

The Incidence Rate of Twin Pregnancies during 2013 in Kosovo

Astrit M. Gashi^{1*}, Reshat Bekteshi², and Brikene Dacaj-Elshani¹

¹University Clinical Center of Kosovo, Obstetrician and Gynecological Clinic (OGC) Pristine

²University of Prishtina – Medical Faculty

***Corresponding Author:** Astrit Malush Gashi, Department of Obstetrician and Gynecological Clinic (OGC) Pristine, University Clinical Center of Kosovo, Pristine 10000, Kosovo.

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Abstract

Twin pregnancy is defined as a pregnancy in which two embryos develop in the uterus at the same time. It is dizygotic twins when the twins are derived from two zygote that develops from a two fertilized oocytes and monozygotic twins when they are derived from one zygote that develops from a single fertilized oocyte.

Aim: The purpose of this research is to determine the incidence of twin pregnancies in Kosovo, and the study of other parameters of twins that directly affect in perinatal outcomes.

Material and methods: This was a cross-sectional study, were analyzing protocols of births during 2013, in Obstetrics and Gynecology Clinic/University Clinical Centre of Kosovo. It made statistical processing of material collected and the results are recorded in a special protocol.

Statistical analysis was performed using the computer programs for statistics. Sum tests were used to compare differences in categorical variables. Number of all women who had twin pregnancies, in relation to the total number of births for 2013 was used to compute rates for this study.

Results: From 10 286 births realized in Obstetrics and Gynecology Clinic/University Clinical Centre of Kosovo, during 2013, 97,22 percent (n = 10,000) were singleton pregnancy, 2, 78 percent (n = 286) multiple pregnancies, of these 2, 63 percent (n = 270) twins, 0, 15 percent (n = 16) triplets pregnancy, quadruplets pregnancy had not.

This paper is focused on women with twin pregnancy. The rate of the incidence of twin pregnancy during 2013 in Obstetrics and Gynecology Clinic - Prishtine, Kosovo; was 26, 25 twin pregnancy for 1000 live birth of babies, or 2, 63 percent, were twin pregnancies, in relation to the total number of births for 2013 in Obstetrics and Gynecology Clinic.

By the method of conception: 22, 2 percent (n = 60) were twin pregnancies that were realized to the use of ART, while 77, 8 percent (n = 210) with spontaneous conception. (Odds ratio; 0.28, 95% CI: 0.20 to 0.39, Significance level P < 0.0001).

The average age of all mothers who carried twin pregnancies was 30.8 years.

From 270 twin pregnancies 64, 8 percent were born with section Caesarean, 35, 2 percent, with the vaginal birth. (Difference: 29%, 95% CI: 20, 47 to 37, 06, Chi-squared:44.26, Significance level P < 0.0001).

The average gestational age of all twin pregnancies in births result to be: 35.6 weeks pregnant, where 50, 74 percent (n = 137) were infants born in time or after the 37th week of gestation, while 49, 26 percent (n = 133) were born preterm or before 37th week of gestation.

From infants of born preterm; 3, 33 percent (n = 9) were infants born before 28th gestational week, in an age so early pregnancy, 10, 75 percent (n = 29) before 32th week, 35, 18 percent (n = 95) were born between 32-36 +6 week gestation.

The average weight of all twins born alive was 2395 grams, where 3, 8 percent (n = 20) were born less than 1000 grams, 7, 7 percent (n = 40) \leq 1500 Grams, 37,76 percent (n = 73) \leq 2500 Grams and 50, 74 percent (n = 137) \geq 2500 Grams. Apgar test scoring average for all infants born alive was 7,1.

Conclusions: In this study it turned out that; the rate of the incidence of twin pregnancy during 2013- in Obstetrics and Gynecology Clinic-Prishtine, Kosovo; was 26,25 twin pregnancy for 1000 live birth of babies, or 2, 63 percent, were twin pregnancies, in relation to the total number of births for 2013 in Obstetrics and Gynecology Clinic.

This significant increase of the incidence of twin pregnancies is attributed mostly using assisted reproductive technology (IVF et ET) for conception, but also other factors such as increasing age of pregnant mothers and maternal parity.

In this study it turned out that; every second infant they were born prematurely, or before reaching 37th weeks of pregnancy. The average gestational age of all twin pregnancies in births was: 35.6 weeks of pregnancy, while the average weight at birth for all babies born alive was 2395 grams. And finally we found that twin pregnancies as a result of premature birth, low birth weight and high rate of fetal prematurity, have a relatively high increase of neonatal morbidity and mortality.

Keywords: *Incidence rate; Twin pregnancies; Premature births; ART*

Introduction

Twin pregnancy is defined as a pregnancy in which two embryos develop in the uterus at the same time. It is dizygotic twins when the twins are derived from two zygote that develops from a two fertilized oocytes and monozygotic twins when they are derived from one zygote that develops from a single fertilized oocyte [1].

Recently have seen a major increase in multiple births rates globally [2]. A number of factors have been associated with increased incidence of twinning. These include advanced maternal age and the use of fertility drugs for induction of ovulation [3-8]. Women with twin pregnancies are at increased risk of many pregnancy complications compared with singleton pregnancies [9-11].

When parents are informed of a twin pregnancy, the majority of them feel excited, but also scared at the same time. On the other side obstetrician doctors face with a large number of fetal problems as: prematurity, morbidity, mortality, IUGR, growth and structural abnormalities, aneuploidia, and maternal complications with preeclampsia, diabetes, infections, etc.

Percentage incidence of twin pregnancies is different for different countries. Although the incidence of twins monozygotic has been relatively constant worldwide, is different for twins dizygotic, where the incidence varies depending on maternal age and number to births, race, geographical area and the availability of assisted reproduction techniques.

Aim

The primary objective of this research was to determine the incidence rate of twin pregnancies during 2013, in Obstetrics and Gynecology Clinic/University Clinical Centre of Kosovo. As well as the study of other parameters of twins that directly influences in perinatal outcomes.

Material and Methods

This was a cross-sectional study, were analyzing protocols of births during 2013, in Obstetrics and Gynecology Clinic/University Clinical Centre of Kosovo. It made statistical processing of material collected and the results are recorded in a special protocol.

Statistical analysis was performed using the computer programs for statistics. Sum tests were used to compare differences in categorical variables. Number of all women who had twin pregnancies, in relation to the total number of births for 2013 was used to compute rates for this study.

Results

From 10286 births realized in Obstetrics and Gynecology Clinic/University Clinical Centre of Kosovo, during 2013, 97, 22 percent (n = 10,000) were singleton pregnancy, 2, 78 percent (n = 286) multiple pregnancies, of these 2, 63 percent (n = 270) twins, 0, 15 percent (n = 16) triplets pregnancy, quadruplets pregnancy had not.

This paper is focused on women with twin pregnancy. The rate of the incidence of twin pregnancy during 2013 in Obstetrics and Gynecology Clinic - Pristine, Kosovo; was 26, 25 twin pregnancy for 1000 live birth of babies, or 2, 63 percent, were twin pregnancies, in relation to the total number of births for 2013 in Obstetrics and Gynecology Clinic.

Twin year	Total number of births	Number of twin pregnancies	The number of twins in percentage	Report of twins pregnancies in 1000/births	Percentage of twins from spontaneous conception	Percentage of twins from use ART
2013	10286	270	2.63%	26,25	77.8%	22.2%

Table1: The rate of the incidence of twin pregnancy during 2013 in Obstetrics and Gynecology Clinic - Pristine, Kosovo.

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By the method of conception: 22, 2 percent (n = 60) were twin pregnancies that were realized to the use of ART, while 77, 8 percent (n = 210) with spontaneous conception. (Odds ratio; 0.28, 95% CI: 0.20 to 0.39, Significance level P < 0.0001).

The average age of all mothers who carried twin pregnancies was 30.8 years. From 270 twin pregnancies 64, 8 percent were born with section Caesarean, 35, 2 percent, with the vaginal birth. (Difference; 29%, 95% CI: 20, 47 to 37, 06, Chi-squared; 44.26, Significance level P < 0.0001).

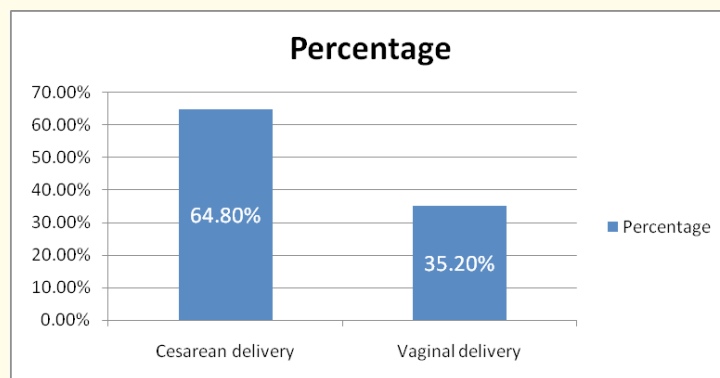


Figure 1: Methods of Childbirth.

The average gestational age of all twin pregnancies in births result to be: 35.6 weeks pregnant, where 50, 74 percent (n = 137) were infants born in time or after the 37th week of gestation, while 49, 26 percent (n = 133) were born preterm or before 37th week of gestation.

From infants of born preterm; 3, 33 percent (n = 9) were infants born before 28th gestational week, in an age so early pregnancy, 10, 75 percent (n = 29) before 32th week, 35, 18 percent (n = 95) were born between 32-36 +6 week gestation.

Weeks gestation	Number of infants	Percentages	Significance level
≤ 28 th week	9	3.33%	P < 0.0001 95% Cl of observed proportion; 0.99 to 7.97
≤ 32 th week	29	10.75%	P < 0.0001 95% Cl of observed proportion; 6.05 to 17.30
Between 32-36 week + 6 day	95	35.18%	P < 0.0001 95% Cl of observed proportion; 27.10 to 43.93
Totali	133	49.26%	

Table 2: Infants of born preterm to women with twin pregnancy.

Of the most common pathologies that impacting in premature births, were premature rupture amniotic membranes (27.5%) Status after section caesarean with pain (13.4%), maternal hypertensive disease (12.5%), death of the fetus in uterus (10%), insufficiency of the cervix (9.5%), and other pathologies in smaller percentage: IUGR, accidents umbilical cord, placental abruption, polyhydramnios etc.

The average weight of all twins born alive was 2395 grams, where 3, 8 percent (n = 20) were born less than 1000 grams, 7, 7percent (n = 40) ≤ 1500 Grams, 37, 76 percent (n = 73) ≤ 2500 Grams and 50, 74 percent (n = 137) ≥ 2500 Grams. Apgar test scoring average for all infants born alive was 7,1.

Average weight	Number of infants	Percentages	Significance level
≤ 1000 grams	20	3.8%	P < 0.0001 95% Cl of observed proportion; 1.86 to 6.83
≤ 1500 grams	40	7.7%	P < 0.0001 95% Cl of observed proportion; 4.82 to 11.55
≤ 2500 grams	73	37.76%	P < 0.0001 95% Cl of observed proportion; 31.96 to 43.84
≥ 2500 grams	137	50.74%	P < 0.0001 95% Cl of observed proportion; 44.61 to 56.85
Total	270	100%	

Table 3: Average weight of infants of the born to women with twin pregnancy.

Discussion

In this study it turned out that; the rate of the incidence of twin pregnancy during 2013- in Obstetrics and Gynecology Clinic-Prishtine, Kosovo; was 26, 25 twin pregnancy for 1000 live birth of babies, or 2, 63 percent, were twin pregnancies, in relation to the total number of births for 2013 in Obstetrics and Gynecology Clinic.

This significant increase of the incidence of twin pregnancies is attributed mostly of use assisted reproductive technology (IVF et ET) for conception (where in Kosovo in 2013, 22.2% were twin pregnancies of perform to the use of ART, specifically with (IVF et ET), but also the great age of pregnant mothers (average age in 2013 was 30.8 years) and maternal parity. Our results were compared with data from other countries e.g. This incidence in the US in 2002 was 31/1000 births twin, while in Sweden ranged from 12-16/1000 births twins.

In this study it turned out that; every second infant they were born prematurely, or before reaching 37th weeks of pregnancy The average gestational age of all twin pregnancies result in births was: 35.6 weeks of pregnancy (while in the US the average gestational age was 35.3 weeks gestational). In Obstetrics and Gynecology Clinic-Pristine, Kosovo, during 2013; 10.75% of twin pregnancies are born before week 32th of gestation, while in the US 11.9%. Average weight at birth for all babies born alive was: 2395 grams (in the

US it was: 2347 grams).The twin pregnancy as a result of premature birth, low birth weight and high rate of fetal prematurity, have a relatively high increase of neonatal morbidity and mortality.

Conclusions

In this study it turned out that; the rate of the incidence of twin pregnancy during 2013- in Obstetrics and Gynecology Clinic- Prishtine, Kosovo; was 26, 25 twin pregnancy for 1000 live birth of babies, or 2,63 percent, were twin pregnancies, in relation to the total number of births for 2013 in Obstetrics and Gynecology Clinic.

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