

Analysis of Drug Use During Pregnancy in a Tertiary Women Health Hospital

Üçüncü Basamak Bir Kadın Sağlığı Hastanesinde Gebelik Süresince İlaç Kullanımının Analizi

Şule ÖZEL¹, Ayçağ YORGANCI¹, Nilüfer ERCAN², Nagehan CENGAVER¹, Yaprak ENGİN ÜSTÜN¹

ÖZ

Amaç: Amacımız hastanemizde doğum yapan kadınların gebelik sırasında ilaç kullanımlarını analiz etmektir.

Araçlar ve Yöntem: Çalışmamız Zekai Tahir Burak Kadın Sağlığı Hastanesi Postpartum Kliniğinde yürütülen kesitsel-tanımlayıcı bir çalışmadır. Şubat 2017'de bir haftalık periyotta hastanemiz postpartum kliniğinde doğum sonrası yatan tüm hastalar çalışma için bilgilendirildi ve 109 hasta çalışmaya katılmayı kabul etti. Hastalar gebelikte ilaç kullanımı ve kullanılan ilacın kimin tarafından reçete edildiği konusunda sorgulandı. Aynı zamanda kadınların obstetrik hikayeleri ve eğitim durumları değerlendirildi.

Bulgular: Kadınların kullandığı ilaçlar ve oranları şu şekilde sınıflandırıldı: Multivitaminler %54.1 (n=59), antianemikler %43.1 (n=47), folik asit %18.3 (n=20), vitamin D %11.9 (n=13) ve antibiyotikler % 9.2 (n=10). Bu sınıflamaların dışında kullanılan ilaçlar % 48.6 (n=53) idi. Gebelik sırasında en az 1 ilaç kullanan kadınların oranı %84.4 (n=92) idi. Çalışmamızda vitamin ve mineral dışında ilaç kullanım oranı %55 (n=60) idi. Kullanılan ilaçların %82.6'sı uzman hekim tarafından, %11.6'sı aile hekimi tarafından reçete edilmişti. Reçetesiz kullanılan ilaçlar %5.4'ü oluşturuyordu.

Sonuç: Toplum genelinde antibiyotik kullanımı yaygın olmakla birlikte, bizim sonuçlarımızda gebelikte antibiyotik kullanımı oldukça düşük oranda bulundu. Bununla birlikte ülkemizde gebelik sırasında ilaç kullanım oranlarındaki yükseklikten dolayı gebelik sırasında ve emzirme döneminde ilaç kullanımı kayıt sisteminin oluşturulması ihtiyaçtır.

Anahtar Kelimeler: Gebelik, güvenli ilaç kullanımı, reçete

ABSTRACT

Purpose: Our aim was to analyze the drug use during pregnancy in women giving birth in our hospital.

Materials and Methods: This descriptive study was conducted at Postpartum Clinic of Zekai Tahir Burak Women Health Hospital. In February 2017, All post partum woman in our clinics asked about the participation in the study and 109 patients accepted. Patients were questioned by a midwife about the drugs (antibiotic, vitamin, folic acid, vitamin D, over-the-counter drug and etc.) they have used and who have prescribed the drugs during pregnancy. Their obstetric histories, educational statuses were also assessed.

Results: The classification of the used drugs was as follows: multivitamins 54.1% (n=59), antianemics 43.1% (n=47), folic acid 18.3% (n=20), vitamin D 11.9% (n=13) and antibiotics 9.2% (n=10). The rate of drugs used apart from these (Enoxaparin, Progesterone, Ventolin, Prednol, Levothyroxine, Propycil, Insulin, Carbamazepine, Calcium-magnesium carbonate) was 48.6% (n=53). The rate of women who used at least one medication during pregnancy was 84.4% (n=92). Drug use rate excluding vitamins and minerals in our study group was 55% (n=60). While 82.6% of the prescriptions were written by specialist physicians, 11.9% were written by family physicians. The percentage of the over-the-counter drug usage was 5.4%.

Conclusion: Although antibiotics are widely used in general population, according to our results during pregnancy it is relatively low compared to other countries. However, because of the high rate of drug use during pregnancy, the drug use recording system during pregnancy and breast feeding period is needed in our country.

Key Words: Pregnancy, prescription, safe drug use

Received: 09.05.2018; Accepted: 30.08.2018

¹ University of Health Sciences Zekai Tahir Burak Women Health, Health Application and Research Hospital, Obstetrics and Gynecology, MD

² University of Health Sciences, Zekai Tahir Burak Women Health, Health Application and Research Hospital, Nurse Practitioner

Corresponding author: Şule Özel, University of Health Sciences Zekai Tahir Burak Women Health, Health Application and Research Hospital, Hamamözü/Ankara

E- mail: sule.ozel71@gmail.com

How to cite: Özel Ş, Yorgancı A, Ercan N, Cengaver N, Engin Üstün Y. Analysis of drug use during pregnancy in a tertiary women health hospital. Ahi Evran Med J. 2018;2(3):74-76.

INTRODUCTION

Drug use during pregnancy closely affects the health of both the mother and the baby. Pregnancy needs, chronic disease or a disease appeared during pregnancy can be a cause of drug use during gestation. The doses and dose intervals of drugs must be readjusted because of the changes in cardiovascular, pulmonary, renal and gastrointestinal systems of mother and welfare of growing fetus. 18-21st and 56-60th days of pregnancy are the most sensitive period of gestation for teratogenic effect to fetus.¹⁻² Threshold levels of drugs for teratogenic effects are related to dosage, exposure period, tissue specific effect, placental passage, maternal body mass index, maternal metabolism, and maternal and fetal age.³⁻⁴ Generalization of planned pregnancies with family planning services, detection of gestation and prescribing effective drugs at minimal effective doses according to gestational weeks, prevention of drug use without physician's prescription, pre-pregnancy counselling is important to ensure safe medication use for both mother and fetus.⁵ For the prevention of therapeutic abortion because of teratogenic drug use, safe medication use in pregnant or women with pregnancy expectation is crucial.

Our aim was to guide safe and logical drug use studies by analyzing present situation of women giving birth in our hospital.

MATERIALS AND METHODS

This descriptive cross sectional study was conducted at University of Health Sciences Zekai Tahir Burak Women Health, Health Application and Research Hospital Postpartum Clinics in which postpartum patients are hospitalized after delivery. All postpartum women in our clinics asked about the participation in the study and 109 patients accepted. Patients were questioned by a midwife about the drugs (antibiotic, vitamin, folic acid, vitamin D, over-the-

counter drug and etc.) used by them and who have prescribed the drugs during pregnancy. Their obstetric histories, educational statuses were also assessed. The study was approved by the Local Ethics Committee of the institution. Written informed consent was taken from all participants. Statistical analyses were carried out using SPSS 17.0 for Windows (SPSS Inc., Chicago, IL).

RESULTS

Annual birth number of our hospital was 16.000 in 2017. There was approximately 1300 birth in one-month study period. Of the 109 randomly chosen postpartum patients, 51 (46.8%) were primiparous and 58 (53.2%) were multiparous. Their educational status was associate degree and above 21.3%, high school 31.2%, secondary school 21%, primary school 24.7% and illiterate 1.8%. The classification of the used drugs was as follows: multivitamins 54.1% (n=59), antianemics 43.1% (n=47), folic acid 18.3% (n=20), vitamin D 11.9% (n=13) and antibiotics 9.2% (n=10). The rate of drugs used apart from these (Enoxaparin, Progesterone, Ventolin, Prednol, Levothyroxine, Propycil, Insulin, Carbamazepine, Calcium-magnesium carbonate) was 48.6% (n=53) (Table 1). The percentage of patients who did not use any drug was 15.6% (n=17). The prescribed drugs given by a specialist physician were 82.6% and by family physician was 11.9%. The percentage of the over-the-counter drug usage was 5.4%. The over-the-counter drugs in the study group were only multi-vitamins and antianemics. In our study group, prescribed drug use excluding vitamins and minerals was 55% (n=60). Types of used antibiotics were cephalosporin, penicillin and fosfomycine. Antibiotics were used for respiratory tract and urinary system infections and none of them was teratogenic. Antibiotic usage during pregnancy wasn't associated with any adverse health problems which need special health care in infants.

Table1: Type of the drugs, number and percent of patients who used them.

Drugs	Multivitamin	Antianemics	Vitamin D	Folic Acid	Antibiotics	Other	No drugs
Patients	59	47	13	20	10	53	17
Number, %	(54.1%)	(43.1%)	(11.9%)	(18.3%)	(9.2%)	(48.6%)	(15.6%)

DISCUSSION

In our study, 84.4% of women used at least one medication during pregnancy. In a study, up to 80% of women are estimated to use at least one medication during pregnancy.⁶ Our results were similar to this rate. We also found out that drug use rate in pregnancy excluding vitamins and minerals were 55%. Among the 12 most comparable studies, estimated rates of prescription drug use in pregnancy excluding vitamins and minerals ranged from 44.2% to 93% across countries and antibiotic usage was 20-25%.⁷ In another study, the use of antibiotics during pregnancy varies between 19.7-40.8% in Europe and USA.⁸ Antibiotic usage rate was %9.2 in our study population.

Our study shows that drug use in pregnancy excluding vitamins and minerals was near to baseline of these studies. In Turkey, primary goal of rational drug use is to decrease unnecessary antibiotic usage. With this national action plan, the ratio of prescriptions, which includes an antibiotic, decreased from 34.9% to 29.5%.⁹ Although antibiotics are widely used in general population in our country, during pregnancy it is relatively low compared to other countries according to our results.

To achieve logical and safe drug use during pregnancy, it is of utmost important that the drug use recording system during pregnancy and breastfeeding period in our country is needed. So, as a starting point for a drug registration system during pregnancy and lactation period for our country, we set up an e-mail address where our patients can give feedbacks about the prescribed medicine in our hospital, and we started to get feedback using this administrative

prescription databases. We hope to collect data about short and long term adverse effects of drugs by the help of this database.

Conflict of interest: The authors declare no conflict of interest.

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