

GEBELİKTE İLAÇ İNTOKSİKASYONLARI SEBEP VE SONUÇLARI

Causes and Results of Drug Intoxication in Pregnancy

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ÖZET

Giriş: Gebelikte ilaçların farmakokinetiği ve farmadınamiği değişebilir. Bu yüzden bu hastalar genellikle yoğun bakımda takip edilirler. Erken dönemde gelişen komplikasyonlar yoğun bakımda takip ve tedaviyi yapan hekim için bir sorun olmakla beraber geç dönemde hastalar yalnızca kadın doğum uzmanları tarafından takip ve tedavi edildiği için geç dönem komplikasyonlar yeterince bilinmemektedir. Çalışmamızda en sık karşılaşılan ilaç intoksikasyonları ve gelişen komplikasyonları incelenmiştir.

Materyal metot: Son beş yıl içerisinde hastanemize ilaç intoksikasyonu nedeniyle başvuru yapan gebeler retrospektif olarak incelendi. Hastane arşivleri gebelik süresince ve yeni doğanda erken dönemde gelişen mortalite ve morbidite açısından araştırıldı.

Bulgular: İlaç intoksikasyonu nedeniyle başvuran 116 hastanın yüzde yetmiş beşi yoğun bakımda tedavi edilmişti. Konsültasyon notlarına göre bu hastaların %47.4'ü ilacı intihar amacı ile kullanmıştı ve %52.58'i yanlışlıkla aşırı doz aldıklarını belirtmişti. İntoksikasyon vakalarında en sık kullanılan ilaç %28.4 ile prenatal multivitaminlerdi. Bunu parasetamol, antibiyotikler, opioid olmayan analjezikler izledi. Yirmi sekiz hastada birden fazla ilaç kullanımı vardı. 15 hasta başka bir merkeze sevk edildi. Beş hastada erken doğum veya düşük gözlemlendi ve durum iki hastada ölümcül sonuçlandı.

Sonuç: Gebelerde ilaç intoksikasyonları genellikle kendi ilaçları ile gerçekleşmektedir. Bu ilaçların doz aralıklarının geniş olması sayesinde mortalite oranları düşük bulunmuştur. Gebelik uzun bir süreçtir ve kullanılan ilacın bu sürece etkisinin tespiti zor olabilmektedir. Bu yüzden gerçek morbidite oranları net değildir.

Anahtar Kelimeler: *Gebelik; İlaç intoksikasyonu; Erken komplikasyonlar*

ABSTRACT

Background and aim: Pharmacokinetics and pharmacodynamics of drugs may vary in pregnancy. Therefore, these patients are usually followed up in intensive care. Although early-term complications due to intoxication are usually a challenge for the physician in the intensive care unit, late-term effects are unknown by intensivists and only followed by a gynecologist. In our study, commonly used drugs and complications related to intoxication were investigated.

Methods: In the last 5 years, pregnant patients who admitted to our hospital with drug intoxication were evaluated retrospectively. The hospital archives were investigated in these patients for the mortality and morbidity due to intoxication, in the pregnancy period, the postnatal first month and the effects on the newborn.

Result: Seventy five percent of 116 pregnant women who admitted to our hospital due to drug intoxication were followed up in the intensive care unit. According to the consultation notes, 47.4% of the patients were used drugs for the purpose of suicide and the 52.58% patients were used inadvertently. The most commonly used drugs were prenatal vitamin drugs (28.4%), paracetamol (21.5%), antibiotics (12%) and non-opioid analgesics 6.8%. There was more than one drug use in 28 patients. Fifteen of the patients were referred to another center. Five patients had premature labor or miscarriage. In two patients, the condition was mortal.

Conclusion: Drug intoxications in pregnant women are usually carried out by the drugs they use. The mortality rate was found to be low because the therapeutic ranges of these drugs were broad. Pregnancy is a long process and it may be difficult to establish a relationship between possible complications and drug intoxication during pregnancy. Therefore the true morbidity rate is not clear.

Keywords: *Pregnancy; Drug intoxication; Early complications*

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INTRODUCTION

In pregnant women, pharmacokinetics and dynamics of drugs differ from other patients because of the physiological changes (4).

In addition, these physiological and environmental changes may trigger a change in mental or emotional status in pregnant women (1).

Misused doses in daily drug supplementation and cases of suicide purposed intoxication due to emotional changes in pregnancy may be the reason for applying to emergency services and intensive care unit.

In a study conducted by the toxicology research consortium, it was emphasized that 0.6% of all intoxication cases in the United States were pregnant however 80% of these patients were symptomatic and require treatment (5). This increases the rate of hospitalization and the importance of treatment in pregnant women who apply due to intoxication.

The aim of our study is to make a retrospective analysis of drug-induced intoxication cases in our province.

METHODS

After Bozok University ethical committee approval (2017-KAEK-189_2019.06.19_10) pregnant women admitted to the Bozok University Hospital emergency department and intensive care units between 01.05.2014-01.05.2019 were evaluated retrospectively. Hospital archives and electronic files of the patients were scanned and epicrisis, anamnesis, consultation notes and treatment notes were perused.

The causes of overdose in patients, whether they use the drugs with the purpose of suicide or dosing error and the type of drug used were examined.

In addition, complications, mortality and morbidity on pregnant and fetus were investigated.

Patients whose files could not be accessed or whose drug was unknown were not included in the study.

RESULTS

In the last five-year period, 116 patients with available information were identified during archival screening. Between these dates, %0.7 of total admissions to emergency department was due to drug intoxication or overdose. %5 of total drug intoxication or overdose patients were pregnant.

Of the 116 pregnant and intoxicated patients identified, 55 patients (47.4%) had used drugs or drugs for the purpose of suicide and the 52.58% patient was used inadvertently.

33 patients (28.4%) presented with intoxication due to prenatal vitamin drugs. Multivitamin drugs were the most common drug group in suicide - related admissions.

This was followed by Paracetamol 21.5%, antibiotics 12% and Non-opioid analgesics 6.8%, Oral contraceptive 3.4%, iron supplementation 3.4% respectively.

15.5 % of the patients used 2 drugs together and 8% used Three or more drugs combined. 3 of them used multivitamins, antibiotics and analgesics together.

The most commonly used drugs for suicide in pregnant women are presented at Table 1.

Table 1: The most common drugs in intoxication-related applications

Drugs	Number of patients (n=116)	Percents (%)
Prenatal multivitamins	33	28.4 %
Paracetamol	25	21.5%
Two drug Combination	18	15.5%
Antibiotics	14	12%
Three and more drugs Combination	10	8%
Non-opioid analgesics	8	6.8%
Oral contraceptive	4	3.4%
Iron perpetrator	4	3.4%

One patient stated that she was taking more than one drug, but she did not know their names.

Fifteen patients were referred to other centers. The reasons for referral were dialysis requirement and lack of empty beds in intensive care. Prognosis was mortal in 2 referred patients.

Five patients had premature labor or miscarriage. 51% of the patients (n=60) were in the 1st trimester, 25% in the 2nd trimester (n=29) and 23% in the 3rd trimester (n=27). The mean gestational week was 18.16 ±6.05 week.

There was no congenital anomaly in any fetus including a baby born prematurely.

DISCUSSION

In cases of drug intoxication in pregnant women, suicidal drug use was found to be more than accidental overdose. Fortunately, the majority of pregnant women, even for suicide purposes, used their own medications. Therefore the mortality rate may be low. The drugs used in pregnancy are observed as reliable or innocent drugs when examined the effect on the fetus.

The dosage ranges of these drugs are also relatively wide. When used alone, overdose may have less negative effects on mother and fetus.

In our study, the majority of patients were poisoned with their own drugs (6).

Likewise in a study supporting this data, iron intoxication has been reported as the second most common cause of drug poisoning among pregnant women (7).

But in our patients, multivitamin use was prominent, while iron use was lower in the list.

In the Toxicology Investigators Consortium study the most common cases of intoxication were with non-opioid analgesics (5).

In a study by Metz et al., Self-harm to the causes of death in pregnant women were almost one third of the causes of death in pregnancy (3) In this study, it was stated that drug addiction and psychiatric problems in pregnant women may increase drug-induced intoxication rate.

These patients often require intensive care follow-up. Because the combination of these drugs and the possibility of mixing with other drugs that are not specified after use in the suicide make it difficult to predict the results.

Uzkeser et al. Found that pregnant patients were treated more inpatient than non-pregnant patients and consequently treatment costs increased (6).

In a study examining ante partum depression in pregnant women, it was found that depression was observed most frequently in the third trimester. Differently in our study, the majority of the applications for intoxication were in the first trimester (8).

In a Danish study, the rate of miscarriage in pregnancies admitted due to intoxication was doubled compared to the normal population. No fetal anomaly was found in the patients in this study as in our study. Also in another study, deaths doubled between 2005 and 2014 due to drug-induced pregnancy problems in pregnant. Use of opioid drugs has been identified as the most common cause of death. Increasing drug addiction seems to have negative effects on pregnant women also (9).

Intoxication patients are usually followed by intensive care specialists or anesthesiologists. Pregnancy-related issues are consulted to gynecologists. Therefore, early complications are a challenge for anesthesiologists. However, pregnancy is a long process. These patients' follow-up and problems after discharge are problematic for gynecologists. The adverse effects of late complications and intoxications after this stage on the fetus are not fully known to anesthesiologists.

CONCLUSION

When pregnant women have poisoning, early intervention has paramount importance for the fetus as well as to the mother.

Since the majority of intoxications are observed in early pregnancy, late complications on the fetus are difficult to detect.

In these cases, multidisciplinary study and long-term follow-up after discharge seem necessary.

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