

# Effect of Holiday Periods on Obstetrician's Cesarean Decisions

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**OBJECTIVE:** To compare the cesarean sections performed prior to public holidays in 2004 with the rates of cesarean delivery in other periods in Kahramanmaraş.

**STUDY DESIGN:** A total of 3994 cesarean sections out of 11611 deliveries were analyzed retrospectively. Two different long public holiday periods were determined. The total number of cesarean deliveries in a total of ten days comprised of each five days prior to the mentioned holiday periods were taken into consideration and evaluated.

**RESULTS:** No significant difference was found in these units between the numbers of cesarean deliveries in periods prior public holiday dates and the numbers of cesarean in other times.

**CONCLUSIONS:** As a result of this study, it may be concluded that the tendency of physicians in cesarean indications before long off-time periods is not as effective as expected. Further detailed studies examining also the indications of cesarean sections with larger patient populations are required to make a real conclusion.

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**Key Words:** Cesarean, Indication, Off-time periods

Cesarean delivery rates have obviously increased in the last two decades. These rates have increased from 6% to 30% in some tertiary-level centers between 1983-2001.<sup>1</sup> Most pronounced increases have been at the nonmedical cesareans.<sup>2</sup> In a trial from Brasil which has the highest cesarean rates in the World by the rate of 36%, it was determined that more than 90% of the nulliparous women preferred vaginal delivery.<sup>3</sup>

Increases in cesarean rates are not only associated with patient preferences, but it may also be affected from physician attitudes. In our study, we investigated whether a significant difference existed between the cesarean deliveries in the period prior to holiday dates and the numbers of cesarean in other times and we aimed to detect the effect of physician tendency on cesarean decisions.

## Material and Methods

A total of 3994 cesarean sections out of 11611 deliveries in between January 1<sup>st</sup> and December 31<sup>st</sup>, 2004 in hospitals of Kahramanmaraş Sütçü İmam University, SSK and State in Kahramanmaraş were analyzed retrospectively. The pa-

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rity, mode of delivery, maternal age and infant birthweight were recorded separately for each hospital. The ages of pregnant women were classified as follows: Under 20, between 20-35, over 35. Infant birthweights were classified as follows: Less than 2500 g., 2500- 4000 g., more than 4000 g. Two different long public holiday periods were determined in 2004. The total number of cesarean deliveries in a total of ten days each comprised of five days prior to the mentioned holiday periods were taken into consideration and evaluated. Whether a significant difference existed between the cesarean deliveries in the period prior to holiday dates and the numbers of cesarean in other times was investigated.

## Results

Annual total number of deliveries was 11611 and cesarean rate was 34.4% in all hospitals. Table 1 shows maternal ages, infant birthweights and sexes. The rates of cesarean section can be seen in Table 2. The rates of cesarean were found significantly higher in the University and SSK Hospitals compared to State Hospital. However, no significant difference was found in these units between the numbers of cesarean deliveries in periods prior to public holiday dates and the numbers of cesarean in other times. Higher tendency for cesarean in University and SSK Hospitals was consistently high also in periods prior to holiday dates (Table 3).

## Discussion

Nonmedical cesarean indications may affect the increased cesarean rates in the last two decades.<sup>2</sup> In a retrospective study in which 290 pregnant women were involved, Olatunbosun and associates reported that 23% of all cesareans might be preventable. These preventable cesareans were performed related to physician decisions in 38%, patient decision in 62%. Most prevalent preventable causes were dystocia and breech presentation with the rate of 53 and 23% respectively.<sup>4</sup> In the other study, in which a questionnaire was

Table 1. Maternal ages, infant birthweights and sexes according to hospitals.

	University hospital n (%)	State Hospital n (%)	SSK Hospital n (%)
<b>Sex</b>			
Male	139 (52)	1239 (50.1)	620 (49.5)
Female	130 (48)	1234 (49.9)	632 (50.5)
<b>Maternal age</b>			
< 20	10 (3.7)	254 (10.3)	69 (5.5)
20-35	221 (82.2)	2002 (80.9)	1075 (85.9)
> 35	38 (14.1)	217 (8.8)	108 (8.6)
<b>Fetal weight</b>			
< 2500	53 (19.7)	69 (2.8)	58 (4.6)
2500-4000	186 (69.1)	2261 (91.4)	1053 (84.1)
> 4000	30 (11.2)	143 (5.8)	141 (11.3)

introduced to obstetricians, it was reported that physicians did not prefer cesarean delivery for their wives in the case of low risk pregnancies, but 59% of them approved the cesarean delivery related to patient request.<sup>5</sup> These trials indicate that patient requests affect some cesarean decisions.

Table 2. Cesarean rates according to hospitals ( $\chi^2=471.8$ ,  $p=0.000^*$ ).

Institution	Cesarean delivery n (%)	Vaginal delivery n (%)
University Hospital	269 (53.0)	239 (47.0)
State Hospital	2473 (28.7)	6130 (71.3)
SSK Hospital	1252 (50.1)	1248 (49.9)

\* Difference is due to lower cesarean rates in State Hospital.

Table 3. Cesarean and vaginal delivery rates in periods prior to holiday dates.

Institution	Cesarean delivery n (%)	Vaginal delivery n (%)	Total n (%)
University Hospital	8 (50.0)	8 (50.0)	16 (100.0)
State Hospital	77 (32.1)	163 (67.9)	240 (100.0)
SSK Hospital	47 (54.0)	40 (45.9)	87 (100.0)

The tendency for cesarean was found higher in the University and SSK Hospitals in the period prior to off-time dates as observed in the other periods ( $\chi^2= 13.92$ ,  $p= 0.000$ ).

Nonmedical cesarean indications may be affected by some factors, i.e. environment, cultural issues, age, experience and education of the physician. Some erroneous thoughts including that cesarean is associated with decreased fetal and maternal morbidity and vaginal delivery causes damage of pelvic floor, may be effective on cesarean preference of the physician.<sup>6</sup> More dramatically, some cesarean decisions have been given due to causes that may be acceptable as a medical malpractice (to get more benefits as a result of more payment for cesarean deliveries from insurance companies, the need of longer waiting periods for vaginal delivery, to be more advantageous when cesarean section is performed in the case of medicolegal situations).<sup>7, 8, 9</sup> In Brasil, cesarean rates reach 80-90% in some private medical centers. Physicians affect nonmedical cesarean deliveries in these centers

and they claim that cesarean decisions are usually due to patient request.<sup>3</sup>

Although we were not able to determine any differences in cesarean rates in periods prior to public holiday dates and the numbers of cesarean in other times in our study, many trials reported that physician preference and attitudes to perform patient-requested cesarean delivery could affect cesarean rates.<sup>7,10</sup> Burns and associates reported lower cesarean rates at the weekend periods.<sup>7</sup> Accordingly, Brown et al. showed similar cesarean rates on weekdays but decreased rates at the weekends and they claimed this was due to demand from physicians to leisure at the weekend.<sup>11</sup> Dickert-Conlin and associates determined that the parents preferred cesarean delivery in the last week of December since there is a diffe-

rence in tax rates between the last week of December and the first week of January.<sup>12</sup> These trials indirectly show the effect of physician attitudes on cesarean decisions.

It is obvious that nonmedical cesarean is an ongoing trend. But physicians are dominant in the choice of nonmedical cesarean and they have authority on the patient.<sup>3</sup> The aim of the physician should be to direct the patient to make a correct decision in a confident patient- physician communication, and cesarean deliveries for non- obstetrical causes should be avoided.

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