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Letter to the Editor

Maternal and Neonatal Complications in the Pregnant Women Aged Less than 20 Years

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ABSTRACT

Pregnancy in the women aged less than 20 years is an important public health issue, especially in developing countries. In Iran, limited studies have focused on the effects of maternal age on gestational and neonatal outcomes to demonstrate the pregnancy outcomes in young women. The present study aimed to investigate the maternal and neonatal complications in the pregnant women aged less than 20 years. In this cross-sectional study, variables such as maternal age, neonatal birth weight, head circumference at birth, one- and five-minute Apgar scores, gestational age, low birth weight, intrauterine growth restriction (IUGR), neonatal mortality, fetal death, preterm labor and cesarean section, maternal mortality, anemia, and preeclampsia were assessed in all the subjects. Mean age of the studied women was 18.79 ± 1.27 years, and low birth weight was reported in 17.6% of the neonates. One- and five-minute Apgar scores of <7 were observed in 8.1% and 4.5% of the neonates, respectively. In addition, IUGR, neonatal mortality, fetal death, preterm labor, maternal anemia, and preeclampsia were reported in 4.1%, 1.7%, 1.4%, 24.6%, and 3.4% of the subjects, respectively. Cesarean delivery was performed in 51.8% of the mothers, and no maternal mortality was reported. Rate of fetal death was higher and one-minute Apgar score was lower in the neonates of the mothers aged less than 18 years compared to those aged 18-20 years ($P=0.001$). Moreover, neonatal mortality and low one- and five-minute Apgar scores were higher in our study compared to the previous studies. It is recommended that educational programs be planned about the maternal and neonatal complications in the pregnant women aged less than 20 years. Considering the high rate of neonatal mortality and low Apgar scores at birth in our subjects, better prenatal care and accurate resuscitation must be implemented, especially in the pregnant women aged less than 18 years.

Keywords: Complications, Neonates, Teenage pregnancy

Teenage pregnancy is an important public health issue due to the increased risk of major obstetric syndromes, including preeclampsia, intrauterine growth restriction (IUGR), and preterm birth (1, 2). Additionally, uterine immaturity and socio-demographic factors may increase the incidence of such disorders in these mothers (3). The first reports on teenage mothers (aged ≤ 14.3 years) were indicative of the higher prevalence of adverse perinatal outcomes and infant mortality compared to older mothers (4).

In Iran, limited studies have focused on the effects of maternal age on prenatal, neonatal, and

pregnancy outcomes. The present study aimed to investigate the rates of adverse maternal and neonatal complications in the mothers aged less than 20 years.

This analytical, cross-sectional study was conducted on all the pregnant women aged less than 20 years who were admitted for delivery in Al-Zahra Hospital in Rasht, Iran during September 2009-2013. Available data on maternal age, neonatal birth weight, one- and five-minute Apgar scores, gestational age, low birth weight (LBW), IUGR, neonatal mortality, fetal death, preterm labor and cesarean section, maternal mortality, anemia, and preeclampsia were collected. Mean

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age of the subjects was 18.79 ± 1.27 years, and LBW was reported in 17.6% of the neonates. One- and five-minute Apgar scores of <7 were observed in 8.1% and 4.5% of the neonates, respectively. In addition, IUGR, neonatal mortality, fetal death, preterm labor, maternal anemia, and preeclampsia were reported in 4.1%, 1.7%, 1.4%, 24.6%, and 3.4% of the subjects, respectively. Cesarean delivery was performed in 51.8% of the mothers, and no maternal mortality was reported. Rate of fetal death was higher and one-minute Apgar score was lower in the neonates of the mothers aged less than 18 years compared to those aged 18-20 years ($P=0.001$). Moreover, neonatal mortality and low one- and five-minute Apgar scores were higher in our study compared to the previous studies (5, 6). It is recommended that educational programs be planned about the maternal and neonatal complications in the pregnant women aged less than 20 years. Considering the high rate of neonatal mortality and low Apgar scores at birth in our subjects, better prenatal care and accurate resuscitation must be implemented, especially in the pregnant

women aged less than 18 years.

References

1. Smith GC, Pell JP. Teenage pregnancy and risk of adverse perinatal outcomes associated with first and second births: population based retrospective cohort study. *BMJ*. 2001; 323(7311):476.
2. Smith GC, Pell JP. Teenage pregnancy and risk of adverse perinatal outcomes associated with first and second births: population based retrospective cohort study. *Obstet Gynecol Sur*. 2002; 57(3): 136-7.
3. Brosens I, Muter J, Gargett C, Puttemans P, Benagiano G, Brosens JJ. The impact of uterine immaturity on obstetrical syndromes during adolescence. *Am J Obstet Gynecol*. 2017; 217(5):546-55.
4. Kramer KL. Evolutionary perspectives on teen motherhood: how young is too young? *The arc of life*. New York: Springer; 2017. P. 55-75.
5. Watcharaseranee N, Pinchantra P, Piyaman S. The incidence and complications of teenage pregnancy at Chonburi Hospital. *J Med Assoc Thai*. 2006; 89(Suppl 4):S118-23.
6. Gupta N, Kiran U, Bhal K. Teenage pregnancies: obstetric characteristics and outcome. *Eur J Obstet Gynecol Reprod Biol*. 2008; 137(2):165-71.