

Deliveries Among Teenage Females Under 18 Years Old in Al-Hindiya General Hospital

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Abstract

Teenage marriage and pregnancy considered a common public health issue in Iraq that associate with higher incidence of maternal and neonatal complications. We assess in this study the relation between teenage pregnancy and risk of operative delivery whether emergency or elective in comparison with older pregnant women. It is a retrospective cohort study of pregnant women admitted for delivery at the obstetric ward in Al-Hindiya general hospital during one year time. The study revealed two folds risk of primary operative delivery in teenage pregnant women than older pregnant women.

Keywords: Teenage pregnancy, Caesarean section.

Introduction

Teenage pregnancy is a public health problem worldwide. Approximately 11% of women giving birth are aged 15-19 years, and the vast majority of these births are in countries with low and middle income.^[1] There was a marked drop in the complication rate in early 1970s, mainly as a result of the out-reach programs that comprise prenatal counseling and care for teenage pregnant women.^[2] However, teenage pregnancy is still considered high-risk pregnancy with several maternal complications leading to neonatal and maternal morbidity and mortality.^[3] More than half a million deaths annually are due to complications of pregnancy and labor, as reported by WHO. Maternal death in teenage women is reported to be twice as the rate for adult pregnant women.^[4, 5] Incidence of certain complications including ante- and postpartum hemorrhage, cord prolapse, and low implanted placenta were found to be higher in teenage pregnant woman than adult women.^[3]

In Iraq, Teenage pregnancy is considered a common public health issue that is associated with higher incidence of maternal and neonatal complications.^[6] A nationally representative survey in Iraq done on 2006 by the ministry of health in collaboration with WHO showed that 9.4% of married women were 15 years old at first marriage, and that 72.7% of those women get pregnant before age 19.^[7]

As a response to the negative outcomes associated with teenage pregnancy, there have been a worldwide campaign about the hazards of teenage pregnancy, by providing education and raising awareness regarding this issue.^[8]

The study aims to assess the relation between the risks of operative delivery and teenage pregnancy.

Materials and Methods

Study design

A descriptive comparative study using inpatient data from Al-Hindiya general hospital during the period from January 2017 through December 2017 to compare between teenage pregnancy and adult pregnancy regarding obstetric outcome and mode of delivery. The data were collected using the inpatient records of the hospital on a monthly basis, and included the mode of delivery, age of pregnant mother, indications for surgery for operative deliveries and whether the surgery was elective or emergency, and the outcome of the delivery. The study included a total of 6295 participants who had their delivery at the obstetric ward in Al-Hindiya general hospital. The study population was divided into teenage pregnant (age < 18 years) and adult pregnant (age ≥ 18 years), and teenage pregnancy was considered the risk factor regarding comparison, whereas operative delivery was considered the outcome.

Statistical Analysis

SPSS Software version 23.0 has been used to perform statistical analysis for this study. Qualitative data were presented as numbers and percentages, while continuous data were presented as mean ± standard deviation. Comparison of study groups was carried out using chi-square test for categorical data, and Student's t-test for continuous data. P-value of < 0.05 was considered statistically significant .primary operative delivery than older women.

Result

This research included a total of 6295 pregnant women .4839 females of which had underwent vaginal delivery, whereas 1456 females had operative delivery. Temporal distribution of these deliveries is summarized in figure 1.

Figure 1: Distribution of mode of delivery by month

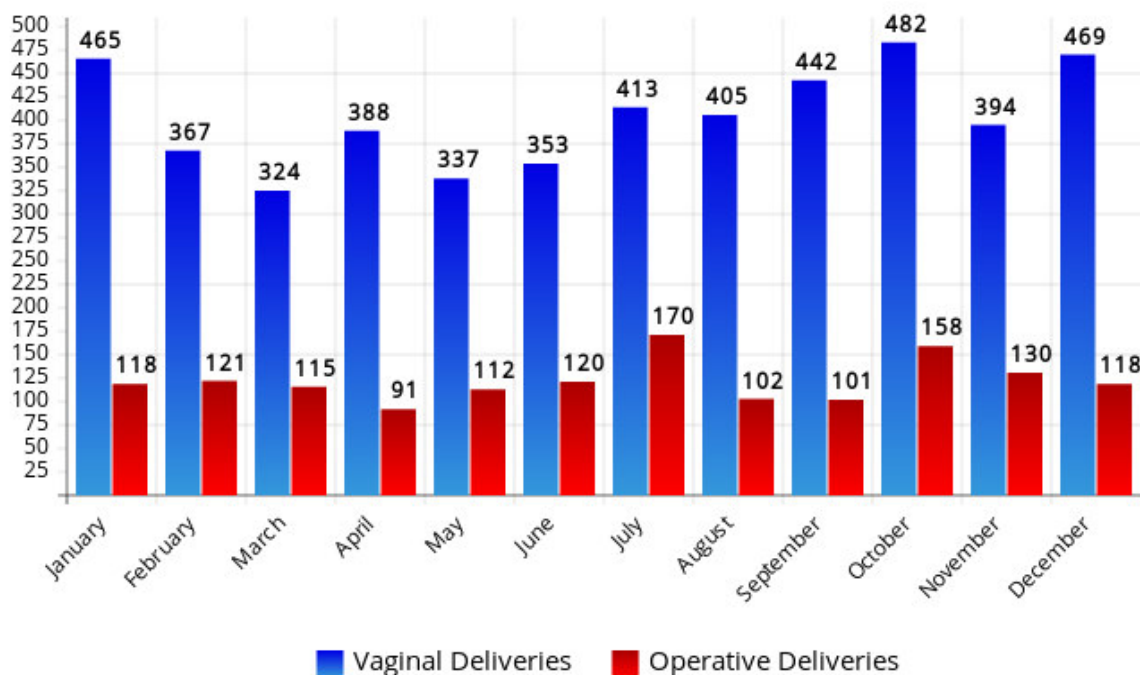
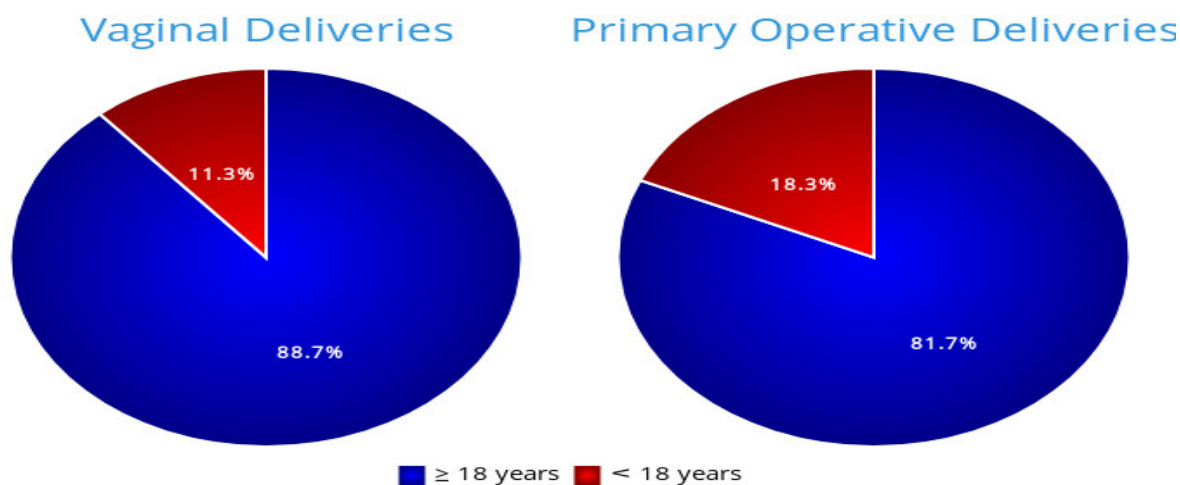


Figure 2: Mode of delivery by age group



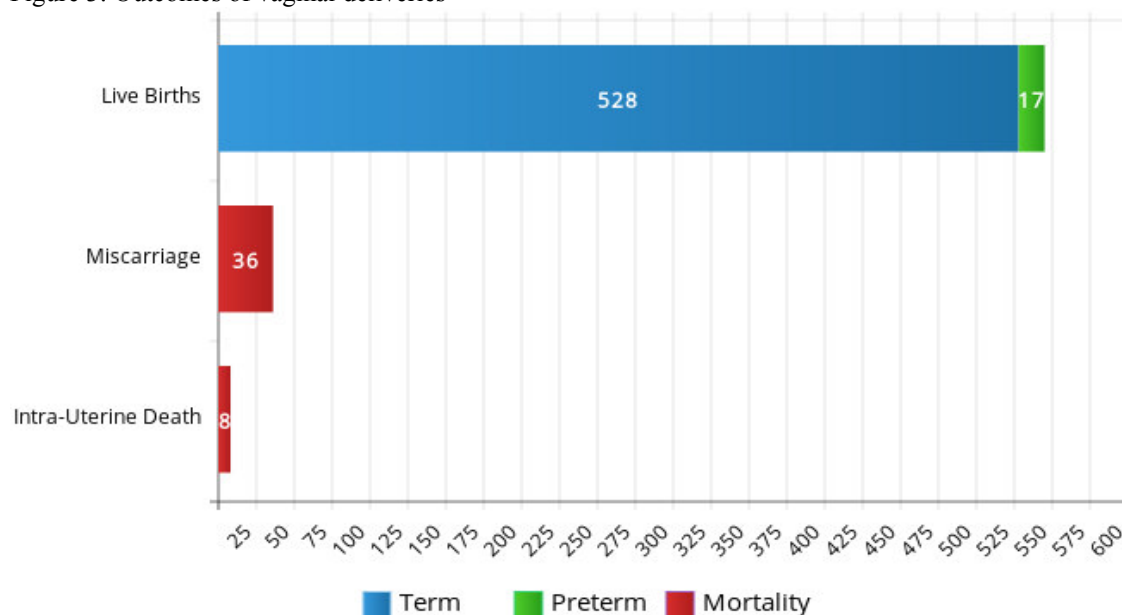
The comparison between age groups regarding mode of delivery is shown in table 1. The risk of teenage pregnant woman of having primary operative delivery was estimated using odds-ratio, which was calculated to be 1.76 (95% confidence interval: 1.37-2.27). This result indicates that teenage pregnant women are approximately 1.8 times more likely to have a primary operative delivery than older pregnant women.

Table 1: Comparison between age groups regarding mode of delivery

Age	Mode of Delivery	
	Vaginal	Operative (Primary)
< 18 years	545 (11.26%)	86 (18.30%)
≥ 18 years	4294 (88.74%)	384 (81.70%)
Total	4839 (100%)	470 (100%)

$\chi^2 = 20.25$, d.f=1 , P < 0.001

Figure 3: Outcomes of vaginal deliveries



A comparison between the types of vaginal deliveries: normal vaginal delivery, assisted vaginal delivery (episiotomy), and genital tract trauma (vaginal or cervical injury) is summarized in figure 4

Figure 4: types of vaginal delivery

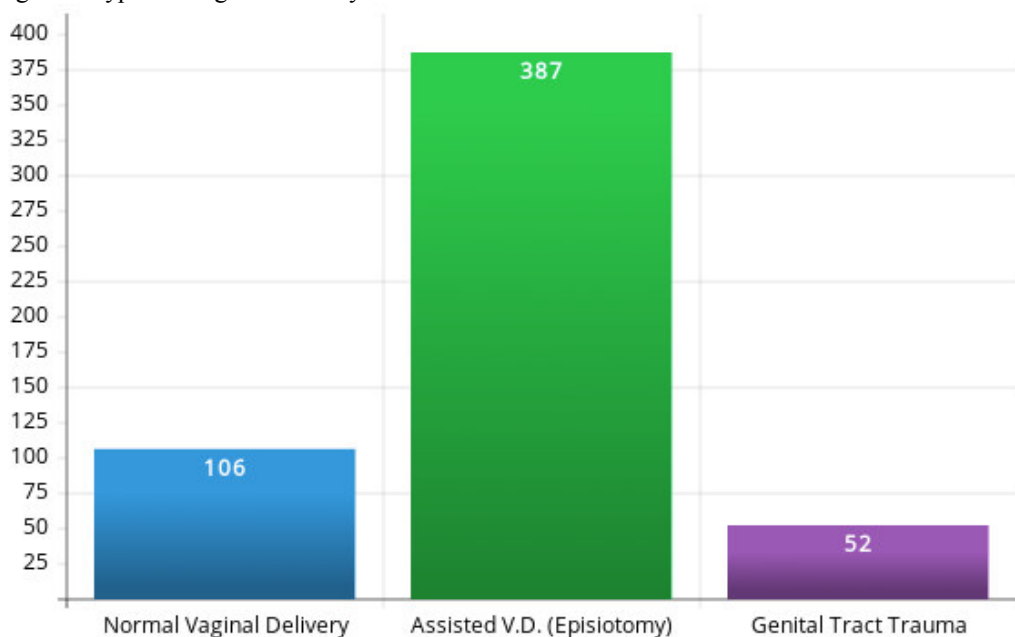


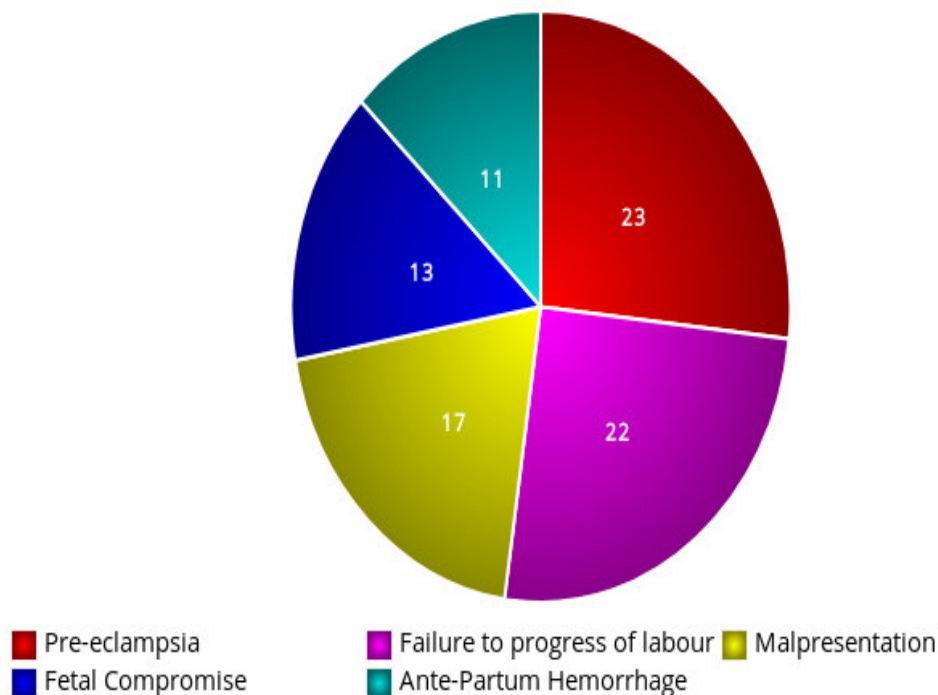
Table 2 compares between age groups regarding reason for operative delivery. The odds ratio was calculated to be 9.18 (95% C.I.= 4.83-17.43). This means that the odds of having emergency caesarean section (CS) for pregnant women under 18 who are having operative deliveries are 9.18 times the odds of having emergency CS for those who are at age 18 or older. Relative risk was calculated to be 2.05 (95% C.I. = 1.85-2.26), meaning that pregnant women under 18 who are having operative delivery are 2 times more likely to have emergency reason (rather than elective reason) than those who are 18 years or older.

Table 2: Comparison between age groups regarding reason for operative delivery

Age	Reason for Operative Delivery	
	Emergency	Elective
< 18 years	75 (11.38%)	11 (1.38%)
≥ 18 years	584 (88.62%)	786 (98.62%)
Total	659 (100%)	797 (100%)

$\chi^2 = 64.92, d.f = 1, P < 0.001$

Figure 5: indication for operative delivery



It was found that the most common indication for operative delivery was pre-eclampsia (23 cases) followed by failure to progress of labor (22 cases), remaining indications are illustrated in figure 5

Discussion

The results of this study revealed that teenage pregnancy carries greater odds of having primary operative delivery (odds ratio = 1.8) and teenagers newborns were also lighter than older pregnant females. This may be due to premature deliveries, which more common in the teenage group who did not visit primary health centers or maternity outpatient clinics, and these teenage pregnant women with operative delivery have much greater odds for having emergency CS as compared to adult pregnant women (odds ratio 9.2). This result is consistent with the finding in a similar study in Egypt by Rasheed et al. (2011) who reported higher rate of CS among teenage pregnant women as compared to adult pregnant women.^[9] The compatible results in both studies is related to the similarity between Iraq and Egypt in terms of religion and social traditions. However, Eldene et al. (2015) showed an opposite result regarding incidence of CS among teenage pregnant women.^[3] This can be explained by the fact that the latter study does not make a clear distinction between emergency and elective CS. Also, regarding vaginal deliveries of this group it seems that they have more incidence of assisted vaginal delivery (VD) than normal VD, and some of these deliveries are associated with genital tract trauma like vaginal or cervical injury.

Acknowledgement

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