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**Antenatal care status of refugees and evaluation of intrapartum and postpartum period:  
A tertiary center's experience****Siğınmacıların antenatal bakım durumları, doğum ve doğum sonrası sürecinin değerlendirilmesi:  
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**Amaç:** Siğınmacılar tüm dünyada büyük bir sağlık sorunudur. Gebelik esnasında antenatal bakımın olmaması, siğınmacılarda kötü maternal ve neonatal sonuçlara sebep olabilir. Bu çalışmada Türkiye'nin kuzeybatısında bulunan bir üçüncü basamak merkezdeki siğınmacı gebelerin antenatal bakım durumları, doğum ve doğum sonrası süreçlerinin değerlendirilmesi amaçlanmıştır.

**Gereç ve Yöntemler:** Türkiye'de üçüncü basamak bir merkezde doğum yapmış 311 siğınmacının demografik, antenatal, peri ve postpartum özellikleri değerlendirilmiştir.

**Bulgular:** Siğınmacı gebelerin %21,5'i adolesan yaş grubundaydı. Gebelerin %14,1'i akraba evliliği yapmıştı. Siğınmacı gebelerin %99'u düzenli antenatal takip yaptırmamıştır. Doğum şekli olarak sezaryen, %22,5 oranında saptanmıştır.

**Sonuç:** Bu çalışma siğınmacı kadınların düzenli antenatal bakım almadıklarını ortaya koymuştur. Türkiye'de siğınmacılar için antenatal bakım ücretsiz ve kolay ulaşılabilir olmasına rağmen, siğınmacılar bu hizmetten faydalanmamaktadır. Bu sebeple siğınmacı kadınların antenatal bakımın önemi hakkında bilgilendirilmeleri ve eğitilmeleri gerekmektedir.

**Anahtar Kelimeler:** siğınmacı, antenatal bakım, obstetrik sonuçlar

**ABSTRACT**

**Aim:** Refugees around the world is a major health problem. Lack of antenatal care among pregnant refugees may result in poor maternal and neonatal outcomes. In this study it was aimed to show current antenatal care status of refugees and evaluate intrapartum and postpartum features in a tertiary center in south west of Turkey.

**Materials and Methods:** Demographic, antenatal, peripartum and postpartum clinical features of 311 refugee women who gave birth in a tertiary hospital in Turkey were evaluated.

**Results:** Adolescent pregnancy was seen in 21.5% of refugees. Consanguineous marriage was seen in %14.1 of women. Ninety nine percent of refugee pregnant didn't have regular antenatal care. Cesarean section rate was 22.5% among refugee labors.

**Conclusion:** This study reveals that refugee women lack enough antenatal care. Although antenatal care is free and easily accessible in Turkey, refugee women don't attend antenatal care programs. For this reason, refugee women should be educated and informed about the importance of antenatal care.

**Keywords:** refugee, antenatal care, obstetrical outcome

**INTRODUCTION**

The crisis in Syria has forced millions of people to migrate to Turkey, Iraq, Lebanon, Jordan and Egypt. More than half of these migrants are women and children, who face social problems, and are forced to live in unhealthy conditions, both in their home country and in the countries to which they have fled. Number of the refugees under temporary protection in Turkey is increasing every year (1, 2). According to the recent data, this number has reached to 3.7 million (3). Women constitute approximately 1.7 million of

this number and every one of three women is between 15-49 years of age (3). After start of migration in 2011, more than 276 thousand Syrian babies were born in Turkey till 2017 (4) Ninety six percent of those babies were born in clinics or hospital settings(2). Only small part of the (nearly 150.000) refugees live in camps, remaining three and half million live in cities. Most refugee hosting city in Turkey is Istanbul (3). Communication problems, lack of adequate housing, problems in accessing food and money are major obstacles in adaptation of refugees to normal social life.

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Previous studies reveal that refugees are under risk of poor pregnancy outcomes among different ethnicities in the world (5). Also it was shown that migrant women who have refugee background have greater risk of adverse pregnancy women compared to migrant women without refugee background(6). The adverse pregnancy outcomes among refugee women increase the importance of antenatal care for this high risk group.

Refugees in Turkey have free access to emergency health care and 2nd and 3rd degree health care services. All preventive and treatment health care can be easily reached without charges by refugees. Iron and vitamin supplementation during pregnancy and antenatal care are free for pregnant refugees. Antenatal care provides qualified health care during pregnancy which contributes to a safe birth and favorable outcomes for pregnancy. The risk group can be saved from the obstetric complications by preventive measures. The aim of this study is to show antenatal care status of Syrian refugees in a tertiary health care center and evaluate intra and postpartum clinical features.

## MATERIALS AND METHODS

This cross-sectional study was conducted in a university hospital by evaluation of medical records of patients retrospectively. Data achieved from labor and hospital records of patients between July 2016 and July 2018. In records, patients' age, gravida and parity status, way of labor (vaginal vs. cesarean), cesarean indication, attendance to antenatal care (double test, triple test, Gestational diabetes screening), gestational week during labor, APGAR scores for newborn, need for neonatal intensive care unit admission, postpartum hemoglobin levels of mother, need for transfusion of mother, hospitalization periods are evaluated.

Three hundred and forty two Syrian pregnant were included in study group. Lack of too much data of 31 women caused exclusion of those women from study group. Among 311 patients 30 of them lack data about newborns ICU needs, one woman age was not found instead mean of age was used for this patient. Four women's gravida and parity status were missing (mentioned under graphics). APGAR score of 17 babies was missing. APGAR scores were classified as; 0-3, 4-6, 7-10. Finished 37 weeks of gestation was accepted as term pregnancy.

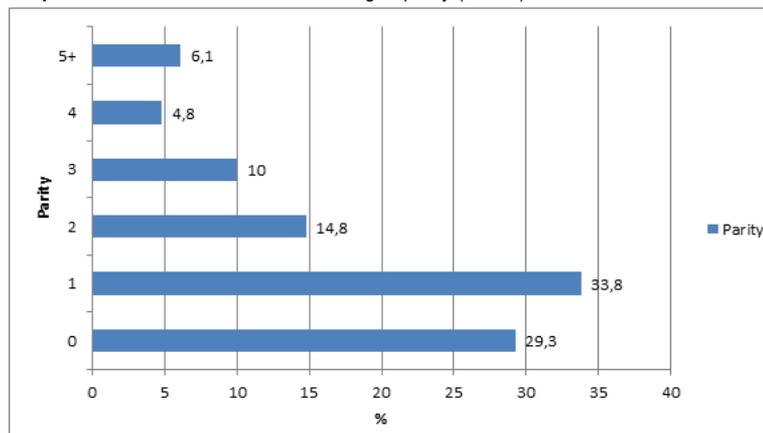
## STATISTICS

For presentation of descriptive findings, for continuous variables mean and standart deviation and for categorical variables frequencies and percentages were used. Mann Whitney U test was used to compare parameters between the groups. The Chi-square test or Fisher's Exact test(when chi-square test assumptions do not hold due to low expected cell counts), where appropriate, was used to compare proportions in different groups or statistical significance p value of < 0,05 is accepted as significant.

## RESULTS

Mean age of women was 24.5±6.1 (14-43). Adolescents compose %21.5 of pregnant. Consequent marriage was seen in %14.1 women. Twenty eight percent of women had their first labor. Women who had more than 5 pregnancies compose 12.5% of whole patients. Patients' parity status is shown in graph 1.

**Graph 1.** Distribution of women according to parity (n=317)



According to records 99% of women had no fully attended regular antenatal care. None of the women had GDM screening. Only 3 patients (1%) had prenatal screening tests (double test and/or triple test). Vitamin and iron supplementation of women were not found in records.

Mean gestational age was 36.6±2.1 (20-42) during labor and 52% of labor was preterm but only 10 % of preterm labors were less than 34 weeks of gestation. Six patients gave birth outside the hospital. Four patients had twin labors. Mean hospitalization time was 1.9±3 day with a range of 0-49 days. Postpartum first day mean hemoglobin level was 10.6±1.6 (5-15) g/dl. Ten percent of women required at least one unit of erythrocyte suspension. Among labors 22.5% had cesarean section. Mostly seen type of cesarean indication was previous history of cesarean section which was followed by fetal distress and malpresentation. Table 1 shows cesarean indications.

**Table 1.** Distribution of cesarean indications (n: 70)

C/S Indications	n
Previous C/S	42
Fetal distress	8
Malpresentation	5
Cephalopelvic disproportion	2
Preeclampsia	2
Eclampsia	2
Placental Abrasion	2
Multiple Pregnancy	2
Elective	2
Placenta Previa Totalis	1
Congenital abnormality	1
Anhidramniosis	1
Total	70

Two percent of newborns' 5th minute APGAR score were less than 7. Table 2 shows 1st and 5th minute APGAR scores of newborns.

**Table 2.** APGAR scores of newborns

Score	APGAR 1 n (%)	APGAR 5 n (%)
0-3	7(2,2)	3(1)
4-6	20(6,4)	4(1,2)
7-10	267(85,9)	287(92,3)
unknown *	17(5,5)	17(5,5)
Total	311	311

\*:no data in records

Eight percent of newborns required admission to ICU. Table 3 shows distribution of patients according to way of labor, need for transfusion, need for newborn admission to ICU. Frequency of need for ICU for newborns were 20.7% for cesarean section and 5.4% for vaginal delivery ( $p=0.001$ ). Mean hospitalization for women who underwent cesarean section was 3.1 days and for vaginal delivery cases 1.6 days ( $p<0.0001$ ). Twelve percent of women who had preterm labor required transfusion and 7.2 % of women who gave term birth had transfusion requirement ( $p:0.15$ ). Ten percent of preterm newborns and 6.4 % term labors required new born ICU admission ( $p:0.29$ ). Admission to ICU according to way of labor and term status of newborns was shown in table 4.

**Table 3.** Distribution of way of labor, transfusion requirement and need for newborn

		n	%
<b>Way of labor</b>	Cesarean	70	22.5
	Vaginal Labor	241	77.5
<b>Transfusion requirement</b>	present	281	90.4
	Not present	30	9.6
<b>Need for newborn ICU</b>	Not present	257	82.6
	present	24	7.7
	unknown	30	9.6
	<b>Total</b>	<b>311</b>	<b>100</b>

**Table 4.** ICU need of newborns according to way of labor and preterm situation (n=281)

Not Present		ICU need		p
		Present		
<b>Way of labor</b>	C/S	46 (78,3)	12 (20,7)	<b>0.01*</b>
	Vagina	211 (94,6)	12 (5,4)	
<b>Term/preterm</b>	Preterm	126(89,4)	15(10,6)	
	Term	131(93,6)	9(6,4)	
				0.29**

† Fisher's Exact Test, \*\*Chi-Square Test

One women had labor of an ex fetus. This ex fetus was 31 weeks of gestation. Mother was 28 years old with a parity of 5. This patient didn't have antenatal care. Hemoglobin level was 7gr/dl and mother was discharged 2 days after labor. One newborn with APGAR scores of 3-4 was death after labor. This patient also didn't have antenatal care with a hemoglobin level of 12gr/dl. Three women left hospital before routine discharge time.

## DISCUSSION

Wars, economic problems and unrest in countries force people to migrate to other countries. Refugees prefer to live in countries where they feel comfortable and secure. Turkey is one of the mostly preferred countries by refugees after start of war in Syria. No matter how safe the country they migrate to, the refugees have to deal with social, physical and psychological problems. Women and children are the main group that is influenced from those problems. Refugees in Turkey have free access to health care services (7). Like all pregnant women in Turkey, refugee pregnant can attend antenatal care facilities without paying charges. Also vitamin and iron supplementation is free in Turkey for pregnant. In the present study it was aimed to show the attendance of refugees to antenatal care services in Turkey.

It was shown that, adolescent pregnancy, especially the early-middle adoles-

cent pregnancies, is associated with increased risks of adverse pregnancy outcomes (7). In a study conducted in Turkey, it was revealed that adolescents have less attendance to routine antenatal care programs (8). In the present study mean age of the pregnant refugees was found to be 24. Erenel et al. showed mean age of Syrian pregnant refugees as 25.2, and in a different study it was found to be 23 years. In the present study 21.5% of pregnant were adolescents, Erenel et al showed 14.3 % adolescents and Ozel et al showed 31% adolescents among refugee pregnant in different regions of Turkey (9, 10). Several factors such as level of education and social and religious factors may affect the number of adolescent pregnancies. High number of adolescent pregnancies among refugees in Turkey may be the result of the unprotected status of women during war.

Every year 500.000- 600.000 women died due to pregnancy and labor complications (11). Results of Turkish Republic Ministry of Health National Maternal mortality study show that among maternal deaths between October 2004 and December 2006 %25.5 of women did not take any antenatal care and %23.6 of women had low quality antenatal care (12). In the present study 99% of refugees did not have antenatal care. Although the health system of Turkey allows them free medical service, nearly all refugee pregnant women did not seek for medical assistance during their pregnancy period. Only one patient had a regular antenatal care and none of the patients had OGTT and 3 women had double and/or triple tests. This result is not consistent with the findings of another study in which antenatal follow up of the refugees were 41.3% in the same region of Turkey(13). Twenty three percent attendance to antenatal care was also shown in a different region of Turkey (10). Also a study in Lebanon showed that 17.1% of refugees in that country did not take antenatal care(14).

More than half of the patients in this study had preterm labor. The findings of this study were discriminately higher from other studies conducted in Turkey (9, 10). This conflict may arise from the hospital characteristics where the studies were conducted. Our center has several hospitals around where uncomplicated labors are managed. Preterm patients could be referred to our center because we serve as a perinatal center. When the number of the newborns that were referred to ICU is evaluated, only ten percent of preterm born newborns were transferred to ICU. Low number of admission of preterm newborns to ICU may arise from the fact that most of the labors among this group are late preterm.

It was shown that planned homebirths with a registered midwife was shown to be safe compared with hospital births Six of refugees gave birth outside the hospital in the present study but those births were not planned and were not under control of a health professional. The idea of the studies showing the safety of planned home birth is away from the conditions of the refugees who gave birth outside the hospitals (15, 16). Birth at hospital gives opportunity for quick interventions in case of urgent conditions that requires medical assistance (17). Although patients who gave birth at home in this study had no complications, labor outside the hospital without supervision of a health professional may have unwanted results for both mother and fetus.

Hemoglobin levels of the pregnant refugees were found to be low compared with non-refugees similar with other studies (9, 10). We also showed that one tenth of the refugees required transfusions. As previously mentioned, iron supplementation is free in Turkey but low hemoglobin levels and high rate of transfusion requirement shows lack of iron supplementation and antenatal care among refugees.

Retrospective nature of the study limits the data availability from the records of the patients. Missing data of some patients is one of the major limitations of the study but this shows the problems in the system. An interpretation about

the postpartum neonatal complications could not be made due to lack of data about newborn follow up procedures. This study was conducted in a tertiary center. The results of this study cannot reflect the status of refugee pregnant in population.

## CONCLUSION

Despite the missing data of 10% of refugees in this study, this study reveals that adolescent pregnancies and consanguineous pregnancies were higher in refugees. Only one percent of refugees had antenatal follow up. All studies suggest that there is a low antenatal care among refugees in Turkey. This problem does not arise from health system in Turkey because antenatal care in Turkey is free. For this reason refugees should be informed and educated about the importance of the antenatal care during pregnancy.

Conflict of interest

Authors declare no conflict of interest.

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