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Women's preferences regarding the mode of delivery and review of the current status of Cesarean as a delivery method in Turkey**Kadınların doğum şekline ilişkin tercihleri ve Türkiye'de sezaryen doğum yönteminin mevcut durumunun gözden geçirilmesi**TUGBA ALTUN ENSARİ^{1,2}DUYGU KAVAK²BÜLENT YİRCİ¹BURAK ELMAS²SERTAÇ ESİN¹SERDAR YALVAC¹ÖZLEM MORALOĞLU TEKİN² Orcid ID:0000-0002-7819-5325 Orcid ID:0000-0002-9977-6567 Orcid ID:0000-0002-1405-3774 Orcid ID:0000-0001-7977-4364 Orcid ID:0000-0001-9577-4946 Orcid ID:0000-0001-9941-4999 Orcid ID:0000-0001-8167-3837¹ Maternal-Fetal Medicine Clinic, Etlik Zubeyde Hanim Women's Health Training and Research Hospital Department of Obstetrics and Gynecology, Ankara, Turkey² Ankara Şehir Hospital, Department of Obstetrics and Gynecology, Ankara, Turkey**ÖZ**

Aim: Increasing cesarean section (C/S) rates have become a growing public health issue. Turkey ranked among the top countries in the world for the highest cesarean rates. Why women desire CS instead of vaginal birth may be the key to avoiding unnecessary C/Ss. In this study, we performed a questionnaire to evaluate the possible reasons for maternal CS requests in one of the largest maternity care hospitals in Turkey.

Materials and Methods: A questionnaire was applied among pregnant women, focused on the preference of the mode of delivery and the reasons for the preferences.

Results: Of the 1200 women who answered the questionnaire about the mode of delivery, 45.7% were nulliparous and of these, 85% preferred vaginal delivery. Of the women who had vaginal birth previously, 93.4% preferred vaginal delivery. Of the women who had a previous c-section, 11.8% preferred to try a vaginal delivery. The main factor that affected the preference for C/S was the previous history of C/S. When the patients with a previous history of C/S were excluded; a history of previous spontaneous abortion and longer marital relationships were found to be the factors associated with C/S preference. of women who preferred vaginal delivery 55.8% stated that vaginal delivery was preferred because the most natural way of childbirth was a vaginal birth.

Conclusion: Elective cesarean section in the absence of clinical indications is one of the most discussed topics of obstetric practice. The reason for the first C/S should be very well-reviewed to provide a logical approach to the current rates of C/S. Childbirth fear is also an important point to be carefully evaluated for especially nulliparous women.

Keywords: Birth, Vaginal, Cesarean, Preference

ABSTRACT

Amaç: Artan sezaryen (C/S) oranları giderek büyüyen bir halk sağlığı sorunu haline gelmiştir. Türkiye, son yıllarda dünyanın en yüksek sezaryen oranları olan ülkeleri arasında yer almaktadır. Kadınların neden vajinal doğum yerine sezaryen istemekte olduklarının bilinmesi, gereksiz sezaryenlerden kaçınmanın anahtarı olabilir. Bu çalışmada, Türkiye'nin en büyük doğum bakım hastanelerinden birinde anne adaylarının sezaryen taleplerinin olası nedenlerini değerlendirmeyi amaçladık.

Gereç ve Yöntemler: Gebelere doğum şekli tercihi ve tercih nedenlerine odaklanan bir anket uygulandı. Anket içerisinde doğum şekli tercihleri ve bu tercihlerini etkileyen nedenler sorgulandı.

Bulgular: Doğum şekli ile ilgili anketi yanıtlayan 1200 kadının %45.7'si nullipardı ve bunların %85'i vajinal doğumu tercih etti. Daha önce vajinal doğum yapan kadınların %93.4'ü vajinal doğumu tercih ettiğini bildirdi. Daha önce sezaryen olan kadınların %11.8'i vajinal doğum yapmayı tercih etti. C/S tercihinin etkileyen ana faktör, daha önceki C/S öyküsü idi. Daha önce C/S öyküsü olan hastalar dışlandığında; önceki spontan abort öyküsü ve daha uzun evlilik süresinin C/S tercihiyle ilişkili faktörler olduğu bulundu. Vajinal doğumu tercih eden kadınların %55,8'i en doğal doğum şeklinin vajinal doğum olması nedeniyle bu tercihte bulunduğunu belirtmiştir.

Sonuç: Medikal bir endikasyon olmaksızın elektif sezaryen, obstetrik pratiğin en çok tartışılan konularından biridir. Mevcut C/S oranlarına mantıklı bir yaklaşım sağlamak için ilk C/S'nin nedeni çok iyi gözden geçirilmelidir. Doğum korkusu da özellikle nullipar kadınlar için dikkatle değerlendirilmesi gereken önemli bir noktadır.

Anahtar kelimeler: Doğum, Vajinal, Sezaryen, Tercih

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INTRODUCTION

Increasing cesarean section (C/S) rates have become a growing public health issue. Turkey ranked among the top countries in the world for the highest cesarean rates and according to recent official local data, hit a record high of 57.3%. (1) After this data, as a response to the substantial increase in C/S rates, the debate on the mode of delivery has become one of the most popular topics in society and some legal restrictions came into question to decrease C/S rates to an acceptable percent rate consistent with the World Health Organization (WHO) statements. (2) Although, WHO proposed the target of overall C/S rates as 10-15%, more than 50% of countries all over the world have cesarean rates above the proposed limit (2,3).

The risks of maternal and neonatal morbidity and mortality are all increased by C/Ss (3). From this point of view, a medical indication should be present to prevent higher risks. Postponing pregnancies to older ages, breech pregnancies, and increased rates of multiple pregnancies are examples of modern medical indications for C/S; however, the physician and women's preference for C/S also greatly contribute to higher C/S rates.

There may be several reasons that impel obstetricians to perform more cesarean sections. Tendency to avoid potential neonatal risks of vaginal delivery, medico-legal issues inducing the defensive practice, and some social reasons coming out from private practice because of the difficulties of managing a spontaneous vaginal delivery may be listed as common reasons coming out from the clinician side (3). On the other hand, 'patient choice', 'maternal request', 'cesarean section on demand' all refer to elective C/S demanded by the patient and is performed with no medical indications related to maternal or fetal health. Why women desire CS instead of vaginal birth may be the key to avoiding unnecessary C/Ss. In this study, we performed a questionnaire to evaluate the possible reasons for maternal CS requests in one of the largest maternity care hospitals in Turkey.

MATERIALS AND METHODS

After Institutional Review Board approval, the study was conducted at the Maternal & Fetal Medicine outpatient clinic of Etilik Zubeyde Hanim Women's Health Training and Research Hospital. Pregnant women with a gestational age of more than 24 weeks who were admitted for the antenatal visit were invited to participate in the study and answer the questions in the questionnaire. After their informed consent, two trained researchers

who were not directly involved in administering medical care to the women interviewed the patients. None of the participants was asked about their name, address, or any other questions about their identity. The questionnaire was focused on the preference of the mode of delivery and the reasons for the preferences and had two main parts: the first part was about the socio-demographic properties of the patients and the second part was about the delivery preferences. The sociodemographic form consisted of 10 questions about the woman's age, marital status, duration of her marriage, educational level, occupation, reproductive history containing the number of previous pregnancies, parity, abortions, number of living children, and economical status of the women (low, moderate, high). Delivery preferences related to multiple-choice questions consisted of seven options for both spontaneous vaginal delivery and the cesarean section regarding the reason for choosing the certain delivery method were listed. At the end of the questionnaire, there was one more question about how they made their decision to understand people or factors influencing the decision process. Each participant answered the questionnaire individually without taking help from anyone and without prejudice. Maximum effort was held for privacy during the time taken for answering the questions.

Statistical analysis

All data collected were analyzed with Statistical Package for Social Sciences (SPSS, version 17; Chicago, IL). In the evaluation of the data; Number and percentage analysis were used in descriptive data, Pearson Chi-square and Fisher's exact Chi-Square were used to determine the influencing factors, One-Way Analysis of Variance (ANOVA), and Tukey Test were used to determine birth type decisions, and factors affecting their type of decision-making styles.

RESULTS

Of 1680 women who were eligible for the study, a total of 1200 pregnant women consecutively agreed to participate. The mean age of the respondents was 26.9 years, and the mean gestational week was 31 weeks and 3 days. Respondents were mostly low educated; only 11.4% had a university graduate degree. One-third of the women indicated that they were employed. Forty-four percent of the women reported low (under 6.000 \$ per year) and 48% reported moderate (6000-12000 \$ per year)

household income (Table 1).

Table 1: Patient Characteristics

| | Percentage (%) | N |
|------------------------------------|----------------|-----|
| Obstetric History | | |
| Nulliparous | 45.7 | 549 |
| Multiparous | 54.3 | 651 |
| Mode of Previous Delivery | | |
| Vaginal Delivery | 37.9 | 455 |
| Cesarean | 16.4 | 197 |
| Mode of Delivery Preference | | |
| Vaginal | 75.3 | 903 |
| Cesarean | 24.7 | 297 |
| Educational Level | | |
| Primary School | 28.1 | 338 |
| Secondary School-High School | 60.4 | 724 |
| University and Higher | 11.4 | 137 |
| Employment Status | | |
| Employed | 13.3 | 160 |
| Unemployed | 86.6 | 160 |
| Income | | |
| Low | 44.8 | 538 |
| Middle | 48.1 | 577 |
| High | 7.1 | 85 |

The majority (88%) of the respondents had at least one antenatal care visit, and 21% had five or more visits.

Of the 1200 women who answered the questionnaire about the mode of delivery, 45.7% were nulliparous and of these, 85% preferred vaginal delivery. Of the women who had vaginal birth previously, 93.4% preferred vaginal delivery again. Of the women who had a previous c-section, 11.8% preferred to try a vaginal delivery. (Table 2) The main factor that affected the preference for C/S was the previous history of C/S.

Table 2. Reasons for preference of mode of the delivery

| Reasons for Preference of Vaginal Delivery | Frequency (n) | Percentage (%) |
|--|---------------|----------------|
| It's the natural way of birth | 670 | 55.8 |
| Fast recovery after vaginal birth | 179 | 14.9 |
| C/S is an invasive operation | 42 | 3.5 |
| Doesn't want a C/S scar | 7 | 0.6 |
| Bad Experiences of cother pregnant women about C/S | 5 | 0.4 |
| Fear of lactation problems after C/S | 4 | 0.3 |
| | | |
| Reasons for Preference of C/S Delivery | | |
| Previous C/S history | 111 | 9.2 |
| Fear of failing vaginal delivery | 65 | 5.4 |
| Fear of pain | 50 | 4.2 |
| Fear of fetal hypoxia | 27 | 2.2 |
| Fear of vaginal examination | 27 | 2.2 |
| Avoiding urinary incontinence, vaginal prolapse | 11 | 0.9 |
| Probability of sexual problems | 2 | 0.2 |

When questioned about reasons for their preferences; of women who preferred vaginal delivery 55.8% stated that vaginal delivery was preferred because the most natural way of childbirth was a vaginal birth. Other answers were fast recovery after vaginal birth (14.9%) and 'the nature of the cesarean as an invasive operative procedure' (3.5%). The factor that most influenced the decision toward C/S was the previous history of having a C/S (37.9%). The factors other than previous operative history were listed as; fear of failing to deliver (20.8%), the fear of pain (17.1%), fear of hypoxia of the fetus (9.2%), and the fear of vaginal examination (9.2%) (Table 3).

Table 3. Factors associated with preference of mode of the delivery

| | Prefers Vaginal Delivery | Prefers C/S | <i>p</i> |
|---------------------------|--------------------------|-------------|----------|
| Previous Vaginal Delivery | 455 | 32 | *0.061 |
| Previous C/S | 24 | 180 | |
| History of abortion | 159 | 79 | **0.001 |
| No History of Abortion | 748 | 214 | |
| Employed | 125 | 35 | 0.242 |
| Unemployed | 782 | 258 | |
| Economical Status | | | |
| Low | 409 | 129 | 0.692 |
| Middle | 437 | 140 | |
| High | 61 | 24 | |
| Education | | | |
| Primary | 241 | 97 | 0.136 |
| Secondary-High School | 567 | 158 | |
| University | 99 | 38 | |

When questioned about how they reached the final decision about the mode of delivery, 45% of the women reported that it was their own decision, 24.1% reported they reached the final decision after discussing it with their husband, 15.7% of the women reported that they were directed by their gynecologists.

DISCUSSION

In our study, we observed that pregnant women strongly believe that vaginal delivery is the most natural mode of delivery, and women with a history of previous C/S would choose another C/S for the subsequent pregnancy. These results were compatible with previous research regarding the high rate of vaginal delivery will, and the high rate of cesarean requests because of previous c-section history.

Still, some other factors influence the final decision of both the patient and the caregiver sides.

As the findings of our study revealed that at least one spontaneous abortus in the obstetrical background of the patient makes

the C/S choice predominant in their decision.

Several studies confirm that women's previous birth experiences are important when choosing the mode of delivery (4-7).

Older age, longer duration of the marriage, and being tended to have a greater number of children were associated with a C/S preference in our study which was consistent with other studies in terms of maternal age. In a study by Wiklund et al., factors associated with the c-section preference were maternal age over 35, previous experience of elective and emergency c-section, a previous negative birth experience, complicated pregnancy, and childbirth fear (8). Childbirth fear was almost a common factor associated with C/S preference. In an Australian study authors found that the main reasons for preferring cesarean delivery were childbirth fear, issues of control and safety, body perceptions, and birth process (9).

In our study, 15% of nulliparous women declared that they prefer a C/S to vaginal delivery. This was compatible with the results of a systematic review by Mazzone et al. (7). The remarkable reasons for this preference were childbirth fear and fear of pain. Another study reported that primiparous women were significantly more fearful than multiparous women and C/S preference was mostly related to childbirth fear (10). During the study interval, of the 9112 births, that took place in our hospital; the primary C/S rate was 25.5%. This rate shows that some of the women who preferred vaginal delivery somehow changed their minds or were directed to a C/S for a particular reason. In a study conducted among the Swedish population half of the women who preferred c-section in early pregnancy also had an operative birth. (11) In the study conducted by Karlström in 2011 a previous c-section, childbirth-related fear, and lack of interest in a natural birth were the most important factors related to the preference for C/S (12). Fear of childbirth (FOC) is considered a multifactorial, multi-faceted concept regarding an important factor of C/S on maternal request. Several studies were conducted to investigate the social and psychological roots of FOC as it has been realized that it affects many more women than thought (13-14). Moreover, it is well-known that women with FOC have more C/S operations and they even suffer physiological results of fear, pain perception, and prolonged labor (13-17). A current Cochrane Review focused on the concept of FOC, and interventions for lowering C/S rates related mainly to FOC

(18). According to the meta-analysis non-pharmacological interventions including socio-psychological evaluation, and maternal education on childbirth and pregnancy would help to reduce maternal demand for C/S without medical indications (17-19). A recent study from Turkey also investigated the effect of psychoeducation programs on the level of FOC and found encouraging results when compared to antenatal education groups (20).

Elective cesarean section in the absence of clinical indications is one of the most discussed topics of obstetric practice. There are several kinds of thoughts regarding patient autonomy, complications of unnecessary surgery, and economical aspects of the trend opposite to the agreement of the surgery or not. Cesarean section as an alternative mode of delivery is an invasive and risk-bearing practice involving abdominal surgery. In some countries according to their health care policy, an elective C/S without any medical indications is traditionally thought inappropriate, but nobody can deny that it has been applied for decades. As nearly all of the women agree with the fact that vaginal delivery is the most natural mode of delivery, some of them have reasons preponderant to nature while making their decisions. International estimates on Maternal Requests for cesarean sections range from 4% to 18% of all cesarean sections (21). Members of a Canadian cluster which consisted of 79% obstetricians, strongly believed that women had the right to request a C/S (22). Among Danish obstetricians, 37.6% agreed with the women's right to choose an elective c-section (23). Habiba et al. Reported that 15-79% of European obstetricians would agree to perform a c-section according to the patient's wish (24).

There is a lack of studies in Turkey investigating obstetricians' attitudes about the mode of delivery and elective C/S. In a study by Derya et al; it was observed that 100% of the obstetricians and 48.7% of the midwives had experienced cesarean birth in their deliveries. In the same study, 58.3% of the obstetricians and 39.3% of the midwives stated that they would choose elective cesarean birth if they were currently pregnant (25). It is thought-provoking that the obstetricians and midwives who are responsible for the woman's birth chose elective cesarean birth for themselves or their wives. Although these results are striking, we need more studies to get a reliable opinion about the perception of caregivers of the obstetric practice. Otherwise, the whole policy and trends toward the delivery mode in Turkey need

to be reviewed and revised.

According to the birth records in Turkey, it is not possible to reach the truth about elective C/S rates because women's choice is still not a reason for c-sections according to the Ministry of Health regulations. As sometimes it might be possible to offer a C/S when a "psycho-social" indication was put by a psychologist and reported that the labor process may have potential risks for the patient's psychological integrity.

Research on the socio-economical aspects of women's preferences failed to conclude. In Turkey, according to recent legal regulations; delivery via C/S is restricted only to medical indications directly concerning maternal and fetal health. In this regulation, the patient request seems to be excluded from the cesarean indications and the practice of elective C/S becomes highly controversial. Thus, elective C/S appears to be unavailable and restricted to any patient or clinician, especially at the centers affiliated with the Ministry of Health.

'My body, my choice is the most remarkable objection of the Women's Rights Organizations against regulations of treatment choices on patient demand all over the world. It is not surprising that elective C/S is one of the popular points of this discussion.

CONCLUSION

The reason for the first C/S should be very well-reviewed to provide a logical approach to the current rates of C/S. Childbirth fear is also an important point to be carefully evaluated for especially nulliparous women.

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