NEÜ PRESS

MEVLANA TIP BİLİMLERİ
MEVLANA MEDICAL SCIENCES
eISSN:2757-976X

OLGU SUNUMU/CASE REPORT

DOI:http:/dx.doi.org/10.56752/Mevmedsci.2023.28
Mev Med Sci, 2023; 3(1): 42-44

Adrenal Infarction in Pregnancy

Gebelikte Adrenal Enfarktüs

Dilara Bayraktar[1], Jule Eriç Horasanlı[2]

[1]Necmettin Erbakan University, Meram Faculty of Medicine, Medical Student, Konya, Turkey
[2]Necmettin Erbakan Üniversity, Meram Faculty of Medicine, Department of Gynecology and Obstetrics, Konya, Turkey

Makale Tarihleri/Article Dates:
Geliş Tarihi/Recived: 30 Eylül 2022
Kabul Tarihi/Accepted: 16 Şubat 2023
Yayın Tarihi/Published Online: 17 Nisan 2023

Sorumlu Yazar/Corresponding Author:
Dilara Bayraktar,
Necmettin Erbakan University, Meram Faculty of Medicine, Konya, Turkey
e mail: dilaraabyrktr@gmail.com

Açıklama/Disclosure: Yazarların hiçbiri, bu makalede bahsedilen herhangi bir ürün, aygıt veya ilaç ile ilgili maddi çıkar ilişkisine sahip değildir. Araştırma, herhangi bir dış organizasyon tarafından desteklenmedi. Yazarlar çalışmanın birincil verilerine tam erişim izni vermek ve derginin talep ettiği takdirde verileri incelemesine izin vermeyi kabul etmektedirler.

ÖZET

Adrenal enfarktüs çok nadir bir durumdur, ancak bazen hiper pıhtılaşma durumlarında görülür. Hamilelik bu hiper pıhtılaşma durumlarından biridir. Gebelikte oluşan pıhtılaşma sistemindeki değişiklikler bu hiper pıhtılaşmada etkilidir. 36 haftalık gebe, daha önce tromboz öyküsü olmayan, sağ üst kadran ağrısı şikayeti ile gelen ve sonunda tek taraflı sağ adrenal enfarktüs tanısı alan nadir bir olguyu sunuyoruz.

Anahtar Kelimeler: Gebelik, adrenal enfarktüs, arteriyel emboli, adrenal bez

ABSTRACT

Adrenal infarction is a very uncommon occasion however not very often seen in hypercoagulable states. Pregnancy is one of these hypercoagulation conditions. Changes in the coagulation system during pregnancy are effective in this hypercoagulation. We present a rare case of 36-week pregnant woman, without any history of previous thrombotic occasions, providing with right upper quadrant abdominal pain and ultimately diagnosed with unilateral rigt adrenal infarct.

Key words: Pregnancy, adrenal infarction, arterial embolism, adrenal gland

Atıf yapmak için/ Cite this article as: Bayraktar D, Eriç Horasanlı J. Adrenal Infarction in Pregnancy. Mev Med Sci. 2023;3(1): 42-44

INTRODUCTION

The causes of abdominal pain in pregnant woman can be classified into two groups; obstetric or non-obstetric (1). The most common causes of acute abdominal pain in pregnancy are acute appendicitis, cholecystitis, pyelonephritis, and problems related to adnexa, like ovarian torsion with ovarian cyst rupture (2).

Adrenal infarction is a rare cause of abdominal pain during pregnancy and if its diagnosis is missed, it might have serious medical consequences for the mother and child. The location of the pain may occur on the flanks, abdomen or chest, depending on the situation. It is difficult to identify adrenal infarction as the cause of abdominal pain during pregnancy. This is because the diagnosis of adrenal infarction has no specific signs and attention is given to more common pathologies (eg preterm labor, appendicitis, cholecystitis and pulmonary embolism) (3).

CASE PRESENTATION

A 25-year-old G2P1 pregnant woman presented at 36 weeks of gestation to the emergency department with acute onset of right-sided abdominal pain. The pain was severe, radiating to the back, and was accompanied by vomiting and nausea. There was no history of fever, chills, constipation, or urinary symptoms. Her medical history was unremarkable, only with appendectomy history.

On examination, her vital signs showed a blood pressure of 120/70 mmHg, pulse rate of 96 per minute and regular, respiratory rate of 18 per minute, a temperature of 37ºC, and oxygen saturation (SpO_2) of 98% in room air. On abdominal examination, there was moderate tenderness in the right upper quadrant, and there was no rebound tenderness. There was no fundus tenderness on uterine palpation, bowel sounds were present, and other system examinations were normal. Laboratory tests (white blood cell count, hemoglobin level, hematocrit, platelets, coagulation profile, kidney function test, liver function test, electrolytes, serum amylase, and lipase) at admission were essentially normal. Urine microscopy showed no evidence of microscopic hematuria, proteinuria, or infection. The gallbladder hydropic other organs were normal on abdominal ultrasonography.

In the obstetrics evaluation, a single, live, normal fetus with normal amniotic fluid was observed on ultrasonography. It was observed that there were regular contractions hitting 80 mmHg on CTG (cardiotocography). A 3530 g healthy male baby was delivered through cesarean section applied to the patient who had a previous cesarean section history. The patient's vital signs were normal after cesarean section, and when the effect of spinal analgesia ceased, severe pain reappeared and the pain did not respond to analgesics.

Abdominal contrast-enhanced computed tomography (CT) scan showed enlargement and edema in the right adrenal gland, lack of perfusion, and adrenal artery perfusion defect supporting the embolism (Figures 1 and 2). Cortisol levels and adenocortocotropic hormone (ACTH) levels were measured to assess adrenal insufficiency, and a normal ACTH result of 63 pg/mL and a slightly elevated cortisol level of 29 µg/dL were noted.

The patient was started on two daily doses of low-molecular-weight heparin (LMWH) subcutaneously as anticoagulant treatment due to new arterial embolism. The patient was discharged six days after the delivery.

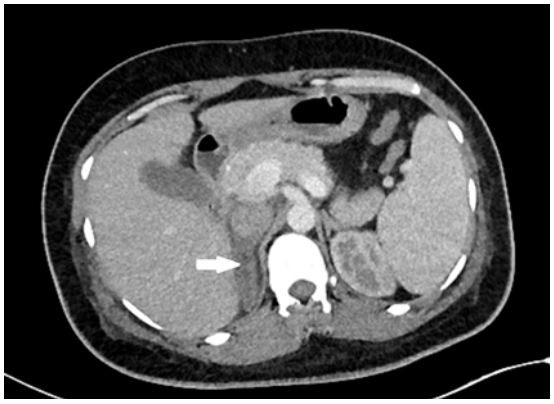

Figure 1. In the transverse section of the abdomen with CT, a lack of perfusion in the adrenal gland is seen with the arrow.

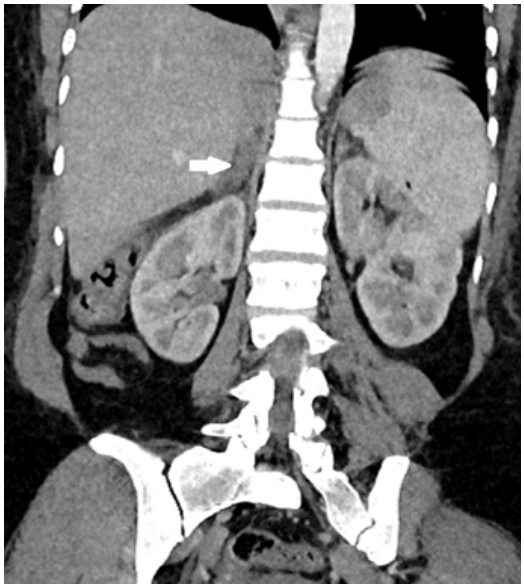

Figure 2. In the coronal section of the abdomen with CT, a lack of perfusion in the adrenal gland is seen with the arrow.

Thrombophilia and antiphospholipid syndrome panel was requested from the patient and policlinic control was recommended.

DISCUSSION

The risk of venous thromboembolism increases by 4-5 times, the risk of arterial thromboembolism which increases by 3-4 times in pregnancy. The total prevalence of thromboembolic events experienced during pregnancy is at the level of 1:500 (4).

Adrenal infarction may exist with abdominal pain, nausea and vomiting secondary to electrolyte disturbances. CT or MRI can be done to diagnose a suspected adrenal infarction. After adrenal infarction is diagnosed, therapeutic anticoagulation treatment is recommended to prevent contralateral adrenal infarction (5). Contrast-enhanced CT scan was performed in our patient who applied with complaints of right upper quadrant pain, nausea and vomiting, and anticoagulant treatment was started after diagnosis in accordance with the literature.

There are several predisposing factors for the development of adrenal infarction during pregnancy (3). Hypercoagulability is one of these factors. Hypercoagulability is necessary for saving a mother from bleeding postpartum. The coagulation factors VII, VIII, X, von Willebrand factor and fibrinogen levels rise during pregnancy. Free protein S decreases depending on the increase in binding protein. Level of plasminogen activator inhibitor-1 increases by five times (6). As pregnancy progresses, there is a significant decrease in the activity of activated protein C, a critical anticoagulant. While these physiological changes may be significant for minimizing intrapartum blood loss, they entail an increased risk of thromboembolism during pregnancy and postpartum (7).

Literature on adrenal infarction; consists of several small retrospective case series, mainly case reports, and old articles evaluating the pathology of adrenal infarctions for various reasons (8). In most of the cases, unilateral adrenal infarction was detected without adrenal insufficiency and was treated with anticoagulants that continued for a while after delivery (9). There is no definite opinion about how long to continue anticoagulant treatment, it should be individualized according to the patient. The use of anticoagulation in a pregnant patient should be evaluated for each patient according to the patient's characteristics, taking the risks into account. The risk of conversion to adrenal hemorrhage and the risk of hemorrhage at birth should be considered. Anticoagulation is recommended for adrenal infarction in the absence of bleeding (8). After the diagnosis of adrenal infarction, the patient should be followed up for signs of adrenal insufficiency, and steroid treatment should be administered if necessary (9).

When evaluating abdominal pains during pregnancy, it is atypical to confront arterial embolism, particularly in the adrenal gland. With the analyzes described above, a diagnosis of exclusion was realized, and a possible unnecessary operations was prevented.

Çıkar Çatışması: Çalışmada herhangi bir çıkar çatışması yoktur.

Finansal Çıkar Çatışması: Çalışmada herhangi bir finansal çıkar çatışması yoktur.

Sorumlu Yazar: Dilara Bayraktar, Necmettin Erbakan University, Meram Faculty of Medicine, Konya, Turkey
e-mail: dilaraabyrktr@gmail.com

REFERENCES

1. Öztürk HB, Selam B, Demirel C, ve ark. Gebelikte akut karın nedeni olarak miyom torsiyonu. Acıbadem Üniversitesi Sağlık Bilimleri Dergisi 2010;1:56-4.
2. Tekin F, İlter T. Birinci basamakta akut karın ağrısı olan hastaya yaklaşım. Güncel Gastroenteroloji Dergisi 2015;19(3):170-61.
3. Shah N, Deshmukh H, Akbar MJ, et al. Unilateral adrenal infarction in pregnancy with associated acute hypoadrenalism and subsequent spontaneous biochemical and radiological resolution. Clinical Case Reports 2022;10(2):05442.
4. Çom U, Melez DO, Melez İE, ve ark. Sezaryen sonrası pulmoner tromboemboli: Olgu sunumu. Dicle Tıp Dergisi 2014;41(4):757-4.
5. Green PAD, Ngai IM, Lee TT, et al. Unilateral adrenal infarction in pregnancy. BMJ Case Reports 2013:bcr2013009997.
6. Yaşar Z, Talay F. Gebelikte tromboembolik hastalıklara tanısal yaklaşım. Abant Tıp Dergisi 2015;4(3):308-2.
7. Bremme KA. Haemostatic changes in pregnancy. Best Practice & Research Clinical Haematology 2003;16(2):168-53.
8. Mathew R, Ali A, Sanders K, et al. Adrenal infarction in pregnancy secondary to elevated plasma factor VIII activity. The Cureus Journal of Medical Science 2021;13(11):e19491.
9. Fei YF, Gonzalez-Brown V, Rood K, et al. Non-hemorrhagic unilateral adrenal infarct in pregnancy. Journal of Case Reports and Images in Obstetrics and Gynecology 2019; 5:100044Z08YF2019.