

BIRTH IN TEENAGERS – OUR EXPERIENCE

D. Mureșan^{*,**#,}, P.D. Cotuțiu^{**}, Diana Elena Dumitraș^{***}, Ioana Cristina Rotar^{*,**}

**Department of Obstetrics and Gynecology, University of Medicine and Pharmacy “Iuliu Hațieganu”, Romania*

***Department of Obstetrics and Gynecology, Emergency County Hospital, Romania*

****Department of Economic Sciences, University of Agricultural Sciences and Veterinary Medicine, Romania*

Abstract

Introduction: Birth assistance for teenage patients continue to be quite frequently in current obstetric practice, even if in recent decades the incidence of teenage pregnancies has declined globally as well as in Romania.

Methods: To achieve an analysis of births in this population we conducted a retrospective study during 01.01.2012-31.12.2015 Gynecology Clinic in Cluj-Napoca. All patients were included (n = 39, 0.8%) who had at delivery an age under 18 years. The data were compared with the deliveries in patients over 18 years, conducted in the same clinic during the same period. Multiple pregnancies were excluded from the study. They were used for comparisons Student test and Chi-square test, to a threshold of statistical significance of $p < 0.05$.

Results: No significant differences were found in terms of the route of delivery between teenage patients and the rest of the patients ($\chi^2 = 0.6555$, $p = 0.418$). The average birthweight was considerable lower in primiparous adolescents ($t = 3.633$, $p = 0.0003$). Also the average gestational age was lower in primiparous adolescent girls ($t = 5.583$, $p < 0.0001$). Instead no significant differences were detected for the duration of expulsion, delivery and Apgar score at one minute.

Conclusions: we can conclude that although fetal weights and gestational age at birth are lower, vaginal birth is a safe alternative for adolescents.

Rezumat: Nașterea la adolescente - experiența noastră

Introducere: Asistența la naștere la pacientele adolescente continuă să fie întâlnită destul de frecvent în practica obstetricală curentă, chiar dacă în ultimele decade incidența sarcinilor la adolescente a scăzut la nivel mondial cât și în România.

Material și metodă: Pentru a realiza o analiză a nașterilor la această categorie de paciente a fost efectuat un studiu retrospectiv în perioada 01.01.2012-31.12.2015 în Clinica Ginecologie I Cluj-Napoca. Au fost incluse toate pacientele (n=39, 0.8%) care au avut la naștere o vârstă de maximum 18 ani. Datele obținute au fost comparate cu nașterile la paciente peste 18 ani desfășurate în clinică în același perioadă. Sarcinile multiple au fost excluse din studiu. Pentru realizarea comparațiilor au fost utilizate testul student și testul hi-pătrat la un prag de semnificație statistică de $p < 0,05$.

Rezultate: Nu s-au constatat diferențe semnificative în ceea ce privește calea de naștere între adolescente și restul pacientelor ($\chi^2 = 0.6555$, $p = 0.418$). Greutatea medie la naștere a fost semnificativ mai mică în cazul adolescentelor primipare ($t=3.633$, $p=0.0003$). De altfel și vârsta gestațională medie a fost mai mică în cazul adolescentelor primipare ($t=5.583$, $p < 0.0001$). În schimb nu s-au decelat diferențe semnificative în ceea ce privește durata expulziei, delivrenței și scorul Apgar la un minut.

Concluzii: Putem concluziona că deși greutatea feților este mai mică și nașterea se înregistrează la o vârstă gestațională mai mică, nașterea pe cale vaginală este o alternativă sigură în cazul adolescentelor.

Cuvinte cheie: naștere vaginală, secțiune cezariană, vârstă gestațională, scor Apgar, greutate

#- corresponding author

Introduction

Even though in the last decades, the number of births among teenagers has decreased, at a world level, as well as in Romania, [1] they continue to represent a special category of patients with special needs during pregnancy, during birth and childbed. Along with an appropriate sexual education and with the wider spreading of contraceptive means, the number of unplanned pregnancies has decreased including at this age category. We have analysed the births at the teenagers who came to the Gynecology Clinic no. 1 in Cluj-Napoca, Romania for qualified health service at birth, without finding significant differences from a statistical viewpoint between the data analysed at the births at teenagers as compared to the births by general population. The aspects related to the psychological impact on the teenager have not been analysed, nor the impact of birth on the mother in the long run.

Material and method

In order to carry out this study, all women patients under 18 years old at the time of birth who came to the Gynecology Clinic no. 1 in Cluj-Napoca between 01.01.2012—31.12.2015, have been included. The patients who gave birth at home or in a different department have not been included, they came to the clinic in the placental period or during childbed. The study is a retrospective one, the information being collected from the birth register and

from the medical history of the pregnant women. The database was created using Microsoft Excel, while the statistical analyses were done by using Microsoft Excel and SPSS softwares. The results were compared with the results obtained after the statistical analysis of all the births from the Gynecology Clinic no. 1 in Cluj-Napoca, which were in progress at the same time. When the value of “p” was smaller than 0.05, the results were considered to be significant from a statistical viewpoint.

Results

The number of patients under the age of 18 who gave birth at the Gynecology Clinic no. 1 within the time span mentioned was that of 39, these patients representing 0.8% of all births. The youngest patient was 13 years old. The average age was 16.64 years old.

The occurrence of precocious birth in our clinic is that of 8 cases at 1000 births. The biggest occurrence of births at teenagers is in Africa, the incidence being of 143 newborns at 1000 births. In USA the occurrence is that of 12.5 at 1000 births [3]. In 2001, in Romania, the occurrence was that of 39.3 at 1000 births. [4].

As regards to the status of birth, most of them were primiparas, respectively 87% of the patients being at the first birth, while 13% were secundiparas. None of the patients had among antecedents, two or more births.

In our study, the patients who gave birth in a natural way represented 88.24% in the case of

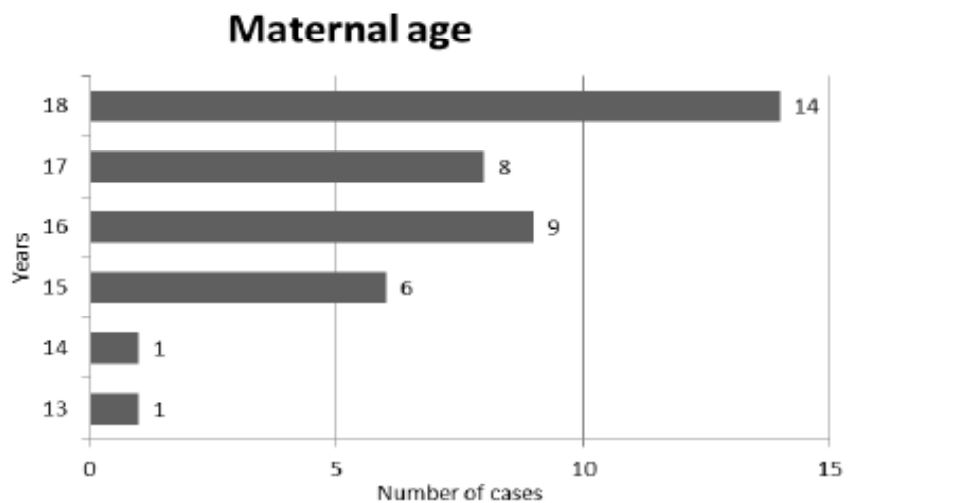


Fig. 1. Number of patients by age

primiparas, while in the case of secundiparas, there was no birth through caesarian operation.

As regards to the births through caesarian operation, the instructions (the symptoms) were fetal, respectively acute fetal suffering, premature fracture of membrane and pelvic presentation.

The maternal symptoms were represented by a case of extended vulvar warts, respectively a case of forte myopia.

The fetal-pelvic disproportion was also the symptom of caesarian in one of the cases.

Table I Route of delivery

	IP (%)	IIP (%)
Vaginal birth	88.24	100.00
Caesarian operation	11.76	0.00
chi2(1) = 0.6555 p = 0.418		

The average weight at birth was of 2870g at primiparas respectively 2550g at secundiparas. The maximum weight was 4590g, and the minimum of

900g. From a statistical viewpoint, teenagers gave birth to fetus with a smaller weight at birth as compared to the general population, both in the case of primiparas, as well as in the case of secundiparas. (p=0.0003, respectively p=0.0238).

The gestational age was 36 weeks, and the smallest gestational age was 26 weeks. As well, in the case of teenagers, the gestational age was significantly smaller than in the case of patients with the age over 18 years old, in the case of primiparas p<0.0001.

As regards the gestational age at birth, in the case of teenager secundiparas, no significant statistical differences were found as compared to the general population.

After the analysis of the duration of expulsion, and respectively of the Apgar score at one minute, we have not found significant differences from a statistical viewpoint as compared to the general population.

Table II Average birthweight

	<=18 years			n>= 18 years		
	average	stdev	N	average	stdev	n
IP	2870.59	887.84	34	3264.70	613.11	1087
t=3.633 p=0.0003						
IIP	2550.00	1019.80	5	3265.77	701.30	640
t=2.266 p=0.0238						

TableIII. Gestational age

	<=18 years			n>=18 years		
	average	stdev	n	average	stdev	n
IP	36.64	3.90	34	38.80	2.15	1087
t=5.583 p<0.0001						
IIP	36.64	4.55	5	38.50	2.21	640
t=1.856 p=0.0639						

TableIV. The duration of expulsion in minutes

	<=18 years			n>=18 years		
	average	stdev	n	average	stdev	n
IP	27.41	11.00	30	25.02	10.62	680
t=-1.205 p=0.2288						
IIP	11.39	5.48	5	11.33	4.79	395
t=-0.028 p=0.9778						

Table V. The duration of delivery in minutes

	<=18 years			n>=18 years		
	average	stdev	n	average	stdev	n
IP	10.34	1.29	30	11.07	4.92	680
t=0.811 p=0.4177						
IIP	8.80	0.84	5	10.88	4.71	395
t=0.986 p =0.3247						

Table VI. The Apgar score at one minute

	<=18 years			n>=18 years		
	average	stdev	n	average	stdev	n
IP	8.68	2.84	30	9.29	1.71	680
t=1.847 p=0.0652						
IIP	8.80	0.84	5	9.68	1.03	395
t=1.902 p=0.0579						

Discussions

On the basis of the analysis of the data obtained in our study, we concluded that in the Gynecology Clinic no. 1 in Cluj-Napoca, the incidence of births at teenagers is well under the national average which is estimated at 39.3 at 1000 births although Romania along with Bulgaria occupy the first places in Europe in terms of birth incidence at teenagers [4,5].

If we analyze the data from literature, we notice a bigger incidence of births among teenagers who belong to underprivileged social classes and who are from developing countries [6,7,8]. During the study, the phenomenon which led to a reduced addressability in this department of teenagers who come for health service at birth could not be analysed.

Depending on the racial criteria in USA the biggest incidence of births at teenagers is found in the hispanic population, respectively 38 at 1000 births as compared to the white population where the incidence is of 17 at 1000 births [7]. If we analyse

the number of births at teenagers based on the level of education, Cluj-Napoca, along with Bucharest, Iasi and Timisoara occupy the first places according to the number of institutions of higher education [9], the incidence of births at teenagers having a more reduced level as compared to other regions of the country.

The data obtained in the study concurs with the data from the literature which sustain the idea that teenagers have a smaller risk of giving birth through caesarian operation or through vaginal birth as compared to the general population [11].

If we analyze the risk of premature birth and the small weight at birth, teenagers run a higher risk of giving birth prematurely and of giving birth to fetus with a smaller weight as compared to the general population, the data from literature supporting this idea [10]. Birth at teenagers continues to remain an issue both at a national level, as well at an international level through the frequent complications (a higher risk

at premature birth and fetus with a smaller weight). As well, there is a correlation between the educational level and the bigger incidence of births at teenagers among people who have a more reduced level of education [12, 13].

Conclusions

As compared to the data from literature, the occurrence of births at teenagers Gynecology Clinic no. 1 in Cluj-Napoca is much smaller than the one in the developing countries or than in USA. Among teenagers, most of them are primiparas and in our study we had no teenager patient who had 2 or more births in her antecedents. As well, the gestational age and the weight at birth were significantly smaller among teenagers as compared to the patients younger than 18 who gave birth at the same time. By analyzing the data, in our opinion, vaginal birth is the only one at patients under 18, being no significant differences from a statistic viewpoint between patients under 18 years old and the general population of patients as regards the dilatation, expulsion and delivery period. The Apgar score obtained at 1 minute is similar to the Apgar score obtained as a result of the analysis of the births at pregnant women older than 18. The limits of the study are due to the fact that we analyzed a reduced number of births at patients under 18. The study being retrospective, we could not analyze the data related to the level of education, financial independence and marital status at the moment of birth. As well, the psychological impact of birth on teenagers in the average and long run could not be analyzed.

References

1. United Nations Population Division, World Population Prospects, Adolescent fertility rate (births per 1,000 women ages 15-19)
2. Treffers P.E. "Teenage pregnancy, a worldwide problem" 2003
3. National Vital Statistics Report 2015
4. UNICEF A league table of teenage births in rich nations 2001
5. UNICEF global databases, 2016, based on DHS, MICS and other nationally representative surveys, 2009-2015
6. Indicator: Births per 1000 women (15-19 ys) – 2002 UNFPA, State of World Population 2003, Retrieved Jan 22, 2007.
7. Hamilton, B.E., Martin, J.A., Osterman, M.J.K., & Curtin, S. C. (2015). Births: Final Data for 2014. Hyattsville, MD: National Center for Health Statistics. Retrieved May 4, 2016
8. Percentage of teens who will experience a first birth based on analyses of NCHS Vital Statistics 2013 final birth data. Washington, DC: Child Trends
9. Romanian Statistical Yearbook 2012
10. Dr. Ahlam A. Alwahab, M.B.c.h.B, F.I.C.M.S. Pregnancy complication and outcome among teenager
11. Torvie AJ, Callegari LS, Schiff MA, Debiec KE Labor and delivery outcomes among young adolescents. Am J Obstet Gynecol. 2015 Jul;213(1):95.e1-8
12. Hofferth SL, Reid L, Mott FL (2001). "The effects of early childbearing on schooling over time". Family Planning Perspectives
13. The National Campaign to Prevent Teen Pregnancy. (2002). "Not Just Another Single Issue: Teen Pregnancy Prevention's Link to Other Critical Social Issues