Prevalence of multiple birth in Isfahan, Iran

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INTRODUCTION

Each of two or more individuals of the same pregnancy period of the same mother is called twins or multiples.\(^\text{[1]}\) Multiple pregnancies are high-risk pregnancies which about 14% of neonatal mortalities are related to.\(^\text{[2]}\) The prevalence of twins and triplets is due to multiple factors such as racial factors (e.g., 6% in Nigeria, 10% in Brazil, and 1% among whites), mother individual characteristics, and also using assisted reproductive technology (ART).\(^\text{[3‑6]}\) Meanwhile, the mean prevalence rate in the world is reported 3%.\(^\text{[2]}\)

A considerable issue is the recent growing trend of this prevalence rate, which requires more intensive care units and more prenatal and maternal care. This increasing trend is shown in United States, Spain, and Beijing.\(^\text{[7‑9]}\)

Due to use of the ARTs in Iran, which is the most leery in this issue, we aimed to calculate the recent prevalence rate of multiple birth pregnancies in Isfahan, in 2009–2010.

MATERIALS AND METHODS

In this descriptive cross-sectional study, all files related to births in 2009–2010 of main hospitals in Isfahan were evaluated and applicable data were collected. Finally, data were classified and released by SPSS statistical software (version 16.0; Chicago, INC., IL) presented as mean and standard deviation.

RESULTS

A total of 31,640 files were gone under study. Of which 614 were cases of multiple birth pregnancies. The products of these pregnancies were 1286 infants including 557 twins (17.6/1000), 56 triplets (1.8/1000), and just one case of quadruple (0.03/1000) [Table 1].

Mothers had mean ages of 27.9 ± 4.9 which 30.4% of them had a positive history of using ART.

CONCLUSION: The prevalence of multiple birth pregnancies is growing. The need for more mother and child care is important. Using ART world wide is leading more multiple birth which could be a cause for more complicated pregnancies.

Keywords: Epidemiology, multiple birth, prevalence, triplet, twin

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Received: 25-11-2016; Revised: 03-07-2017; Accepted: 28-08-2017
infertility and ART used were 30.4% of total. In relation to delivery mode, there were just three cases of natural vaginal delivery – which were for twins – and the rest were cesareans section deliveries.

A total of 646 (50.2%) infants born in 1286 were females. 52% of first offsprings were male and 52% of the second were female. In a case of quadruple, the first was male and the rest were female. The mean birth weight of infants from the first to the fourth was 2253.9 ± 1091, 2213 ± 667.8, 1750.9, and 600 g, respectively [Table 2]. Most of these neonates weigh <2500 g (84.9%).

DISCUSSION

In our study, the prevalence of multiple birth pregnancies in Isfahan in the years 2009 and 2010 were 19.4/1000 births. Low birth weight neonates were 84.9% of all 1286. Furthermore, about one-third of these mothers accounted for receiving ART for any reason. Again about one-third of these mothers were older than 30 years old. These two latter factors are playing important role in high multiple birth rate. This prevalence rate comparing with previous studies in Iran shows significant increase. So that in the years 1996–2000, the twin and triplet delivery rates were 6.7 and 0.15/thousand births, respectively, in Mashhad, Iran, which have been obtained by Hamedi and Akhlaqi.\(^{[10]}\) Despite the location, a developing trend is seen in the last two decades. A trend that has also been observed in advanced countries. In the United States, there have been a growth of 59% in the years 1980–1999,\(^{[9]}\) 63% and 217% increase in twins and triplets, respectively, in Spain\(^{[8]}\) and in Beijing.\(^{[7]}\)

CONCLUSION

In this study, the prevalence of multiple birth in 2009–2010 with elevated health risks and accompanying greater healthcare costs.

Acknowledgments

I want to acknowledge all major hospitals for accompany including Alzahra, Beheshti, Saadi, and Sina except Mehregan Hospital who did not allow us to review their

Table 1: Characteristics of multiple neonates born in 2009 and 2010

|        | Twins (%) | Triplets (%) | Quadruples (%) | Sex | GA (%) |
|--------|-----------|--------------|----------------|-----|--------|
|        | 2009      | 2010         |                |     |        |
|        | Female    | Male         | Term           | Preterm |        |
|        | 287 (93.4)| 270 (87.9)   | 318            | 316      | 165 (26)| 469 (74)|
|        | 20 (6.6)  | 36 (11.7)    |                |          |        |

Term ≥37 weeks; Preterm <37 weeks. GA = Gestational age

files although we had permission paper from the ethical department of Isfahan university.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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