginally. **Kiran Ts Et Al In 2006** Reported That Scar Rupture Rates Significantly Increased In Women Who Underwent Tol After Edd Without Any Corresponding Increased In Cs, Maternal And Perinatal Morbidities. The Influence Of Ga On Scar Rupture Persisted Even After Controlling For Other Confounding Factors Such As Birth Weight, Induction Of Labour And Bmi. So They Do Not Support Tol In Ga Beyond 40 weeks. But Acog In 2013, Although Chances Of Success May Be Lower In More Advanced Gestations, Ga Of Greater Than 40 Weeks Alone Should Not Preclude Tolac. (Ix) Vbac: In Recent Years , Trend Is To Allow A Post Cs Pregnancy For A Tol After A Careful Selection And If No Other Concomitant Contraindication For Vaginal Birth Is Present. Incidence Of Vaginal Delivery In This Series Irrespective Of Indication Was 17.74% (96 Out Of 541). Tol Was Allowed In 155 Out Of Which 96 (61.93%) Cases Delivered Vaginally. The Incidence Rate Was Higher Than The Study Conducted By **Menacker F Et Al, In 2006 (9.2%)**. This Study Was Supported By **Acog 2013 Practice Bulletin Guidelines**, Which Reported The Vbac Incidence Around 8.5%. The Vbac Rate In Tol Cases 155 (28.65%) Is 61.93% (96) Which Is Similar To Study Results Of **Bujold And Gauthier (2001): Acog (2004) 60-80% And Peacemen (2006) 54-67%**.

Lower Incidence Of Vbac In This Series Is Attributed To High Incidence Of Cases With Recurrent Indication, More Number Of Cases With Two Previous Cs And Liberal Use Of Repeat Caesarean Section In Our Institution. And Patient Presenting In Late Labour With Complications. (X) Indication Of Previous Section & Mode Of Delivery: 219 (40.48%) Of Patients Had Undergone C.S Previously Due To Recurrent Indications Which Includes Contracted Pelvis And Cpd. The Non-Recurrent Indication In Previous Section Was Found In 322 Cases (59.52%) Cases Of Which Fetal Distress Is The Commonest One (172 Cases (31.79%). **Goswami (1982), Arora Et Al (1992)** Reported Incidence Of Cpd As A Previous Indication To Be 44.54% And 41.14% Respectively Which Is Similar In The Present Study (41.66%). (Xi) Vaginal Delivery In Relation To Previous Non –Recurrent Indication: In The Present Study , Vaginal Deliveries With Previous Cs For Non-Recurrent Indication Are 24.22%. This Is Lower To The Range Of **Wing And Paul (1999), Bujold And Gauthier (2001) & Peaccemen (2006)**, Close To The Result Of **Goswami (1987)**.

Cs Done For Fetal Distress, Oligohydramnios , Abnormal Presentation , Eclampsia And Placenta Previa Are More Favorable Factor For Vaginal Delivery, Previous Indications Like Cpd Is Found To Be The Worst Cases For Subsequent Vaginal Delivery In Present Series. (Xi) Vaginal Delivery In C.P.D As A Previous Indication- In The Present Study , Only 8.22% Of Patient Delivered Vaginally Who Had Undergone Cs For Cpd Previously. Such Low Incidence Of Vbac Are Due To Elective Cs Among This Group. Incidence Of Vaginal Delivery After Previous Section For Cpd:-

Authors	Year	Incidence %
S.N Goswamy	1982	10.2%
Clark S.L Et Al	1984	64
Jarrel M.A Et Al	1985	54
Present Series	2015	8.22

Jarrel & Clark Used Oxytocin In Their Series For Which Mild Cpd Cases Of Cpd Might Have Delivered Vaginally.

Apart From Cpd , Some Cases Were Also Associated With Boh And Valuable Pregnancy In The Present Series For Which Much Emphasis Has Been Given In Abdominal Delivery For Better Fetal Outcome. In The Present Study 65 Deliveries Out Of 96 Vaginal Deliveries Was Un Aided With An Incidence Of 67.70% Which Is Comparable To That Of **Subhasagar (1983)** As 60.86%. Forceps Was Applied In 20 (20.83%) Cases And Ventouse Was Applied In 11 (11.45%) Cases Which Is Comparable To **Subgasagar**. (Xi) Mean Duration Of Labour In Vaginally Delivered Cases. Mean Duration Of Labour In Present Study Was 8.61 Hrs. The Duration Of Labour Was 7.88 Hrs Those Who Had Vd Prior Or Subsequent To Section In Comparison To 10hrs Who Had No History Of Vd. (Xii) Repeat Caserean Section: The Incidence Of Elective Repeat Cs Is 14.23%, After Failed Tol Is 10.09% & Emergency Repeat Cs In 57.11% In The Present Study.

The Incidence Of Repeat Section Amongst All 541 Patients Studied In The Present Series Is 82.26% As Compared To The Study Done By **Goswami (1982)** Which Was 65.45%. Out Of 541 Cases , 309 Cases Were Admitted In Late Labour And Undergone Emergency Repeat Cs .Most Common Indication Of Emergency Repeat Cs Was Fetal Distress 89 Cases (31.71%), Cpd And Scar Tenderness Cases Account For Emergency Cs In 84 Cases (27.18%) And 74 Cases (23.94%) Respectively. **Arora Et Al (1992)** Showed A High Incidence Of Repeat Cs Due To Increased Rate Of Section For Recurrent Causes In Their Series. (Xiii) Indication Of Repeat Cs After Failed Tol: Most Frequent Indication For Repeat Cs In Failed Tol In The Present Series Is Fetal Distress 19 (32.20%) & Scar Tenderness 19 (32.20%). Impending Scar Rupture In 8 (13.55%) Cases And Non Progress Of Labour In 13 (22.03%) Cases Durind Labour , Necessitating Repeat Section. (Xiv) Type Of Previous Section : In The Present Series All 541 Cases Had Undergone Lscs Previously. In 1961 Menon Observed 72.8% Lscs And 27.2% Classical Section. In Modern Day Obstetric Practice , Classical Csis Rarely Done Due To High Incidence Of Scar Rupture And Post Operative Complications. (Xv) Scar Rupture : In The Present Series Only 15(2.77%) Patient Of Previous C.S Had Scar Rupture And All Of Them Were Admitted In Labour With Signs Of Suspected Scar Rupture And With No Fetal Heart Sound. After Delivery Of The Still Born Baby Repair Of The Uterus Was Done.

During Tol , 19 Cases Developed Scar Tenderness But On Opening The Abdomen Though Lower Segment Was Very Much Stretched And Thinned Out , No Rupture Was Seen; Incidence Being 2.77% Which Is Higher Than The Reported Incidence Of **Macones And Associates (2005)** 0.9%: **London And Co-Workers (2006)** 0.7% **Hibbard (2001)**. Lower Rate Of Scar Rupture Were Reported By **Catherine Y, Spong Md(2007)** 0.12% In Repeat Section Group And **Mozurkewich And Hutton (1999)** 0.39% In Tol Group & 0.16% For Repeat Section Group. Higher Rate Was Reported By **Phelan J.P Et Al (1.9%)**. The Higher Incidence In Scar Rupture Is Due To Poor Availability Of Transportation Services , Distant Location From Hospital And Illiteracy. (Xvi) Maternal Morbidity And Mortality: In The Present Study 2 (0.44%) Maternal Deaths Has Occurred In The The Ruptured Uterus Cases Where Uterine Repair Was Done. Incidence Of Maternal Death Reported By Var Ious Authors Are **Landon And Collaborators,(2004)** Showed 0.06% , **Wen And Associates**

(2005) 0.006% And **Gruise Jm (2010)** 0.016%. The Cause Of Death In Both The Cases Is Septicemia. Febrile Morbidity In 10.78% And 3.12% In Vbac Group. Other Maternal Morbidity Like Sepsis And Abdominal Distension Were More In Repeat Cs Group. However Pph Was Higher In Vaginal Delivery Group. Placenta Accreta Was Seen In 3 (0.55%) Cases, Similar To The Incidence Reported By Stafford And Belfort In 2008. Bladder Injury In 2 Cases, Extensive Adhesions Seen In 9.66% Of Cases. One Case Of Vbac Had Retained Placenta.

Caesarean Hysterectomy Performed In 8 (1.81%) Cases. In 6 Cases – The Indication Was Rupture Uterus And In 2 Cases It Was Placenta Previa Complicated With Placenta Accreta. So Out Of Total 15 Cases Of Scar Rupture, Caesarean Hysterectomy Needed In 6 (40.00%) Cases. This Was Higher Than In The Reports By **McMahon (1996)** And **Miller (1997)** I.E. Around 10-20%. The Increased Incidence Of Uti Is Probably Due To Need For Repeated Catheterization In Some Repeat Cs Cases. 2 Cases Of Repeat Cs Developed Utero-Vesical Fistula. Need For Blood Transfusions Higher In Rcs Group (13.25%) And Overall 12.56% Cases Required Bt, Similar To The Study Of **Tan Pc Et Al (2007)**. They Reported That Successful Vbac Requires Less Blood Transfusion Than Emergency Caesarean Deliveries. **Shiliang Liu, Robert M. Liston, Et Al (2007)** Reported Overall Rates Of Severe Morbidity Were Much Higher In Planned Caesarean Section Group In Comparison To Planned Vaginal Delivery. The High Percentage Of Cs Hysterectomy And Maternal Death In This Study May Be Due To Delayed Referral With Poor Availability Of Emergency Transport Services, Illiteracy And Most Of Them Are Unbooked Cases. (Xvii) Birth Weight Of New Born: One Of The Inherent Dangers Of Elective Cs For Patient With Previous Cs Is The High Incidence Of Prematurity. In Rcs Group The Incidence Of Iugr Is 28 (6.29%). Maximum Number Of Newborns (39.37%) Belongs To The Weight Between 2.6-3kg. Out Of These Babies 84.98% Delivered By Repeat Cs And 15.02% Delivered By Vbac. Most Babies Delivered By Vbac Are Of Range 1.8-2.5 Kg & For Repeat Cs Babies Range Is 2.1 -3.5kg. **E. Irani (1982)** Observed That, When The Baby Weight Was Between 2-2.75kg The Incidence Of Vbac Was Higher And When The Weight Of The Increased From 2,75 To 3,6 Kg, The Incidence Of Repeat Cs Was High. **Tm Coltatat Et Al (1990)** Concluded That When The Baby Weight Is Between 2.5-4kg, Chance Of Successful Vbac Is More And Cs Was More Frequently Done When The Birth Weight Was >4.0kg. Arora Et Al (1992) Found Out That Birth Weight Of Baby <3kg Is A Favourable Factor For Successful Vaginal Delivery. Zelop (2001) Found That The Rate Of Cs Is 40% & 29% For Babies Weighing >4kg & <4kg Respectively. In The Present Study It Is Observed That Repeat Cs Were Associated With Higher Weight Of The Newborn. Lowest Weight Of Baby Delivered Vaginally Was 1.0 Kg & The Highest Weight Was 3.75kg In This Series. (Xviii) Preference Of Contraception- Out Of 445 Rcs Cases, 77 Post Caesarean Mothers Preferred Bilateral Tubal Ligation And 41 Preferred Post Partum Intra-Uterine Device (Ppiucd) During Repeat Cs. 4 Cases From Vbac Group Preferred Post Placental Iud Insertion. (Xix) Perinatal Mortality: The Over All Perinatal Mortality In The Present Series Is 5.54%. **S.N Goswami (1982)** Reported Similar Similar Rate 4.5%. Lower Incidence Of Perinatal Mortality Are Reported By **Arora Et Al (1992)** 0.29%, **Smith (2002)** 0.17%, **Marian (2006)** 0.13%.

In The Present Study There Were 28 Still Births. 22 Cases Are From Rcs Groups, High Incidence Of Still Births Is Due To High Incidence Of Rupture Uterus. There Are 6 Cases Of Still Births In Vbac Group; This High Number Is Due To The Fact That Most Of Them Are Iufds.

Higher Incidence Of Neonatal Death (1.08%) Is Seen In Cases Of Vbac Group In Comparison To The Repeat Cs (0.22%) Group Babies. Higher Incidence Of Perinatal Death In This Study Group Is Due To A Large Number Of Cases Being Referred In Moribund Situation & They Belonged To Low Ses And Are Unbooked Cases. **Landon And Colleagues (2004); Smith And Associates (2002)** Reported The Risk Of Perinatal Death Higher In Women Who Attempted Vbac But **Marian F. Macdorman (2006), Eugene Declerq (2006)** Reported Neonatal Mortality Rates Were Higher Among Infants Delivered By Rcs. (Xx) Apgar Score Of <8: The Apgar Score Of Newborn At 5minutes <8 In 6 (6.25%) Cases In Vbac Groups And 26 (5.84%) In Rcs Groups Showing Slightly More Number Of Newborn With Depressed Apgar In Vbac Groups.

The Results Are Similar To The Results Of **Ugwo Go Et Al In 2014**, They Reported That Apgar Score Of < 7 In First Minute Were Significantly More Frequent Among Women Who Had Vaginal Delivery Compared

To Elective Rcs. (Xxi) Duration Of Hospitalization: In The Present Study Average Post Partum Hospital Stay In Vbac Group Is 1.9 Days In Contrast To 8.5 Days In Repeat Section. The Associated Post Partum Morbidity Further Enhances The Period Of Hospitalization. **Placek Jp (1998)** Reported That The Mean Duration Of Lying In Period Are 1.9 Days And 8.5 Days In Vbac And Repeat Cs Respectively.

Conclusion: Pregnancy With History Of Previous Cs Is Prevalent In Present Day Obstetric Practice. How To Deliver Them Needs Critical Judgement. Maternal Morbidity And Mortality Is Not Only Higher In Repeat Section But Also It Requires Longer Hospital Stay With Its Accompanying Expenditure Which Cannot Be Ignored In A Country Like Ours, Whose Main Population Belong To Low Socioeconomic Group.

Two Major Problems That Influence Vbac Are The Rapidly Rising Primary Cesarean Rate And Uterine Rupture. Although Uterine Rupture Is Rare, Even The Possibility Continues To Present A Dilemma For Physicians And Patients. The Risk And Benefits For Vbac Compared With Repeat Cesarean Delivery Are Complex, And Patient Priorities And Interest In Tolac Vary.

For Women Who Wish Tolac Despite A Factor That Increases Their Specific Risk, Additions To The Consent Form Are Recommended. A Positive And Flexible Approach To Tolac , But With Careful Patient Selection And Close Vigilance Throughout Labour Is Necessary And Is Definitely Superior To Performing Elective Repeat Section In All Cases As A Routine. Once A Cesarean Is No More Always A Caesarean , Rather Dictum Should Be “Once A Caesarean ,Always A Hospital Delivery”.

The Perinatal Outcome Depend Upon Many Factors, Mostly Upon The Proper Clinical Judgment In Selecting Patients For Tolac And The Timely Switching Over To Repeat Section In Cases Of Complication, And The Facility Of Emergency Repeat Section And The Care Of Neonatologist Should Be Available.

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