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Risk assessments, pregnancy and birth processes of pregnant women at primary health care center: A retrospective study

Birinci basamakta izlenmiş gebelerin risk değerlendirmeleri, gebelik ve doğum süreçleri: Retrospektif çalışma

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Abstract

Aim: Although many pregnancies and birth processes have passed without any problems, all pregnancies have various risks. The main purpose should be to control risky situations in pregnancy without threatening the health of mother and baby. Our study was carried out in order to investigate the complications related to the risks determined by the risk assessments of women who were followed during pregnancy and puerperants in a family health centre.

Methods: Women who were registered in the family medicine unit and whose pregnancy and puerperium were followed were scanned through the automation system during the study period. During the pregnancy periods, risk factors and time of birth were examined. Patients with any risk factor were considered as risky pregnant and examined whether a pathological condition developed during pregnancy or during the postpartum period.

Results: It was determined that during pregnancy period 10 pregnant women had at least one risk factor of 81 pregnant women whose risk assessments were examined. The distribution of risk factors was as follow; 3 with grand-multiparity story, 3 with preterm delivery, 2 with pregnancy over 35, 2 with Rh incompatibility, 1 with cardiovascular disease, 1 with multiple pregnancy, 1 with preterm labor, and under 18 years of age in 1 pregnant women was determined. It was found statistically significant that the risk of having a risk factor was higher than that of non-risk patients at 38 weeks ($p<0.01$). Among the risk factors, when the patients with preterm delivery and preterm delivery were excluded, it was also found that the preterm delivery risk increased significantly ($p=0.012$).

Conclusions: In pregnancies with risk factors, complications may occur much more than normal pregnancies. Therefore, it is very important for women to communicate with family physicians while planning pregnancy; if their risks are identified and appropriate approach protocols are used to ensure that both the mother and baby survive and maintain a healthy life.

Keywords: Risk, Pregnancy, Early Birth

Öz

Amaç: Birçok gebelik ve doğum süreci sorunsuz yaşansa da tüm gebelikler çeşitli riskler barındırır. Gebelikteki riskli durumlarını, anne ve bebeğin sağlığını tehdit etmeden kontrol altına almak asıl amaç olmalıdır. Çalışmamız bir aile sağlığımerkezinde, gebelik ve lohusalık boyunca takip edilmiş kadınların risk değerlendirmeleri ile tespit edilen risklerine bağlı komplikasyon gelişme durumlarını incelemek amacıyla yapılmıştır.

Yöntem:Aile hekimliği birimimizde kayıtlı kadınlardan çalışma döneminde gebelik ve lohusalık izlemleri yapılmış kişiler otomasyon sistemi üzerinden tarandı. Gebelik dönemlerinde risk varlığı, doğum haftaları incelendi. Herhangi bir risk faktörüne sahip olan gebeler riskli gebe olarak kabul edilip, gebelikte veya lohusalık döneminde patolojik bir durum gelişip gelişmediği incelenmiştir.

Bulgular: Gebelik ve lohusalık takipleri yapılmış 81 kadının risk değerlendirme formları incelendiğinde 10 tanesinin gebelik döneminde en az bir risk faktörü olduğu tespite dildi. Saptanan risk faktörlerinin dağılımı ise şu şekildeydi; akraba evliliği yapmış 3, grandmultiparite öyküsü olan 3, erken doğum öyküsü olan 2, 35 yaş üstü gebelik durumunda olan 2, Rh uygunsuzluğu olan 2, kardiyovasküler hastalığı olan 1, çoğul gebeliği olan 1, erken doğum eylemi olan 1, ve 18 yaş altında olan 1 hasta tespit edilmiştir. Risk faktörü mevcut olan gebelerin, risk olmayanlara göre 38 haftadan erken doğum yapma riskinin daha fazla olduğu istatistiksel olarak anlamlı tespit edilmiştir ($p<0,01$). Risk faktörleri arasından erken doğum öyküsü ve erken doğum eylemleri olan hastalar çıkarılınca yine anlamlı oranda erken doğum riskinin arttığı görülmüştür ($p=0.012$).

Sonuç: Risk faktörü barındıran gebeliklerde normal gebeliklere göre komplikasyon gerçekleşme ihtimali dahafazladır. Bu yüzden kadınların henüz gebelik planlarken aile hekimleriyle iletişim halinde olması, varsa risklerin saptanıp uygun yaklaşım protokolleriyle hem anneadayının hem de bebeğinin hayatta kalması ve sağlıklı bir yaşam sürmesi açısından çok önemlidir.

AnahtarKelimeler: Risk, Gebe, Erken Doğum

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Introduction

Although many pregnancies and birth processes goes well, all pregnancies have a variety of risks. In 15% of pregnancies, a high complication of mortality and morbidity is developed, requiring professional care. Pregnancy, giving birth and complications during the postpartum are the leading causes of mortality and morbidity among women in the reproductive period in developing countries [1].

Every minute in the world; 380 new pregnancy occurs, 110 women are experiencing complications related to pregnancy, 40 pregnancy results in abortion and a pregnant woman dies. 1% of these deaths occur in developed countries, 99% are in developing countries and 90% of these deaths are due to preventable reasons [2]. Maternal mortality rate in Turkey is one hundred thousand live births; 64 in 2002, 28.5 in 2005, while this rate fell to 15.4 in 2012 [3].

It should be the main goal of controlling the risky situation in pregnancy without threatening the health of the mother and baby. Diseases that exist before pregnancy (e.g. cardiovascular diseases, diabetes mellitus) can make pregnancy risky. In addition, pathologies occurring directly in the pregnancy process (such as preeclampsia, eclampsia, bleeding, hypertension) [4].

All pregnancies should be evaluated in terms of the presence or possibility of risk factors. There are risk factors such as diabetes or preterm birth history in some pregnant women who have added them to the high-risk category. In women who do not carry any risk factors, the pregnancy process can start as usual and then risk factors such as membrane rupture or hypertension occurring during pregnancy may develop. These risk factors may develop abruptly during pregnancy. Therefore, it is extremely important to implement the necessary treatment and follow-up protocols in order to detect and manage these risk factors at the time of development [5]. The risk of mortality and morbidity for mothers and infants will be reduced if many pathological conditions are diagnosed early or before the perinatal period.

Risk in terms of pregnancy; it is unlikely to occur under normal conditions, but there are some complications that may arise before pregnancy or develop during pregnancy [6]. In literature, the risk of pregnancy is defined in three groups, "low risk, risky and high-risk pregnancy" [7,8]. Some sources mention only the concept of "risky pregnancy and high-risk pregnancy" [9], while some sources talk about the concept of "low risk pregnancy and high risk pregnancy" [10].

Low-risk pregnancy is defined as laboratory and screening tests are normal pregnancy. For this reason, the majority of pregnancies are considered low risk. Risky pregnancy laboratory tests are normal pregnancies that should be observed more closely. High-risk pregnancy; pregnancies in which the fetus or mother is clearly at risk [7].

There are a variety of measurement tools aimed at determining risk situations in pregnancy. Knox Scorer Form, one of these tools; maternal factors, obstetric history, medical history, and risk factors for pregnancy [6]. The Rapid Risk Assessment Form, another measurement tool, it is a risk assessment form that the Perinatology Society has worked on. Similar to the Ministry of Health Risk Assessment Form [8]. Another tool is "Ministry of Health Risk Assessment Form"; It is standardized by the Ministry of Health and used in all health institutions in our country. This form; obstetric history, current pregnancy and general medical history, and aims to determine the risky situations in the past [11].

This study was conducted in a family health center with primary health care, to investigate the conditions of complications related to the risks determined by the risk assessments of women who have been followed during pregnancy and lactation.

Material and methods

A retrospective descriptive study was planned. The study was conducted by the researchers in accordance with the Helsinki Declaration.

The universe of the study consisted of women registered in our family medicine unit in Baglarbasi Family Health Center in Gaziantep province and who were followed during pregnancy and postpartum period.

During the study period, a part of the pregnancy follow-up of 163 women and 119 women were performed in our family medicine unit. Both pregnancy and lactation follow-up were determined as 81 and the number of people in our family medicine unit was taken to study. The Ministry of Health Risk Assessment forms [12] have been examined retrospectively for those individuals who underwent a general examination and pregnancy monitoring at least 4 times throughout their pregnancy. Later, the Family Medicine Information System Automation program, where these individuals faced with any health problems during pregnancy and postpartum period, were examined. Pregnant women with any risk factors are considered to be risky pregnancy, and a pathological condition is developed during pregnancy or in the period of postpartum. Births before 38th gestational week were considered as premature delivery.

In evaluating the findings obtained in the study, SPSS v20 (IBM, USA) was used for statistical analysis. Descriptive statistics for data analysis, mean and standard deviation for continuous variables, and number and percentage were used for categorical data. The Chi-squared test was used for comparisons. The semantics were evaluated in the confidence range of 95%, and $p<0,05$ was considered meaningful.

Results

During the study period, we examined the risk assessment forms of the 81 women who followed the pregnancy or lactation in our family medicine unit were found to have at least one risk factor in the gestation period. The risk factors of these people differ among each other. There are three distinct risk factors in one of these individuals, each with two risk factors, and the remaining six are determined to have only one risk factor. The risk factors of the patient who had a three risk factor were multiple pregnancies, early birth history and Rh incompatibility. In one of the patients with two Risk factors, 35 years of gestation and grand-multiparity are detected; In the other, early birth history and relative marriage were revealed. In 6 patients with a risk factor, relatives marriage, grand-multiparity, early birth history, cardiovascular disease, Rh

incompatibility and pregnancy were under 18 years. In general, there are nine different risk factors in 10 patients. The distribution of the detected risk factors was as follows; married relatives in 3, the history of grand-multiparity in 3, the early birth story in 2, the case of pregnancy over the age of 35 in 2, Rh incompatibility in 2, cardiovascular disease in 1, multiple pregnancy in 1, the early birth action in 1 and under the age of 18 in 1.

Pregnant women with risk factors have been statistically significant that there is more risk of premature birth than 38 weeks, according to non-risk ($p<0.01$). When patients with early birth history and early birth actions were removed from risk factors, there was still significantly increased risk of premature birth ($p=0.012$, Table 1).

Pregnant women with any risk factors

	With risk factors		With no risk factors		Total		p
	n	%	n	%	n	%	
Premature births	6	7.4	7	8.8	13	16.1	
Births in time	4	4.9	64	78.9	68	83.9	<0.001
Total	10	12.3	71	87.7	81	100	

Premature birth risks and pregnancies with any risk factor other than preterm delivery

Premature births	3	3.8	7	8.98	10	12.8	
Births in time	4	5.6	64	82.04	68	87.2	0.018
Total	7	8.9	71	91.02	78	100	

Table 1: Preterm delivery status of pregnant women according to risk factor

Discussion

35% of pregnancies on 2008, 39% of pregnancies on 2003, 40.2% of pregnancies on 1998 in any risk category, according to Turkey's Population and Health Survey (TNSA). TNSA's risk categories in pregnancy; Maternal age (aged under 18 or 34 years of age) constitutes the birth range (more than 2 years of gestation) and birth count (more than 3 birth) [13-15]. In our study, the presence of at least one risk factor was identified in 10 of the 81 pregnants (12%).

Many factors have been described in the etiology of preterm birth. Especially the diseases belonging to the mother, the problems of perinatal period, socioeconomic level, infections, etc. [16-18]. Approximately 45% of premature labors are due to unknown causes, 30% of them are due to premature rupture of membranes and 20-25% of them are due to other pregnancy conditions. In the beginning of obstetric problems, there are diseases of fetuses and mothers. The main diseases of the mother; uterocervical structural disorders, ablatio placentae, amnion is the scarcity of fluid, hypertension, diabetes, intrauterine infections. The reasons for the fetus are major congenital disorders, chromosomal anomalies, multiple pregnancies [19]. In our study, the risk factors of premature birth pregnancies are multiple pregnancy, early birth history, Rh incompatibility, relative marriage, pregnancy above 35 years, grand-multiparity and cardiovascular disease in the mother (atrial and ventricular septal defect).

In premature infants, according to the term group, the risk of early sepsis increased by seven times (preterm 8%, term 1.2%) was reported. In another study comparing early membrane rupture (EMR) or non-preterm preterm, the early sepsis was found to be 2% in the control group, 5.2% in the preterm of EMR [20]. Therefore, it is very important to minimize the possibility of pregnant preterm birth.

Hypertensive diseases, especially preeclampsia, affect maternal morbidity and mortality. The fetus increases mortality of asphyxia as a result of utero-placental insufficiency and abruptio placentae. Hypertension, proteinuria and uric acid elevation are other factors that increase fetal mortality [21]. In our study, pregnant women with preeclampsia or arthroplasia are not included in the risk factor. However, in a study examined by the literature, the rate of pregnant women with preeclampsia was 26.8% [9].

Diabetes Mellitus (DM) is important for perinatal risk factors, especially in uncontrolled type 1 DM due to vascular disease controlled by DM type 1, the risk of congenital anomaly is 4-10 times, and neonatal mortality is reported to be 15 times higher [22]. In another study, perinatal mortality in uncontrolled diabetes was reported as 31-38/1000 live Birth [23]. In patients with diabetic vascular disease, the risk of intra-uterine growth retardation (IUGR) is high. The incidence of congenital abnormalities in diabetic mothers infants is 5-10%, neural tube defects, congenital heart disease, especially large artery transposition, ventricular septal defect (VSD) is frequent [9]. In this study, the high rate of preeclampsia is attributed to the fact that the perinatology unit has been observed in pregnants. In our study, the fact that many patients were left out of work due to the retrospective of the data, the first digit to be served to the patient who did not have a preeclampsia and diabetes may explain that the patient is not found.

In a study conducted for risky pregnancy in 2010, the incidence of total multiple pregnancies was found to be 10.6% [9]. In our study, the rate of multiple pregnancies was found 10%.

Due to antenatal monitoring, neonatal morbidity and mortality were reported to decrease [24]. The main three different healthcare professionals perform antenatal monitoring and obstetric care: female diseases and birth physicians, family physicians, nurses/midwives [25]. In the family health centers, two of them are already in position. When the birth week falls, the baby's problems are increasing, early and late morbidity increases [9]. It is very important for women to be in contact with family physicians while they are planning a pregnancy, if any risks are detected and the appropriate approach protocols, both the maternal candidate and the baby survive and a healthy life.

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