

최근 10년동안 동산 의료원에서 시행한 제왕절개술의 적응증 및 빈도의 분석

계명대학교 의과대학 산부인과학교실
박준철 · 오상엽 · 이동호 · 이정호 · 김종인

Analysis of Indication and Rate of Cesarean Deliveries at Dongsan Medical Center for Ten Years

Joon Cheol Park, M.D., Sang Yup Oh, M.D., Dong Ho Lee, M.D.,
Jeong Ho Rhee, M.D., Jong In Kim, M.D.

Department of Obstetric & Gynecology, Keimyung University School of Medicine, Daegu, Korea

Objective : The aim of this study was to evaluate the rate and indications of cesarean delivery.

Methods : All live birth >27weeks at the Dongsan Medical Center, Keimyung University from 1993 to 2002(n=35,891) were retrospectively analyzed of delivery route, indication of cesarean birth, gestational age, and maternal age.

Results : Total cesarean rate was 29.0%(10,411/35,891) and primary rate was 16.8%(6,041/35,891). The annual primary cesarean birth rate number was increased gradually. The most common maternal age of cesarean section patients was between 26 - 30 years(43.7%). The most common gestational age of cesarean section patients was over 36 weeks(87.4%).

Abnormal presentation and CPD were the most common indication(19.17%, 1,158/6,041) at primary cesarean deliveries. The third common indication was fetal distress(16.44%, 993/6,041).

Conclusions : Total cesarean rate was increased gradually by increasing the previous section rate as well as the primary section rate. Further evaluation will be needed about the relationship between cesarean deliveries and long term fetal outcome, and the effort for VBAC will be needed.

Key word : Cesarean delivery.

15~25% , 가
1 : 1000 가¹
가 ,
가 가
가 가²
: , 700 - 712 194
: (053) 250 - 7515 · : (053) 250 - 7599
E - mail : k1011@dsmc.or.kr

3
가
4
5
가
1993 1
2002 12 10 35,891
10,411

연구대상 및 방법

1993 1 2002 12
35,891
10,411

결 과

1. 빈 도

10 29.0%
1993 4,723 18.3%
(864) , 2002 1,482
50.7%(752) 가
1993 10.6%(502) 2002
28.5%(423) 가
1993 7.7%(362) 2002 22.2%(329)
가 (Table 1, Fig. 1).

2. 연령별 분포

18 46

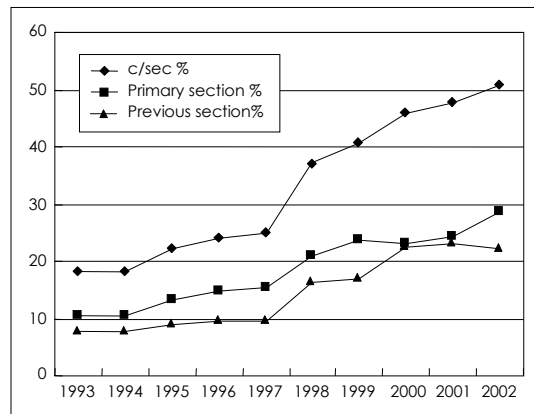


Fig. 1. Annual rate of cesarean deliveries, primary section and previous section.

Table 1. Annual rate of cesarean deliveries

Total deliveries				Cesarean deliveries			
Year	NO.	Total NO.	Rate(%)	Primary NO.	Rate(%)	Repeat NO.	Rate(%)
1993	4723	867	18.3	502	10.6	362	7.7
1994	4746	1020	18.3	502	10.6	363	7.7
1995	4939	1102	22.3	656	13.3	446	9.0
1996	4958	1196	24.1	727	14.7	469	9.4
1997	4861	1214	24.9	754	15.5	460	9.4
1998	3306	1228	37.1	691	20.9	537	16.2
1999	2888	1177	40.7	684	23.6	493	17.0
2000	2146	982	45.8	497	23.2	485	22.6
2001	1842	876	47.6	450	24.4	426	23.1
2002	1482	752	50.7	423	28.5	329	22.2
Total	35891	10411	29.0	6041	16.8	4370	12.2

*NO : number

, 26~30 4,545 (993), 9.34%(564)
 31~35 3,530 (Table 2). 35 7.61%(460)
 가 1993 9.3% 2002 (Table 4).
 19.3% 가 (Fig. 2). Fig. 3

3. 임신 주수별 분포

고 찰

36 9,100 (87.4%)
 , 33~36 1,000
 (Table 3). 37 가 1993
 6.3% 2002 20.0% 가 (Fig. 2).

15~25% ,
 1970 1980 가 1990
 (VBAC)

4. 일차 제왕절개술의 적응증

(, ,
) 19.17%(1158
) 가 16.44%

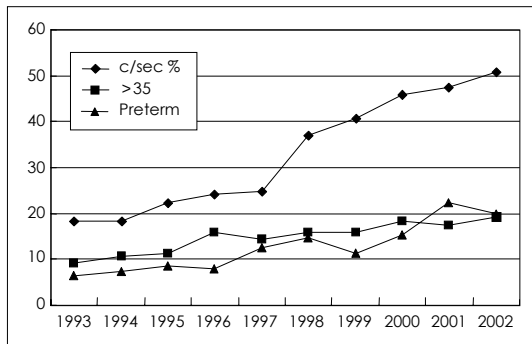


Fig. 2. Elderly pregnant women and preterm delivery.

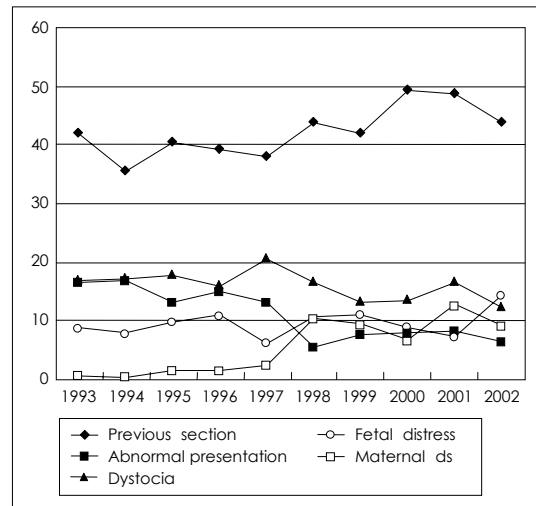


Fig. 3. Indication of cesarean section.

Table 2. Age distribution of cesarean deliveries

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Total	%
Below 21	1	1	2	6	4	2	2	3	6	3	30	0.3
21-25	99	132	117	112	111	52	50	19	41	29	762	7.3
26-30	468	487	569	560	590	518	463	322	303	265	4545	43.7
31-35	216	289	289	328	336	459	474	456	373	310	3530	33.9
Over 35	80	111	125	190	173	197	188	182	153	145	1544	14.8

Table 3. Distribution of gestational age at cesarean deliveries

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Total	%
Below 28	1	1	2	1	6	1	3	6	11	4	36	0.3
28-32	17	13	8	26	37	32	32	32	46	32	275	2.7
32-36	37	61	85	69	111	149	121	113	140	114	1000	9.6
Over 36	809	945	1007	1100	1060	1046	1045	831	679	602	9100	87.4
Total	864	1020	1102	1196	1214	1228	1177	982	876	752	10411	100.0

Table 4. Indication of primary cesarean deliveries

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Total	%
Abnormal presentation	142	172	147	180	160	66	90	80	72	49	1158	19.17
CPD*	93	104	127	143	155	139	100	113	110	74	1158	19.17
Fetal distress	77	81	108	130	75	132	129	87	65	109	993	16.44
Induction failure	53	71	69	48	92	65	56	21	33	17	525	8.69
Elderly	43	62	58	70	67	41	56	28	18	17	460	7.61
Placenta previa	41	86	61	48	48	39	37	41	12	23	434	7.18
Twin pregnancy	13	18	17	24	33	54	59	34	0	48	300	4.96
Wanted	5	19	8	24	41	7	2	1	4	0	111	1.84
Maternal disease	4	4	18	18	28	129	113	67	113	70	564	9.34
Abruptio placenta	10	12	15	16	18	3	5	4	5	0	88	1.46
Pelvic deformity	4	3	7	4	9	1	0	0	0	0	28	0.46
TCIC**	1	0	3	2	19	1	6	4	1	0	37	0.61
Myomectomy	5	7	5	0	7	5	4	7	8	10	58	0.96
Uterine myoma	1	5	1	9	0	6	9	5	9	4	49	0.81
Uterine anomaly	1	1	4	2	2	0	0	0	0	0	10	0.16
Cord prolapse	3	0	1	4	0	0	6	0	0	0	14	0.23
Ovarian tumor	0	0	3	4	0	2	5	2	0	2	18	0.30
Pituitary adenoma	2	5	0	0	0	0	0	0	0	0	7	0.12
Cervical anomaly	2	1	2	1	0	1	1	3	0	0	11	0.18
Genital wart	1	2	1	0	0	0	6	0	0	0	10	0.17
Cancer of cervix	0	2	0	0	2	0	0	0	0	0	4	0.07
Mental retardation	0	1	1	0	1	0	0	0	0	0	3	0.05
Renal transplantation	0	1	0	0	0	0	0	0	0	0	1	0.02
Total	502	657	656	727	754	691	684	497	450	423	6041	100

*CPD : Cephalopelvic disproportion, **TCIC : Transabdominal cerclage

Maternal disease included diabetes mellitus, pregnancy induced hypertension

1991 35%

가 9 28.9%, 10 29.8%, 8 35.5~41.8%

1970 5.5%

1988 24.7% 5 가 Cragin once a cesarean section, always a cesarean section

6 1970 4.9~15.6%

1980 16.3~24%

10 3~4 가 7 가가

1993 18.3% 1997 3

24.9% 가 , 가 , 4

가 2003 50.7% Arad 11

가 .

박준철 외 : - 제왕절개술의 적응증 및 빈도의 분석 -

(VBAC)	1988	12.6%	1993	1	1	2002	12	31
1989	18.5%	가	10					
		25.6%						
가		13	1					
19.17%		60~				1		
90%								
	external cephalic version	1)	35,891					
		29.0%	, 1			16.8%,		
	external cephalic version	37	12.2%					
70%	14		42.0%					
가			35.6~49.3%					
		2)			26~30		가	
					36			
		9,100	(87.4%)	가		35		
		37				가가		
19.17%	가							
	15		3)					
			가		(19.17%)			
	1976	1.6%	(16.4%),		(9.34%)			
1985	13.4%	가가	4)					
	1980		가		4가			
					가			
					3			
		1993						가
2002		가	가				가	
			가			가	가	
가		가						
7.61%								
		가						
			가			가		
						가		
		16						
	20	가						
		17						가
9.1%								

참고문헌

- 1) Leveno KJ, Cunningham FG, Nelson S, Roark M, Williams ML, Guzick D, et al. A prospective comparison of selective and universal electronic fetal monitoring in 34,995 pregnancies. *N Engl J Med* 1986 ; 315 : 615-9.
- 2) 김 암. 제왕절개술 빈도의 변화 양상. *대한산부회지* 1998 ; 41 : 647-52.
- 3) Williams RL, Peter MC. Identifying the source of recent decline in perinatal mortality in California. *N Engl J Med* 1982 ; 306 : 207-14.
- 4) O'Driscoll K, Foley M. Correlation of decrease in perinatal mortality & increase cesarean section rate. *Obstet Gynecol* 1983 ; 61 : 1-5.
- 5) Danforth DN. Cesarean section. *JAMA* 1985 Feb 8 ; 253 (6) : 811-8.
- 6) Taffel SM, Placek PJ, Liss T. Trends in the United states cesarean section rate for 1980-1985 rise. *Am J Public Health* 1987 Aug ; 77 (8) : 955-9.
- 7) 박일수. 제왕절개술의 증가원인. *대한산부회지* 1986 ; 29 : 451-68.
- 8) National Center for Health Statics. Rate of cesarean delivery-United states. 1991. *MMWR* 1993 Apr 23 ; 42 (15) : 285-9.
- 9) 한 영 · 김태균 · 김병철 · 배국환. 제왕절개술에 대한 임상적 고찰. *대한산부회지* 1986 ; 29 : 258-66.
- 10) 이기욱 · 이상화 · 김성배 · 배국환. 제왕절개술의 임상 통계적 고찰. *대한산부회지* 1993 ; 36 : 2177-87.
- 11) Aard LA, Saed F. Low incidence of cesarean section. *Mayo Clin Proc* 1975 ; 50 (7) : 365-9.
- 12) Taffel SM, Placek PJ, Moien M, Kosary CL. 1989 U.S. cesarean section rate steadies --VBAC rate rises to nearly one in five. *Birth* 1991 Jun ; 18 (2) : 73-7.
- 13) Pollard JK, Capeless EL. Cesarean deliveries at a university hospital ; Analysis of rates and indication. *Am J Perinatol* 1997 May ; 14 (5) : 245-8.
- 14) Gimovsky ML, Petrie RH. The intrapartum management of the breech presentation. *Clin Perinatol* 1989 Dec ; 16 (4) : 975-86.
- 15) 김광주 · 서광태 · 신희철 · 김승욱. 제왕절개술에 대한 임상통계적 고찰. *대한산부회지* 1989 ; 32 : 329-34.
- 16) Peipert JF, Bracken MB. Maternal age : An independent risk factor for cesarean delivery. *Obstet Gynecol* 1993 Feb ; 81 (2) : 200-5.
- 17) Taffel SM, Clarke SC, Placek PJ. Factors influencing Primary cesarean rates. *JAMA* 1994 Jun 15 ; 271 (23) : 1829-30.

= 국문초록 =

연구목적 :

방 법 :

35,891

1993 1

2002 12

10

10,411

결 과 : 1)

35,891

29.0%

, 1

16.8%,

12.2%

42.0%

35.6~49.3%

2)

26~30

가

36

9,100

가

35

37

가가

3)

가

(19.17%)

(16.4%),

(9.34%)

결 론 :

가

4가

가

3

가 가

가 가

가

가

중심 단어 :