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Outcome of Pregnancy with Previous Caesarean Sections at T.H. Batticaloa.

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Abstract

Objectives

To analyze;

1. The rate of vaginal delivery in women with one or two caesarean sections.
2. The influence of the use of oxytocin augmentation in the trial of scar.
3. The mode of delivery in women with two caesarean sections.

Subjects and Methods

A retrospective analysis. Women with previous one or two caesarean sections were enrolled. Period of study was between August 2004 and May 2005.Oxytocin augmentation was used in some women with early onset of labour and clinically average size of foetus.

Outcome measures were;

- Vaginal delivery.
- Incidence and indications of repeat caesarean section
- Scar dehiscence or rupture.

Results

Total number of women in the study was 60.Forty seven were allocated for trial of scar.Twenty nine of them were given oxytocin augmentation; Twenty six (90%) had vaginal delivery, and three had repeat caesarean section(CS).In one case scar dehiscence was found at CS.Of the 18 women who had spontaneous onset of labour,12 (66.6%) had vaginal delivery and 6 had emergency CS. Thirteen women had elective CS. Chief indication of repeat CS was dystocia.Of the three women with past two sections, one had vaginal delivery.

Conclusion

Oxytocin augmentation significantly improves the vaginal delivery rate in women with previous CS and thereby reduces repeat CS rate.

Introduction

Rise in caesarean section has been inevitably increasing for the past few decades. The statistics available from 1987 onwards at this hospital also shows this trend (Table I). Transverse lower segment section has been very commonly employed technique by the clinicians. The resulting uterine scar has also been found to be strong enough to withstand uterine contractions in labour (Chua et al 1996). However there is reluctance in the practice of allowing women with previous CS to vaginal delivery. In this study we retrospectively analyze our experience in the success rate of vaginal delivery, focusing especially on the use of augmentation with syntocinon infusion in women with previous CS scar.

Table I. Rise in rate of caesarean section at T.H.Batticaloa.

Year	*LSCS Rate*
1987	10.5%
1990	12.54%
1995	14.83%
2000	12.3%
2004	15.24%

Source: Hospital labour ward statistics.

Method

The study was undertaken at the ward 3 of Teaching Hospital of Batticaloa (one of the two consultant obstetric units).It was a

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retrospective analysis .The period of study was between August 2004 and May 2005.

All women with either one or two previous caesarian scar were allocated into the study. No exclusion criteria were affected. Vaginal examination for uterine scar exploration was not performed on those women who delivered vaginally.

Results

Total number of women with previous CS enrolled in this study was 60.Three of them was with two CS and 18 of them had normal vaginal deliveries either before or after CS. All women had lower segment transverse CS previously.

Total number of women delivered vaginally was 38(64.5%) (Table II.).

Labour was augmented in 29 women with syntocinon infusion. (2 IU in the first pint and 4IU into second pint of normal saline); the augmentation was at the time of artificial rupture of membranes in 23 of them and subsequently (within 4-6 hours) in three subjects. Labour in twelve women had progressed well and had spontaneous vaginal delivery. Of the group augmented with syntocinon(29), 26 had vaginal delivery. Three underwent emergency CS. (two for cervical dystocia and one for foetal distress). (Table IV.) One of them had scar dehiscence found at caesarean section (1.7%) and there was no bleeding. Elective caesarean section was performed in 13 pregnant women. Emergency CS was performed in 9. (Table II).

Just over 50 % of the women in the study were in the age group of 20 – 29 years (table III). Half of them had repeat CS. Seventy five percent of the repeat caesarean section performed was done to this age group(16 out of 22 total CS).

Table II. Outcome of labour with previous CS (n=60).

Vaginal Delivery (n =38)-64.5%			*Caesarean Section (n = 22)-36.5%*		
	n	*%*		*n*	*%*
Spontaneous	12	30	Elective	13	60
Augmented	26	70	Emergency	9	40

Table III. Age distribution & mode of delivery.

Age Group(years)	*Vaginal Delivery*	*Caesarean Section*
20-29 (n=32)	16 (50%)	16 (50%)
29-34 (n=18)	14 (77%)	04 (23%)
35 up words (n=10)	08 (80%)	02 (20%)

Table IV. Outcome of trial of scar (n=47)

Augmented with Oxytocin(n=29)			*Spontaneous (n=18)*		
	n	%		n	%
Vaginal delivery	26	90%	Vaginal delivery	12	66.6%
Caesarean section	3	10%	Caesarean section	6	33.3%

Three women in the study had two previous sections. One among them previously had vaginal delivery. She went into spontaneous onset of labour and had vaginal delivery at this pregnancy as well. The other two had CS.

Scar exploration was not performed subsequently on those women who had vaginal delivery.

One case of silent scar dehiscence was noted at CS in a woman whose labour didn't progress despite oxytocin augmentation.

Discussion

The rise in trends of caesarean sections in the Teaching and Maternity hospitals in Sri Lanka is alarmingly high. The annual health bulletin (2000) (Table VI.) shows that these hospitals conduct 33% of the total number of deliveries and just over a quarter of them were delivered by caesarean section.The vaginal delivery rate of 64.5%(Table II) which is found in our study is within the range of reported rate 62.5%-83%.This achievement was possible because of the excellent delivery rate of 90% in women whose labour was augmented with syntocinon (Table IV). In a study conducted at the Colombo North Teaching Hospital (Rudra & Perera 1995) in which oxytocin was used routinely to assess the vaginal delivery rate over the non oxytocin group, the reported rate of vaginal delivery was 62.5% (the non oxytocin group had more (72.5%) vaginal deliveries) . The scar dehiscence in this group was notably high (3.75%). From these observations we can conclude that oxytocin augmentation should be used judiciously, in cases with favourable Modified Bishop's score and preferably at the onset of labour.

Our observations also reveal that previous vaginal delivery is a favourable predictive factor for successful vaginal delivery after CS. As for maternal age, older women tend to deliver vaginally and higher incidence of repeat CS can be noted in younger women, (Table III). Therefore maternal age of 30 years and over appears to have favourable predictive value.

It is evident that in our study, elective repeat caesarean section was done for cervical dystocia in four cases (7%) (TableV.).Two of them were for breech presentation and the other two with cephalic presentation. The significant proportion of the women (85%) developed spontaneous onset of labour. Therefore we conclude that provided the foetal bio physical parameters are within normal range, we should wait for the spontaneous onset of labour and thus Bishop's score is another predictive factor in the management of pregnant women with past CS.

Exploring the uterine scar after vaginal delivery doesn't seem to be of value since the integrity of the lower segment scar is time tested. Further there is a tendency to cause damage to the scar during examination.

In this study we also report the successful vaginal delivery in a woman with two previous sections. This 32 year old woman previously had two CS for foetal distress in first stage of labour, had a normal vaginal delivery subsequently in 2002 at our unit. She again presented to us in her fourth pregnancy which also had spontaneous onset of labour and ended up in uncomplicated vaginal delivery. In both instances labour was monitored carefully. She subsequently consented for sterilization.

Vaginal delivery after two CS has been reported by several workers. In a study on planned vaginal delivery after two previous caesarean sections (Chattopadhyay et al 1994), 103 (89%) women had delivered vaginally.Some of them had oxytocin augmentation and prostaglandin induction also. Therefore vaginal delivery should be attempted in women with two previous CS.

Table V. Indications for repeat LSCS (n=22.)

Indication	*Elective*	*Emergency*
Dystocia		
1.Cervical	4	4
2.Foeto-pelvic	2	1
GDM/PIH	3	-
Mal presentation	1	-
Abruptio placentae	-	1
Placenta praevia	1	-
Foetal distress	-	3
Bad obstetric history (pervious still births or neonatal deaths)	2	-

Table VI.Maternity services by type of hospital, 2000.

Type of Institution	*Total Deliveries*	*Multiple Deliveries*	*Forceps Deliveries*	*Caesarian Section*	
				Number	*Rate*
Teaching Hospitals	62,065	647	1,606	15,533	25.0
Maternity Hospitals	41,220	378	770	11,179	27.1
Provincial hospitals	48,213	549	450	10,373	21.5
Base Hospitals	90,876	766	1,832	11,361	12.5
District Hospitals	51,189	213	64	117	0.2
Peripheral Units	12,863	84	41	200	1.6
Rural Hospitals	7,320	15	-	-	-
Maternity Homes	2,163	9	-	-	-
Sri Lanka	315,909	2,661	4,763	48,763	15.4

Source: Annual health bulletin 2000.

Our study although small, reveals some vital form of steps towards the reduction of repeat caesarean section. We recommend the use of oxytocin augmentation at the onset of spontaneous labour with previous one or even two lower segment caesarean sections, in order to increase the chances of vaginal delivery and thereby limit the rise in the rate of CS especially due to dystocia (table V), which accounts for 50% of all CS.

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