

ORIGINAL PAPER

Frequency of Vaginal Birth After Cesarean Section at Clinic of Gynecology and Obstetrics in Sarajevo

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At the Clinic of Gynecology and Obstetrics, Clinical Center University of Sarajevo there is a trend of increasing number of cesarean deliveries in the last 15 years. **Material and methods:** During the 2012 percentage of Caesarean sections was 35 %, which represents a true pandemic in obstetrics profession and all scientific postulates are threatened by these practices. Of the total number of vaginal births only 48 deliveries were after previous cesarean section. Of the total number of subjects in which the delivery is completed vaginally after a previous cesarean delivery in 5 (10.42 %) was used vacuum extraction, forceps was not used, while manual exploration of the uterus in order to check the condition of the scar of a previous cesarean section was performed in 32 (66.67%) cases. **Results and discussion:** The largest number of respondents who were surveyed were at age from 31 – 35 years (n=25), followed by group between 26-30 years (39.58%). The analysis of complications of vaginal birth after Caesarean delivery revealed that 93.75 % of the patients did not have any complications, at 4.17 % occurred postpartum hemorrhage and in one patient febrile condition. Birth after cesarean delivery can be successfully completed vaginally, with a careful application of prostaglandins, with a good estimate of an experienced obstetrician, and adequate conditions to complete delivery by cesarean section if a vaginal birth is not going in the right direction and as planned. **Keywords:** cesarean section, vaginal birth.

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1. INTRODUCTION

Obstetric practice is witness of the world trend of increasing rates in caesarean sections during the past few years. Australia and the United States have the highest rate of caesarean sections in the developed world of 28.5% and 29.1% (1). Similar trends of increasing rates of caesarean sections occur in Latin America, especially in Mexico, 25.7% and Brazil 27.9%, as well as other developing countries, such as India (State of Kerala) 21.4% (2). Although „optimal rate“ of caesarean sections remains debate, the World Health Organization proposed optimal rate of 15% (2). At the Clinic of Obstetrics, Clini-

cal Center University of Sarajevo, there is also a increasing trend of births completed by cesarean section in the last 15 years. During the 2012 there was 35% Caesarean sections from total number of deliveries, which represents a true pandemic in obstetrics profession and all scientific postulates are threatened by these practices.

2. GOAL

The goal of this study was to demonstrate the possible occurrence of complications after vaginal delivery following cesariona section at the Clinic of Gynecology and Obstetrics in Sarajevo.

3. MATERIAL AND METHODS

This study included pregnant women which had one or more previous deliveries completed by caesarean section in the 2012. All the subjects are treated in relation to parity and age, interval between births, gestational age, mode of onset of the delivery, method of completing childbirth, complications in childbirth, incidence of complications and birth weight. As criteria for inclusion in the study was weight of the infants greater than 500 g and the length of gestation over 25 weeks. Qualitative variables were statistically analyzed by chi square test and quantitative by ANOVA. The level of significance was set to $p < 0.05$.

4. RESULTS

In the study period of one year at the Clinic of Obstetrics there was 3216 (100%) births. Of the total number of births there was 2101 (63.8%) vaginally completed and 1115 (34.7%) by cesarean section (Table 1). Of the total number of vaginal births only 48 deliveries were after previous cesarean section.

	N	%
Cesarian section	1115	34.70%
Vaginal delivery	2053	63.80%
Vaginalni delivery after cesarian section	48	1.50%
Total	3216	100.00%

Table 1. Method of delivery

During the 2012 in 75 cases women started a vaginal birth after a previous

cesarean section. Of the total number of respondents, in 36% the labor was not successfully completed vaginally, but the repeated cesarean section was needed, while in 64% of patients vaginal delivery was successfully completed (Table 2).

Vaginalni delivery after cesarian section	N	%
Sucesfully completed	48	64%
Unsucsessfull	27	36%
Total	75	100%

Table 2. The success of vaginal births after cesarean section

From the total number of cases in which the delivery was completed vaginally after a previous cesarean delivery in 5 (10.42%) vacuum extraction of the child was needed, forceps was not used in any case, while manual exploration of the uterus in order to check the condition of the scar from the previous cesarean section was performed in 32 (66.67%) respondents. Chi square test showed a statistically significant difference in the incidence of obstetric surgical procedures during and after childbirth, from which was usually made exploration of the uterus to check for a scar from a previous cesarean section, $\chi^2 = 48.054$, $df = 2$, $p < 0.05$ (table 3).

	YES	NO
Vacuum extraction	5 (10.42%)	43 (89.58%)
Forceps	0 (0%)	48 (100%)
Exloparatio cavi uteri manualis (scar check)	32 (66.67%)	16 (33.33%)

Table 3. Obstetric surgical procedured during and after childbirth

The largest number of respondents who were surveyed were between the age of 31-35 years ($n=25$), followed by those at age between 26-30 years (39.58%). In 47.92% of the women delivery was between the 35th and 38th gestation week, while in 33.33% of cases between 31st and 34th gestation week. Of the total number of vaginal birth after cesarean section, the interval between the last two births was most often between 3 and 4 years or in 68.75% of cases, while 75% of infants had birth weight between 2600 and 3500 grams.

The analysis of complications of vaginal birth after Caesarean delivery revealed that 93.75% of the patients did not have any complications, at 4.17%

	N	%	
Age	<25 yrs.	1	2.08%
	26-30 yrs.	19	39.58%
	31-35 yrs.	25	52.08%
	36-40 yrs.	3	6.25%
	>41 yrs.	0	0.00%
	$\chi^2=55.74$; $df=4$; $p<0.05$		
Gestational age	26-30 weeks	7	14.58%
	31-34 weeks	16	33.33%
	35-38. weeks	23	47.92%
	>39 weeks	2	4.17%
	$\chi^2=21.883$; $df=3$; $p<0.05$		
Interval izme u porododa	<2 yrs.	10	20.83%
	3-4. yrs.	33	68.75%
	>5 yrs.	5	10.42%
	$\chi^2=27.885$; $df=2$; $p<0.05$		
Tjelesna težina novoro enceta	up to 2500g	4	8.33%
	2600g-3500g	36	75.00%
	>3600g	8	16.67%
	$\chi^2=45.5$; $df=2$; $p<0.05$		

Table 4. The analysis of the parameters that affect the childbirth outcome

postpartum hemorrhage occurred and in one case febrile condition. It is important to note that there were no cases with uterine rupture at the place of the scar from a previous cesarean section and there were no uterine atony. This all leads to very low risk ratio for complication of $RR=0.07$; $CI=0.262$ to 0.1978 or less than 1%.

	N	Percent
Postpartum hemorrhage	2	4.17%
Rupture of the uterus in the scar area	0	0%
Uterine atony	0	0%
Febrilis puerperialis	1	2.08%
Without complications	45	93.75%
Total	48	100%

Table 5. The incidence of vaginal birth complications after Caesarean delivery

5. DISCUSSION

The old postulate: "Once cesarea, always cesarean" leads to repeated caesarean sections in women who have had previous cesarian section, so are more frequent cases with 2 and 3 cesarean sections (3,4,5). There are many studies about natural birth after previous cesarean section. Women after giving birth by caesarean section are more reluctant for a new pregnancy-birth. According to some studies it occurs in 43.8 % of cases. If we know that most of caesarean sections are done in nulliparous women, it is clear that large numbers of women with cesarean section remains with one child (withouth attempts for further pregnancies) (6,7,8).

The biggest complication in women who have had previous cesarean section is the rupture of the uterus at the place of the previous section. Birth protocol in these cases depends on the ultrasound thickness estimation of the LUS (lower uterine segment) and Bishop's cervical score (9, 10). Women older than 35 years are more likely to have a failed attempt of a test birth (11). Also, postpartum complications after elective cesarean section are not higher than after vaginal delivery (12).

At the Clinic of Obstetrics, Clinical Center University of Sarajevo there is a pandemic of caesarean sections in the last 15 years. The increasing trend has reached a percentage of 34.7% performed caesarean sections in the 2012. Real indications for caesarean section are often contradictory with obstetrics findings, and as there is no option for caesarean section on personal request, sometimes arouse doubt. However, when from the total number are ruled out such cases, still remains a large number of the performed caesarean sections among nulliparous and iterative in pluriparous. In order to put an end to such practices there are attempts to get those women whom underwent cesarean section in a previous pregnancy to give birth during second pregnancy vaginally if there are conditions for it from the mother and fetus. In our study, which covered the 2012, 75 vaginal births was attempted after previous cesarean section. Success rate is 64%. Mankuta and colleagues (13) reported attempted vaginal birth after cesarean section in 50 %, Lyndon-Roche and associates in 60% (14) and Haller and associates in 83.5% of cases. Successful vaginal birth after cesarean Makuta and Associates found in 50% (13), Brattele and associates in 65.6% (15), Haller et al in 30.7% (16) . In our study, only five deliveries was completed with use of vacuum extractor, while in 32 deliveries was made manuel exploration to verify the scar of a previous cesarean section. It is important to note that the

interval between the two births was between 3-4 years in most cases, while in 93.75% women completed vaginal childbirth without complications. Pregnant women with attempted vaginal birth after cesarean section have a high risk of uterine rupture. The risk is particularly high if the labor is induced by prostaglandins. However, there are authors who believe that the careful application of Sintocin at birth after caesarean section does not increase the incidence of uterine rupture. Pregnant women with spontaneous vaginal delivery after cesarean section have a low risk of uterine rupture and febrile conditions, as we showed in our study.

6. CONCLUSIONS

Birth after cesarean delivery can be successfully completed vaginally, with a careful application of prostaglandin, with a good estimate of an experienced obstetrician and adequate conditions to complete the delivery by caesarean section if a vaginal birth is not progressing in the right direction and as planned.

CONFLICT OF INTEREST: NONE DECLARED.

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