

NEW TRENDS IN CESAREAN SECTION

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Summary: The Authors studied the frequency of Cesarean section in relation to deliveries in the last trimester of pregnancy, the frequency of repetitive Cesarean section, age and parity of the patients, indication for cesarean section, week of delivery, and perinatal and maternal morbidity and mortality at the First Clinic of Obstetrics and Gynecology, University of Catania, Catania, Italy, from 1972 to 1974 and from 1983 to 1985. The frequency of Cesarean section has increased from 12.07% (735 cases out of 6,086 deliveries) to 16.89% (837 cases out of 4,955 deliveries). There was a decrease in frequency of repetitive Cesarean section from 30.47% (224 cases) to 27.95% (234 cases) and in perinatal mortality rate from 4.35% (32 cases out of 735) to 3.19% (27 cases out of 845 newborn). There were no cases of maternal death, while the most common cause of maternal morbidity was uterine atonia. From 1972 to 1974 mechanical causes were the most frequent indication for Cesarean section (28.16% — 207 cases), while from 1983 to 1985 previous hysterotomy (32.73% — 274 cases) was the main indications for Cesarean section.

Key words: Cesarean section, indication for Cesarean section, perinatal mortality, maternal mortality.

In the past years, numerous studies have emphasized an increased incidence of Cesarean section (C. S.) with a consequent increase of the maternal and perinatal morbidity and mortality (¹).

It is actual opinion that the frequency of the C. S. should not go above 20% of total deliveries (^{1, 2}).

The purpose of this paper is to analyze the frequency of repetitive C. S., average age and parity of the patients, indication for C. S., week of delivery, and perinatal and maternal morbidity and mortality at the 1st Clinic of Obstetrics and Gynecology, Catania University, Catania, Italy, from 1972 to 1974 and from 1983 to 1985.

CASE REPORT 1972-1974

735 C. S. were performed from 1972 to 1974 and the frequency was 12.07% of deliveries in the third trimester of pregnancy (6,086) (table 1).

Table 1. — Frequency of Cesarean section between 1972-1974 and 1983-1985 in the 1st Clinic of Obstetrics and Gynecology, Catania University, Catania, Italy.

	1972-1974	1983-1985
No. of deliveries	6,086	4,955
No. of Cesarean sections	735	837
Percentage of Cesarean sections	12.07	16.89

The repetitive C. S. was performed in 30.47% (224 cases), of which 84.37% (189 cases) for the second time, and 15.63% (35 cases) for the third time (table 2).

The age of patients was between 16 and 46 years old; 36.19% (226 cases) were nulliparous, 58.09% (427 cases) with parity between 1 and 3 and 5.71 (42 cases) more than 4. Delivery occurred before 38th week of pregnancy in 9.52 (70 cases) of cases, at term in 83.26 (612 cases), and after 42 weeks in 7.06% (53 cases).

The mechanical causes, such as abnormal presentation, feto-pelvic disproportion, previa tu-

Table 2. — *Frequency of repetitive Cesarean section from 1972 to 1974 and from 1983 to 1985.*

	1972-1974		1983-1985	
	no. of cases	%	no. of cases	%
1st Cesarean section	511	69.52	563	67.26
2nd Cesarean section	189	25.71	234	27.95
3rd Cesarean section	35	4.85	34	4.06
4th Cesarean section	—	—	5	0.59
5th Cesarean section	—	—	1	0.11

mors, etc. represented the most frequent indication for C.S. (28.16% - 207 cases), followed by previous hysterotomy (26.39% - 194 cases) and premature rupture of membranes and/or the failure of induction of labor (13.87% - 102 cases).

The perinatal mortality rate was 4.35% (32 cases), of which 19 cases of intrauterine fetal death and 13 cases of early neonatal death. One case of intrauterine fetal death occurred during labor for umbilical cord prolapse. Perinatal mortality rate was higher in newborns weighing less than 2500 or over 4500 grams. Out of 13 early neonatal deaths 61.53% (8 cases) occurred in prematures.

Apgar index less than 3 was present in 3.40% of cases (25 cases), between 4 and 7 in 4.62% (34 cases) and more than 7 in 91.97% of cases (676 cases).

There was no case of maternal death, while in 0.27% (2 cases) hysterectomy was performed for atonia, and in 0.95% (7 cases) medical therapy for postpartum bleeding. One patient (0.13%) was also treated with medical therapy for puerperal thrombophlebitis in the right inferior leg.

CASE REPORT 1983-1985

From January 1983 to June 1985 837 C.S. was performed with a frequency of 16.89% of deliveries in the third trimester of pregnancy (4955 deliveries) (table 1).

The repetitive C.S. was performed in 27.95% of cases (234 cases) for a second time, in 4.06% (34 cases) for a third time, in 0.59% (5 cases) for a fourth time, and in 0.11% (1 case) for a fifth time (table 2); the frequency of repetitive C.S. was equal to 5.52% of total deliveries, while in the same years 38 patients with previous C.S., delivered per vaginam.

The age of the patients varied between 14 and 45 years and 54.12% (84 cases) were nulliparous, 43.36% (363 cases) with parity between

1 and 3 and 2.86% (24 cases) more or equal 4.

Delivery occurred before the 38th week in 10.03% of cases (84 cases), at term in 87.57% (773 cases), and after term in 2.38% (20 cases) of cases.

Previous hysterotomy for C.S. was the most common indication for C.S. (32.73% - 274 cases), followed by prolonged phases of labor and/or premature rupture of membranes (16.60% - 139 cases).

The perinatal mortality rate was 3.19% (27 cases out of 845) and I.A. less or equal to 3 was present in 34% of cases (11 cases), between 4 and 7 in 11.41% of cases (93 cases) and more than 7 in 87.23% of cases (771 cases).

Table 3. — *Indications for Cesarean section between 1972-1974 and 1983-1985.*

	1972-1974		1983-1985	
	no. of cases	%	no. of cases	%
Previous hysterotomy for cesarean section	194	26.39	274	32.73
Feto-placental pathology *	100	13.60	119	14.21
Mechanical causes **	207	28.16	56	6.69
Placenta praevia	45	6.12	16	1.91
Abruptio placentae	8	1.08	55	0.59
Primiparous aged ≥ 35 years	6	0.80	55	0.59
E.P.H. gestosis, hypertension, pre-eclampsia, eclampsia	20	2.72	35	4.18
Soft tissue dystocia	13	1.76	11	0.11
Maternal diseases	13	1.76	9	1.07
Lack of engagement or progression of presented fetal part	31	4.21	36	4.30
Prolonged phase of labor and/or premature rupture of membranes	102	13.87	139	16.60
Uterine malformation	—	—	4	0.44
Negative psychological index ***	4	0.54	32	3.82
Podalic presentation	—	—	93	11.11
Twin pregnancy	—	—	8	0.95
Previous metroplasty	—	—	6	0.71

* Acute and chronic fetal hypoxia, I.U.G.R., fall of E₃, and/or HPL, positive stress test.

** In the years 1972-1974 podalic presentation was not an indication for Cesarean section.

*** Negative psychological index includes: previous sterility, infertility, neonatal mortality.

There were no cases of maternal death, while hysterotomy was performed in 0.23% of case (2 cases) for uterine atonia and in 0.71% (6 cases) medical therapy for post-partum or puerperal bleeding.

DISCUSSION AND CONCLUSION

From a study of data concerning C. S. performed between 1972 and 1974 (735 cases) and between 1983 and 1985 (837 cases) we noted an increase in the frequency of laparotomic delivery from 12.7% to 16.89%, while the perinatal mortality rate was reduced from 4.35% to 3.19%. There were however in 1572 C.S. no cases of maternal death. The most common grave maternal morbidity was uterine atonia treated with hysterectomy.

Among the indication for C. S. in 1983-1985, previous hysterotomy was the principal indication (32.99% of cases), while mechanical pathology in 1972-1974 (28.16%-207 cases). However podalic presentation, which was not an indication for C. S. between 1972 to 1974, caused 11.11% of indication for C. S. from 1983 to 1985.

These trends in indication for C. S. are in agreement with the changes that have occurred in the last ten years in obstetrics which permitted the reduction of maternal and perinatal morbidity and mortality.

In the same years in our Clinic an evident decrease of frequency in forced vaginal delivery occurred as noticed in a previous study ⁽³⁾, so today spontaneous vaginal delivery, Cesarean section and rare application of a vacuum extractor on the low pelvic cavity are the safe modality of delivery ^(3, 8). We believe that such results are obtained with a correct application of parthography as applied from 1974 in our Clinic ^(2, 3, 4, 5, 6, 7, 8).

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