

ADOLESAN GEBELİKLER

Adolescent Pregnancies

Selda SONGUR DAĞLI¹ (0000-0003-4887-2489), Füsun KARBANCIOĞLU CANTÜRK² (0000-0003-1159-2489)

ÖZET

Amaç: Çalışmada, Kırşehir ilinde 2016 yılında gerçekleşen adolesan gebelikler ile aynı yılda gerçekleşen adult (20-35 yaş arası) ilk gebelikler, maternal hemoglobin ve hematokrit düzeyi, yenidoğan bebek kilosu, yenidoğan APGAR skoru ve doğum şekli yönünden karşılaştırılması amaçlandı.

Materyal ve Metod: 01.01.2016-31.12.2016 tarihleri arasında Ahi Evran Üniversitesi Eğitim ve Araştırma Hastanesi Kadın Hastalıkları ve Doğum bölümüne başvurmuş olan gebelerin dosyaları incelendi. 2016 yılında gerçekleşen ilk gebelik doğumları, adolesan (18 yaş ve altı) ve adult (19- 35 yaş) gebeler olarak iki gruba ayrıldı. İki grup maternal hemoglobin ve hematokrit düzeyi, yenidoğan bebek kilosu, yenidoğan APGAR skoru, doğumun gerçekleşme şekli yönünden karşılaştırıldı.

Bulgular: Adolesan grubunda 53, adult grupta 65 gebe olmak üzere 118 gebe çalışmaya dahil edildi. Adolesan grubun yaş ortalaması 17,51 ± 0,724; adult yaş grubunda ise 23,95 ± 4,432 idi. Yaş ortalaması yönünden gruplar arasında anlamlı fark mevcuttu (P = 0.00). Hemoglobin, hematokrit, yenidoğan bebeğin doğum kilosu, 1. Ve 5.dakika APGAR'ları arasında anlamlı fark bulunamamıştır (p<0.069, p<0.128, p<0,128, p<0.391, p<0.773, p<0.921).Adolesan grupta sezaryenle doğum oranı kontrol grubuna göre anlamlı düzeyde düşük bulunmuştur (p = 0.002). Sezaryen endikasyonları arasında anlamlı fark bulunamamıştır (p = 0.450).

Sonuçlar: Adolesan grubun yaş ortalamalarının yüksek olması ve kontrol grubunda sadece ilk gebeliklerin çalışmaya alınması nedeniyle maternal hemoglobin ve hematokrit düzeyi, yenidoğan bebek kilosu, yenidoğan APGAR skorunda iki grup arasında anlamlı fark bulunamamıştır ama adolesan gebelerdeki sezaryen oranının primipar adult gebelere göre daha düşük olduğunu tespit edilmiştir. Sezaryen endikasyonları arasında iki grup arasında anlamlı fark bulunamamıştır.

Anahtar Sözcükler: Adolesan; Gebelik; Doğum

ABSTRACT

Aim: To make a comparison between adolescents and primigravid adults (between 19 and 35 years old) who delivered in Kırşehir at 2016 regarding maternal hemoglobin and hematocrit levels, Apgar scores of newborns, fetal birthweights and mode of delivery.

Materials and methods: The files of patients who delivered in Ahi Evran University Training and Research Hospital between 01.01.2016 and 31.12.2016 were investigated. The primigravid pregnant were allocated into two groups as group 1 aged 18 and lower and group 2 aged between 19 and 35. Groups were compared in terms of maternal hemoglobin and hematocrit levels, Apgar scores of newborns, fetal birthweights and mode of delivery.

Results: 118 patients were included in the study. There was 53 pregnant in group 1 and 65 pregnant in group 2. The mean age of adolescents was 17,51 ± 0,72, and the mean age of adults was 23,95 ± 4,43. There was no statistically significant difference between the groups in terms of maternal hemoglobin and hematocrit levels, fetal birth weights and first and fifth minutes Apgar scores of newborns (p<0,069, p<0,128, p<0,128, p<0,391, p<0,773, p<0,921).Cesarean section rate of adolescents was significantly lower than that of adults (p = 0.002). There was no statistically significant difference between the groups according to cesarian indications (p = 0,450).

Conclusion: Because the mean age of adolescents was high and only primigravid adult pregnant were included in the control group there was no significant difference between the groups in terms of maternal hemoglobin and hematocrit levels, fetal birthweights and first and fifth minutes Apgar scores of newborns. Cesarean section rate of adolescents was significantly lower than that of adults. There was no statistically significant difference between the groups according to cesarian indications.

Key words: Adolesence; Pregnancy; Birth

¹Department of Obstetric and Gynecology, Faculty of Medicine, Ahi Evran University, Kırşehir, Turkey.

²Department of Obstetric and Gynecology, Faculty of Medicine Ahi Evran University, Training and Research Hospital, Kırşehir, Turkey.

Selda SONGUR DAĞLI, Dr. Öğr. Üyesi
Füsun KARBANCIOĞLU CANTÜRK, Uz. Dr.

İletişim:

Dr. Öğr. Üyesi Selda SONGUR DAĞLI
Ahi Evran Üniversitesi Tıp Fakültesi
Kadın Hastalıkları ve Doğum ABD
40100 Kırşehir.

Tel: 0542 316 06 25

e-mail:

seldasongurdagli@hotmail.com
seldasongurdagli@ahievran.edu.tr

Geliş tarihi/Received: 28.05.2018

Kabul tarihi/Accepted: 18.07.2018

DOI: 10.16919/bozoktip.427951

Bozok Tıp Derg 2019;9(1):9-13
Bozok Med J 2019;9(1):9-13

INTRODUCTION

Pregnancies aged between 15 and 19 are defined as adolescent pregnancies. In Turkey, 5% of women population is aged between 15 and 17. The adolescent fertility rate is defined as a mean number of live births per one thousand women. According to data from Turkey recorded in 2017, the adolescent fertility rate was 0.032 in 2011 and decreased to 0.024 in 2016. In other words, in 2016, 24 births occurred per every thousand women aged between 15 and 19 (1).

Some research showed that incidence of prenatal and perinatal complications are higher in adolescent pregnancies (2, 3).

According to WHO report 16 billion babies are delivered by adolescent mothers in every year, and this is equal to 11% of babies in the World (4). It is very important to prevent adolescent pregnancies those causing important problems socially, economically and in health area especially for underdeveloped and undeveloped countries.

In this study we aimed to compare adolescents and primigravid adults (between 19 and 35 years old) who delivered in Kırşehir at 2016, in terms of maternal hemoglobin and hematocrit levels, Apgar scores of newborns, fetal birthweights and mode of delivery.

MATERIAL AND METHODS

This retrospective study was conducted after confirmation of ethics committee (2018-44/39). The hospital files of patients who delivered in Ahi Evran University Training and Research Hospital between 01.01.2016 and 31.12.2016 were investigated, and 53 adolescent pregnant aged between 15 and 19 were included in the study and all of them was primigravid. 696 pregnant who delivered in the same year and aged between 20 and 35 were detected. To form control group; the files of these patients were aligned according to date, and randomly every tenth file was added to control group so totally 65 pregnant were included in the control group.

Retrospectively hospital files of delivered pregnant were investigated and ages, hemoglobin and

hematocrit levels of pregnant and birth weights, first and fifth minute Apgar scores of the newborns and mode of delivery were recorded. For cesarian delivery cesarian indications were also recorded.

SPSS 11.5 Windows (SSPS Inc., Chicago, IL, USA) programme was used for statistical analysis. Compliance with numerical variables to a normal distribution was examined by Shapiro-Wilk test. Descriptive statistics were expressed as mean and standard deviation; categoric variables were expressed as number and percent. Student T test and Ki square tests were used for statistical analysis and results were evaluated with 95% confidence interval and those $p < 0.05$ were accepted as significant statistically.

RESULTS

118 pregnant, 53 adolescents, and 65 adults were included in the study. Mean age of adolescents (Group 1) was $17,51 \pm 0,724$, the mean age of adults was $23,95 \pm 4,432$ (Group 2). Because all adolescents were primigravid, primigravid adults were included in the control group. Comparison of variables of adolescents and adult pregnant was presented at table 1. Comparison of variables according to the mode of delivery was presented at table 2.

There was no statistically significant difference between the groups in terms of hemoglobin and hematocrit levels ($p = 0,069$). The mean number of hemoglobin and hematocrit levels of adolescents were 12,01 and 37,15 respectively. The mean number of hemoglobin and hematocrit levels of adults were 12,54 and 38,27 respectively. The mean birth weight of babies of adolescents was 3095,85 gr; of adults was 3184,38 gr. There was no statistically significant difference between the groups ($p = 0,391$).

Mean values of first and fifth minutes Apgar scores were 8,36 and 8,29 in group 1; 9,7 and 9,68 in group 2. There was no statistically significant difference between the groups (for the first minute Apgar $p = 0.773$; for fifth minute Apgar $p = 0,921$). 42 of 53 adolescent pregnant were delivered by vaginal birth (79,2%), and 11 were delivered by cesarean

section (20,8%). In the adult group, 34 of 65 pregnant were delivered by vaginal birth (52,3%) 31 were delivered by cesarean section (47,7%). There was the statistically significant difference between the groups

(p = 0,002). The difference was due to the high ratio of cesarean section in group 1. Cesarean indications were presented at table 3. There was no statistically significant difference between the groups (p = 0,450).

Table 1. Comparison of variables of adolescent and adult pregnancies.

	Group 1 (n = 53)	Group 2 (n = 65)	p t
Age	17,51 ± 0,724	23,95 ± 4,432	0,000 -10,466
Hemoglobine	12,011 ± 1,6987	12,542 ± 1,4349	0,069 -1,834
Hematocrite	37,153 ± 4,2840	38,274 ± 3,6592	0,128 -1,533
Birth weight	3095,85 ± 527,386	3184,38 ± 577,717	0,391 -0,861
Apgar score 1st minute	8,36 ± 1,111	8,29 ± 1,331	0,773 0,289
Apgar score 5th minute	9,7 ± 0,952	9,68 ± 1,288	0,921 0,100

Table 2. Comparison of adolescents and adults according to the mode of delivery.

	Mode of delivery		Total
	Vaginal	Cesarean	
Group 1	(n = 42) 79,2%	(n = 11) 20,8%	(n = 53) 100%
Group 2	(n = 34) 52,3%	(n = 31) 47,7%	(n = 65) 100%
Total	(n = 76) 64,4%	(n = 42) 35,6%	(n = 118) 100%

Table 3. Cesarean Indications.

	Groups		Total
	Group 1	Group 2	
Acute fetal distress	(n = 5) 45,5%	(n = 8) 26,5%	(n = 13) 20%
Cephalopelvic disproportion	(n = 4) 36,4%	(n = 11) 36,4%	(n = 15) 37,8%
Abrupsio placentae	(n = 1) 9,1%	(n = 1) 2,9%	(n = 2) 4,4%
Unprogressing labor	(n = 1) 9,1%	(n = 6) 17,6%	(n = 7) 15,6%
Breech presentation	(n = 0) 0%	(n = 5) 14,7%	(n = 5) 11,1%
Total	(n = 11) 100%	(n = 31) 100%	(n = 45) 100%

DISCUSSION

According to Turkish Statistics Institution records adolescent pregnancy rate of Turkey in 2016 is 0,024; of Kırşehir is 0,023. (1). So Kırşehir has similar adolescent pregnancy rate to Turkey. Yıldırım et al. found the mean age of adolescents in İzmir as 17,3, Yıldızhan et al. found the mean age of adolescents in Van as 17,36, Ayyıldız et al. found mean age of adolescents in Zonguldak as 18 (5-7). We found it as 17,51 similar to literature.

There was no statistically significant difference between the mean levels of hemoglobin and hematocrit concentrations of group 1 and group 2. In contrast to our findings; Ayyıldız et al. and Keskinöğlü et al. , Lira et al. , Malamitsi-Puchner et al. found significantly lower levels in adolescent group (7-10).

There was no statistically significant difference between the groups in terms of fetal birth weight. In contrast to our findings Ayyıldız et al. , Miller et al. and Sekeroğlu et al. found that adolescent pregnant had lower weighted babies (7, 11, 12).

There was no statistically significant difference between the groups in terms of first and fifth minutes Apgar scores of babies. Taner et al. reported that there wasn't any significant difference between the groups that were similar to our results; but Ayyıldız et al. reported significantly lower Apgar scores in adolescent group (7, 13).

In our study, we found that cesarean section rate was statistically significantly lower in an adolescent group than the adult group. Similar to us; Arkan et al., Sekeroğlu et al., Taner et al., Pavlova-Greenfield et al., Zeteroğlu et al. and Satin et al. reported lower cesarean section rates in adolescents (11, 13-17). On the other hand, Ayyıldız et al., Gortzak-Uzan et al. found higher cesarean section rates in adolescents (7, 18).

There was no statistically significant difference between the groups in terms of cesarean indications. Meydanlı et al. reported the similar results (19).

Adolescent pregnancies are still being a problem

socially. In contrast to old-fashioned data, we think that medical problems of adolescents are less frequent than expected. This may be due to regular follow up of adolescent pregnant during the antenatal, natal and postnatal period, regulation of feeding, and improvement of social status. Adolescents will continue to get pregnant to some ratio in developing countries like Turkey, so this adolescent pregnant should be prevented, and some precautions should be taken to prevent negative results. One of the restrictions of our study is that follow up of newborns is not regular, and the other one is that complicated pregnancies are dispatched to tertiary centers. Another restriction is the inability to prove the accuracy of maternal age recordings.

It is pointed in the literature that adolescent pregnancies cause negative sociocultural results. In the Kırşehir adolescent, the pregnancy rate is not higher than that of Turkey. Differently, from the literature, we examined the primigravid adults like adolescents to make a more homogenous comparison. Because the mean age of adolescents was high and both groups were formed by primigravid pregnant, we did n't find any effective negative result between the groups. As a result, we found lower cesarian section rate in adolescents and no statistically significant difference in terms of other variables.

REFERENCES

1. Bülteni TH. İstatistiklerle Kadın 2016, Sayı: 24643, 07 Mart 2017. 2017.
2. Althabe F, Moore JL, Gibbons L, Berrueta M, Goudar SS, Chomba E, et al. Adverse maternal and perinatal outcomes in adolescent pregnancies: the Global Network's Maternal Newborn Health Registry study. *Reproductive health*. 2015;12(2):S8.
3. Norris S, Norris ML, Sibbald E, Aubry T, Harrison ME, Lafontaine G, et al. Demographic Characteristics Associated with Pregnant and Postpartum Youth Referred for Mental Health Services in a Community Outreach Center. *Journal of the Canadian Academy of Child and Adolescent Psychiatry*. 2016;25(3):152.
4. Violence WHO, Prevention I, Organization WH. Global status report on road safety 2013: supporting a decade of action: World Health Organization; 2013.
5. Yıldırım Y, Inal MM, Tinar S. Reproductive and obstetric characteristics of adolescent pregnancies in Turkish women. *Journal of Pediatric and adolescent Gynecology*. 2005;18(4):249-53.
6. Yıldızhan R, Kulusarı A, Edirne T, Adalı E, Erol Ş, Kurdoğlu M, et al. Van yöresinde adolesan gebeliklerin analizi. *Van Tıp Dergisi*.

2009;16(4):124-7.

7. Ayyıldız T, Topan A, Öztürk Ö, Kulakçı H. Adölesan Gebeliklerin Anne ve Bebeğe Yönelik Obstetrik Sonuçlar Açısından Değerlendirilmesi. Dokuz Eylül Üniversitesi Hemşirelik Fakültesi Elektronik Dergisi. 2015;8(2).
8. Keskinoglu P, Bilgic N, Picakiefe M, Giray H, Karakus N, Gunay T. Perinatal outcomes and risk factors of Turkish adolescent mothers. Journal of pediatric and adolescent gynecology. 2007;20(1):19-24.
9. Lira JP, Oviedo HC, Pereira L, Dib CS, Grosso JE, Ibarguengoitia FO, et al. Analysis of the perinatal results of the first five years of the functioning of a clinic for pregnant teenagers. Ginecologia y obstetricia de Mexico. 2006;74(5):241-6.
10. Malamitsi-Puchner A, Boutsikou T. Adolescent pregnancy and perinatal outcome. Pediatric endocrinology reviews: PER. 2006;3:170-1.
11. Şekeroğlu M, Baksu A, İnce Z, Gültekin H, Göker N, Özsoy S. Adölesan ve ileri yaş gebeliklerde obstetrik sonuçlar. Şişli Etfal Hastanesi Tıp Bülteni. 2009;43(1):1-7.
12. Miller FC. Impact of adolescent pregnancy as we approach the new millennium. Journal of Pediatric and Adolescent Gynecology. 2000;13(1):5-8.
13. Taner CE, Aydoğan Kırmızı D, İriş A, Başoğlu Ö. Adölesan gebeliklerin sonuçları. Medeniyet Medical Journal. 2012;27(1):6-10.
14. Arkan D, Kaplanoğlu M, Kran H, Ozer A, Coşkun A, Turgut E. Adolescent pregnancies and obstetric outcomes in southeast Turkey: data from two regional centers. Clinical and experimental obstetrics & gynecology. 2010;37(2):144-7.
15. Pavlova-Greenfield T, Sutija V, Gudavalli M. Adolescent pregnancy: positive perinatal outcome at a community hospital. Journal of perinatal medicine. 2000;28(6):443-6.
16. Zeteroglu S, Sahin I, Gol K. Cesarean delivery rates in adolescent pregnancy. The European Journal of Contraception & Reproductive Health Care. 2005;10(2):119-22.
17. Satin AJ, Leveno KJ, Sherman ML, Reedy NJ, Lowe TW, McIntire DD. Maternal youth and pregnancy outcomes: middle school versus high school age groups compared with women beyond the teen years. American Journal of Obstetrics & Gynecology. 1994;171(1):184-7.
18. Gortzak-Uzan L, Hallak M, Press F, Katz M, Shoham-Vardi I. Teen-age pregnancy: risk factors for adverse perinatal outcome. Journal of Maternal-Fetal Medicine. 2001;10(6):393-7.
19. Meydanlı MM, Çalıřkan E, Ecemiş T, Arllar S, Dölen İ, Haberal A. Adölesanlarda Gebelik sonuçlarının değerlendirilmesi. Türkiye Klinikleri Journal of Gynecology and Obstetrics. 2000;10(2):98-103.