GEBELİKTE ANTİKOAGÜLAN KULLANIMI İLE İLİŞKİLİ POSTPARTUM HEMORAJİ VE SONRASINDA ASPİRASYON PNÖMONİSİ GELİŞEN VAKANIN YÖNETİMİ

Management of Aspiration Pneumonia Case Occured After a Serious Post-partum Hemorrhage Related to Anticoagulant Treatment During Pregnancy

Emre BAŞER[1](0000-0003-3828-9631), Taylan ONAT[1](0000-0002-8920-1444), Melike Demir ÇALTEKİN[1](0000-0001-8797-7794), Demet AYDOĞAN KIRMIZI[1](0000-0001-7849-8214), Şiho HİDAYET[2](0000-0002-4103-9345), Mustafa KARA[3](0000-0003-2282-6850), Ethem Serdar YALVAÇ[1](0000-0001-9941-4999)

ÖZET

Kalp kapak trombozunu önlemek için mekanik kalp kapaklı hastalarda yaşam boyu antikoagülan tedavi zorunludur. Gebe kadında bu ilaçlar teratojenik etkilere ve kanama komplikasyonlarına neden olabilir. Bu yazıda, antikoagülanlarla ilişkili doğum sonrası kanama gelişen ve daha sonra aspirasyon pnömonisi gelişen bir olgu sunulmuştur.

Anahtar kelimeler: *Antikoagülan tedavi; doğum sonrası kanama; aspirasyon pnömonisi*

ABSTRACT

Life-long anticoagulation therapy is mandatory in patients with mechanical heart valve to prevent the valve thrombosis. It may cause teratogenic effects and hemorrhage complications in the pregnant woman. In this report, we present a case who developed post-partum haemorrhage related to anticoagulants and subsequently developed aspiration pneumonia.

Keywords: *Anticoagulant therapy; postpartum hemorrhage; aspiration pneumonia*

[1]Bozok Üniversitesi Tıp Fakültesi Kadın Hastalıkları ve Doğum A.D. Yozgat, Türkiye

[2]Malatya İnönü Üniversitesi, Tıp Fakültesi, Kardiyoloji A.D. Malatya, Türkiye

[3]Kırşehir Ahi Evran Üniversitesi Tıp Fakültesi Kadın Hastalıkları ve Doğum A.D. Kırşehir, Türkiye

Emre BAŞER, Dr. Öğr. Üyesi
Taylan ONAT, Dr. Öğr. Üyesi
Melike DEMİR ÇALTEKİN, Dr. Öğr. Üyesi
Demet AYDOĞAN KIRMIZI, Dr. Öğr. Üyesi
Şiho HİDAYET, Dr. Öğr. Üyesi
Mustafa KARA, Prof. Dr.
Ethem Serdar YALVAÇ, Prof. Dr.

İletişim:
Dr. Öğr. Üyesi Emre BAŞER,
Bozok Üniversitesi Tıp Fakültesi Kadın Hastalıkları ve Doğum A.D.
Adres Yozgat Bozok Üniversitesi Erdoğan Akdağ Yerleşkesi Atatürk Yolu 7. Km 66100 Merkez / YOZGAT
Tel: +90505-274 9203
e-mail: emrebasermd@gmail.com

Geliş tarihi/Received: 28.10.2019
Kabul tarihi/Accepted: 18.02.2020
DOI: 10.16919/bozoktip.639033

Bozok Tıp Derg 2020;10(2):245-48
Bozok Med J 2020;10(2):245-48

Bozok Tıp Derg 2020;10(2):245-48
Bozok Med J 2020;10(2):245-48

INTRODUCTION

Significant haemodynamic changes and hypercoagulopathy in pregnancy increase the risk of complications in patients with cardiovascular disease. This is especially valid for women with mechanical heart valves (MHV) prosthesis and the hypercoagulable state makes it difficult to treat effective anticoagulation (1).

The percentage of MHV in reproductive age women is not clearly known (2). Even though prosthetic heart valve thrombosis is a rare complication, it has high mortality and morbidity (3). Particularly, patients with metallic prosthetic valves have an estimated 5%) risk of thrombosis during pregnancy and maternal mortality of 1.5% related to the event. In the third trimester and at delivery, the use of warfarin is associated with maternal and neonatal bleeding approximately 5% to 15 of cases, respectively. Fetal abortus and embryotoxicity ratios are reported to be 10% and 15%, respectively (3). Management of this condition has serious difficulties such as wide range of risks, like fetal abortion, fetal and maternal bleeding and thrombosis. We wanted to present a case who developed postpartum haemorrhage related to anticoagulants and subsequently developed aspiration pneumonia.

CASE PRESENTATION

A 32 years-old woman, gravida 5, parity 1, abortion 3 (< 10 gestation weeks) was referred to our clinic as having 33 weeks' pregnancy with the complaints of premature preterm rupture of the membrane (PPROM). In her anamnesis, there was a history of mitral valve replacement (MVR) and usage of warfarin. The patient used LMWH (Low-molecular-weight heparin) in the first 3 months of pregnancy, followed by 5 mg / day warfarin.

Patient's vaginal examination showed that the cervix was 5 cm dilated and 80% effaced. International Normalized Ratio (INR): 1.8, haemoglobin (Hb): 10.5 gr/dl. Other laboratory findings were normal. Under spinal anesthesia, caesarean section (C/S) was made after the administration of 2 units fresh frozen plasma (FFP). There was no complication detected during the operation. At these condand sixth hours of the postoperative first day, the Hb values were 10.1 gr / dl and 9.2 gr / dl, respectively. Then enoxoparin sodium 6,000 IU (60 mg) / 0.6 ml was started twice a day. Her vital findings were normal until the third day of operation. On the third day of her postoperative period, she complained about sudden dizziness, hypotension (90 / 60 mmHg), tachypnea (20 - 25 / min) and tachycardia (120 / min). There wasn't any vaginal active bleeding. The ultrasonic investigation showed a large peritoneal fluid. Blood products preparation was planned promptly due to Hb was 3.1 gr/dl. Blood pressure, pulse, and respiration rate were 70 / 40 mmHg, 140-150 / min, and 20 - 25 / min, respectively. Furthermore, the patient lost her conscious. She was entubated, and four units of concentrated red blood cells were transfused. As the transfusion procedure was ongoing, reoperation was performed. Approximately 4 liters of coagulated blood was drained from the abdomen. When being sure that there was no active bleeding area, the operation terminated. During the postoperative period, Hb values reached 9.9 g / dl. 6000 IU (60 mg) / 0.6 ml of enoxaparin sodium was again started every 12 hours. At the tenth hours of reoperation, the patient's oxygen saturations started to fall. During the observation, chest X-ray revealed common pneumonic infiltrates (Figure 1). She was diagnosed with aspiration pneumonia involving the bilateral middle and lower zones and parenteral antibiotic therapy (tigecycline) was initiated. In addition, she was successfully treated with high continuous positive airway pressure (CPAP) for 2 days. On the sixth postoperative day, the patient was discharged home with almost complete resolution of her symptoms.

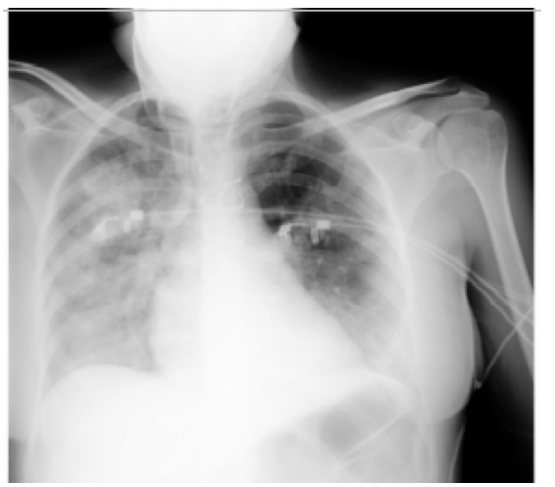

Figure 1: Diffuse pneumonic infiltrates on chest x-ray.

DISCUSSION

The lifelong anticoagulation therapy for all patients with MHV is mandatory (4). With anticoagulation therapy, there is usually no problem following the patients. However, hypercoagulopathy state occurs in pregnancy. Therefore, the risk of thrombosis and the need for anticoagulation increase in these patients. There is no clinically controlled studies to guide the anticoagulant therapy of pregnant patients with MHV, so there is no optimal treatment (5). Current guidelines are based on small retrospective trials and in these guidelines, warfarin is used as standard therapy in the normal population (6, 7). However, these drugs pass the placental barrier in the pregnant woman and may have teratogenic effects including congenital anomalies such as midfacial hypoplasia and stippling of epiphyses, along with central nervous system abnormalities (hydrocephalus and optic atrophy). In addition, these medicines may cause stillbirths and miscarriages (8). According to the 2014 American College of Cardiology (ACC) and American Heart Association (AHA) guidelines, first trimester is the main risky period (4). If warfarin does not exceed 5 mg / day, it is allowed to continue in the first trimester. For those who need more doses or prefer LMWH, LMWH should be administered twice a day and should be followed up with anti-factor Xa. It is recommended stopping warfarin at 36th gestational week and starting continue IV (intravenous) UFH (unfractionated heparin) with aPTT monitoring. If there is no significant bleeding, oral warfarin should be initiated 24 hours after the birth (4).

When the risks between hemorrhage and valve thrombosis are compared, valve thrombosis had more serious complications due to both increased maternal and fetal mortality (2). However, hemorrhage complications are common in patients with MHV, and these complications occur mainly during the birth. Fetal hemorrhage is most common seen as intracranial hemorrhage (9). Therefore, if the birth begins while using warfarin, there is indication of caesarean section (9). The risk of bleeding in the planned births is usually low because warfarin is with drewed close to birth (10). However, this situation changes when an emergency delivery is required. Since the possibility of severe hemorrhagic and thromboembolic complications can not be accurately determined, there are different opinions as to when and how aggressively anticoagulation should be reversed.

In urgent birth, firstly, warfarin should be stopped. The prothrombin complex concentrate (PCC) can be administered a target INR of 2.0. If the PCC product is not available, FFP may be administered (initial dose, 15 to 30 mL / kg) (11). Another option is oral or IV K vitamins in small doses (eg, 2 mg) can be given to reverse the mother's INR for approximately six hours or more, but the fetal INR may not be fully reversed (12). Vitamins K are routinely given to newborns shortly after birth to prevent bleeding due to lack of vitamin K (13). Our case had to be applied urgently C/S because cervix was 6 cm dilated. There was not any PCC in our hospital, therefore 1 unit FFP was given to the patient during C/S, and then INR value was detected 1.8. In the second operation, the patient was taking LMWH treatment and INR value was less than 2.

CONCLUSION

As demonstrated in our case, gestational management of MVR-treated patients with anticoagulant has serious problems in terms of both bleeding and thrombosis risk. Both maternal and fetal risks should be explained to patients at the beginning of the pregnancy. When ever possible, delivery should be planned and its modality debated in close collaboration with the gyneco-obstetrician / maternal-fetal medicine specialist, cardiologist, hematologist, and anesthesiologist. In addition, it is very important to plan the birth of these patients at a convenient center and to prepare blood / blood products in advance. There is no conflict of interest in our study.

REFERENCES

1. Chan WS, Anand S, Ginsberg JS. Anticoagulation of pregnant women with mechanical heart valves: a systematic review of the literature. Archives of internal medicine. 2000;160(2):191-6.
2. van Hagen IM, Roos-Hesselink JW, Ruys TP, Merz WM, Goland S, Gabriel H, et al. Pregnancy in Women With a Mechanical Heart Valve: Data of the European Society of Cardiology Registry of Pregnancy and Cardiac Disease (ROPAC). Circulation. 2015;132(2):132-42.
3. Garcez JD, Rosa VE, Lopes AS, Accorsi TA, Fernandes JR, Pomerantzeff PM, et al. Patient Management with Metallic Valve Prosthesis during Pregnancy and Postpartum Period. Arquivos brasileiros de cardiologia. 2015;105(4):426-9.

4. Nishimura RA, Otto CM, Bonow RO, Carabello BA, Erwin JP, 3rd, Guyton RA, et al. 2014 AHA/ACC guideline for the management of patients with valvular heart disease: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. The Journal of thoracic and cardiovascular surgery. 2014;148(1):e1-e132.
5. Aguilera C, Agusti A. [Anticoagulation of pregnant women with mechanical heart valves]. Medicina clinica. 2003;121(19):755-6.
6. Hirsh J, Fuster V, Ansell J, Halperin JL. American Heart Association/American College of Cardiology Foundation guide to warfarin therapy. Circulation. 2003;107(12):1692-711.
7. Nishimura RA, Otto CM, Bonow RO, Carabello BA, Erwin JP, 3rd, Fleisher LA, et al. 2017 AHA/ACC Focused Update of the 2014 AHA/ACC Guideline for the Management of Patients With Valvular Heart Disease: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. Journal of the American College of Cardiology. 2017;70(2):252-89.
8. Castellano JM, Narayan RL, Vaishnava P, Fuster V. Anticoagulation during pregnancy in patients with a prosthetic heart valve. Nature reviews Cardiology. 2012;9(7):415-24.
9. Kawamata K, Neki R, Yamanaka K, Endo S, Fukuda H, Ikeda T, et al. Risks and pregnancy outcome in women with prosthetic mechanical heart valve replacement. Circulation journal : official journal of the Japanese Circulation Society. 2007;71(2):211-3.
10. Panduranga P, El-Deeb M, Jha C. Mechanical Prosthetic Valves and Pregnancy: A therapeutic dilemma of anticoagulation. Sultan Qaboos University medical journal. 2014;14(4):e448-54.
11. http://www.fda.gov/ucm/groups/fdagov-public/@fdagov-biogen/documents/document/ucm350239.pdf (Accessed on May 08)
12. Ansell J, Hirsh J, Hylek E, Jacobson A, Crowther M, Palareti G. Pharmacology and management of the vitamin K antagonists: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines (8th Edition). Chest. 2008;133(6 Suppl):160s-98s.
13. American Academy of Pediatrics. Committee statement, Committee on Nutrition. Vitamin K supplementation for infants receiving milk