Prevalence and cesarean rates of immigrant adolescent pregnancies

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ABSTRACT

Background: aim of this study was to compare Syrian migrant adolescent pregnancies and Turkish adolescent pregnancies, who gave birth in Osmaniye State Hospital.

Methods: 22,724 women who gave birth at the Osmaniye State Hospital obstetrics and gynecology department between January 2013 and January 2020 were screened retrospectively. 868 Turkish adolescent pregnant women and 522 Syrian migrant adolescent pregnant women were compared. Whether the differences between Turkish and Syrian adolescents were noteworthy (95% confidence interval) was determined using the independent samples t test and Pearson Chi-Square test with statistical software Minitab (version 16.0, USA).

Results: A total of 22,724 births, including 15,883 Turkish and 6841 Syrian immigrants, were analyzed. The number of Turkish adolescent pregnant women was 868 (5.5%), the number of Syrian adolescent pregnant women was 522 (7.6%), the rate of Syrian adolescent pregnancy was higher. The cesarean rate was observed 36.7% in Turkish adolescent pregnancies and 20.1% in Syrian adolescent pregnancies, cesarean rates were significantly higher in Turkish adolescent pregnant women (p<0.001). When the total of 1390 (6.1%) adolescent pregnancies were evaluated in Osmaniye, where there were intense migrants and Syrian camp, the cesarean rate was found to be 30.5%, and the birth rate of low birth weight below 2500 gm was 11.1%.

Conclusions: Maternal and fetal complications increase in adolescent pregnancies. War and migration are associated with poor obstetric outcomes in pregnancies. With Syrian immigration, an increase in adolescent pregnancy rate, cesarean rate, and low birth weight rate was observed in the region. For these reasons, studies should be done to prevent Syrian adolescent pregnancies. Social and education support, regular follow-up should be done to improve pregnancy outcomes. Adolescent pregnant women are more likely to have vaginal delivery. Therefore, normal vaginal delivery should be followed unless there is an emergency cesarean indication.

Keywords: Adolescent pregnancy, Cesarean section, Syrian pregnancy

INTRODUCTION

The adolescent period describes the transition period from childhood to adulthood with psychological and social changes. The World Health Organization (WHO) defines the adolescent period between the ages of 10-19.1 Adolescent pregnancy is considered a common social problem with serious effects on maternal and child health, especially in developing countries.2 It is estimated that 11% of births in the world are adolescent pregnancies and more than 90% of these pregnancies are in middle-low income countries.3 2013 Turkish Demographic and Health Survey (TDHS-2013) data showed that adolescents frequency is 17.2% of the Turkish population and adolescent pregnancy rate is 4.6%.4

Adolescent pregnancies are among high-risk pregnancies and associated with poor maternal and fetal outcomes.5 In adolescents, pregnancy-induced hypertension (PIH),...
anemia, postpartum hemorrhage, low weight gain during pregnancy, preterm delivery, low birth weight infant, and an increase in perinatal mortality are observed.\textsuperscript{6,7}

As in Turkey all over the world, adolescent pregnancy age is affected by low socio-cultural level and different ethnic backgrounds. Adolescent pregnancy rates in Spanish and black people in America are higher than other ethnic groups.\textsuperscript{8} Similarly, the adolescent pregnancy rate is increasing due to low socio-cultural levels in the eastern regions of Turkey and the Syrian border area of migration.

In many studies maternal and obstetric differences between adolescent pregnancies and women of reproductive age have been compared, on the contrary in our study we aimed to compare immigrant Syrian adolescents with Turkish adolescents for the first time. We wanted to draw attention to the impact of immigration on adolescent pregnancy rates.

**METHODS**

A total of 22,724 deliveries at Osmaniye State Hospital between January 2013 and January 2020, including 15,883 Turkish and 6841 Syrian immigrants, were determined using the hospital records. Pregnancy and birth data of 868 Turkish adolescents and 522 Syrian adolescents, under 19 years old and who gave birth over 20 weeks, were analyzed retrospectively.

Maternal age, type of birth, birth weight, sex of the baby and fetal outcomes (live births and stillbirths) were recorded according to the data. Birth weight <2500 gm infants were considered low birth weight infants. Whether the differences between Turkish and Syrian adolescents were noteworthy (95% confidence interval) was determined using the independent samples t test and Pearson Chi-Square test with statistical software Minitab (version 16.0, USA). P<0.05 was considered statistically significant.

**RESULTS**

The number of Turkish adolescent pregnant women was 868 (5.5%), the number of Syrian adolescent pregnant women was 522 (7.6%) and the rate of Syrian adolescent pregnancy was higher.

Demographic data and obstetric outcomes of Turkish and Syrian adolescent pregnant were presented in Table 1. The mean ages of both groups were similar, 17.1±1.1 and 17±1.1, respectively. There was no significant difference between neither birth weights nor low birth weight infant rates. Stillbirth rates were lower than live birth rates in both groups but higher in Syrian adolescents than Turkish adolescents. The sex of the infants in both groups was similar.

Vaginal delivery rates were higher than cesarean rates in both adolescent groups. The cesarean rate was observed 36.7% in Turkish adolescent pregnant and 20.1% in Syrian adolescent pregnant, and the cesarean rate was significantly higher in Turkish adolescent pregnant (p<0.001). When the total of 1390 (6.1%) adolescent pregnant were evaluated, the cesarean rate was found to be 30.5%, and the rate of low birth weight below 2500 gm was 11.1%.

**DISCUSSION**

Although adolescent pregnancy is an increasing problem all over the world, especially in developing countries, the rate of adolescent pregnancy is higher. Adolescent pregnancies are generally evaluated in the high-risk pregnancy category due to poor socioeconomic status, maternal biological immaturity, and insufficient antenatal care which is a result of low education level.\textsuperscript{9,10} Although the prevalence of adolescent pregnancy is 4.6% in Turkey, it is observed to be increasing in Osmaniye with a 7.6% rate of immigrant adolescent pregnant, 5.5% rate of Turkish adolescent pregnant due to the effect of both being an eastern region and immigration camping area.

It is predicted that low birth weight infant prevalence is higher in adolescent pregnant and consequently neonatal

| Characteristics                  | Turkish adolescents n=868 | Syrian adolescents n=522 | Total n=1390 | P value |
|---------------------------------|---------------------------|--------------------------|--------------|---------|
| **Maternal age, years, mean±SD/min.-max.** | 17.1±1.1/12-18            | 17±1.1/12-18             | 17.1±1.1/12-18 | 0.222   |
| **Birth weight, gm, mean±SD**   | 3096±511                  | 3054±527                 | 3080±518     | 0.137   |
| **Sex of newborn, n (%)**       | Female 416 (47.9)          | 217 (41.6)               | 633 (45.5)   | 0.928   |
|                                 | Male 452 (52.1)            | 305 (58.4)               | 757 (54.5)   |         |
| **Type of birth, n (%)**        | Vaginal 549 (63.3)         | 417 (79.9)               | 966 (69.5)   | <0.001  |
|                                 | Cesarean 319 (36.7)        | 105 (20.1)               | 424 (30.5)   |         |
| **Stillbirth, n (%)**           | 2 (0.2)                   | 5 (1.0)                  | 7 (0.5)      | 0.312   |
| **Low birthweight (LBW, ≤2500 gm), n (%)** | 96 (11.1)                | 58 (11.1)                | 154 (11.1)   | 0.977   |

Independent samples t test, Pearson Chi-Square test, SD.: Standard deviation, Min.: minimum, Max.: maximum
observed in Turkish adolescent pregnant compared to Syrian adolescent pregnant. Due to financial opportunity in Turkish adolescents, they tend to give birth by cesarean section, which seems to be painless and short delivery method. Inalöz et al found a significantly lower cesarean rate in adolescent women (37.8%) than non-adolescent women (65.8%). Bas et al reported no differences between the rate of cesarean delivery among adolescent pregnancies and the rate of general cesarean delivery.

As a result, adolescent pregnancies are slightly higher in Syrian pregnancies and poor obstetric outcomes are more common due to insufficient antenatal care and nutrition, negative effects of war, low socio-economic status, language, and cultural differences. The data was limited because of the large series of patients and inadequate enrollment due to the inability to communicate with Syrians.

CONCLUSION

Adolescent births carry maternal and neonatal risks. It is obvious that obstetric complications are high in adolescence, especially in early adolescents. Adolescent pregnancies should be followed closely as high-risk pregnancies considering their health and social consequences. Prevention of early marriages, which is an ongoing social tradition in our country, must be the first step in reducing adolescent pregnancies. Adolescent pregnancy frequency seems to be associated with low educational attainment. It will lead the specialized centers for adolescents to sex education, family planning counselling, antenatal care facilities to educate women in childbirth, and neonatal unit developed centers will play an important role to reduce these problems.

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