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Case Report

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The Management of a Pregnant with Aplastic Anemia: A Case Report

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ABSTRACT

Pregnancy is rarely observed in patients with aplastic anemia. Anemia, hemorrhage and infection may complicate pregnant with aplastic anemia and generally leads to growth restriction, premature labor and intrauterine fetal death. Twenty eight-year-old patient; gravidity 3, parity 2 and 1 alive, was pregnant for 29 weeks and had a history of aplastic anemia. Biochemical analysis and obstetric ultrasonographic examinations were performed during the regular visits. Our patient experienced preterm delivery. Due to late arrival for tocolysis, normal vaginal delivery was performed. Supportive therapy may diminish the rate of maternal and fetal complicatons. It is essential to inform patient and relatives about regular visits and earlier admittance at the time of emergency for minimizing life-threating risks.

Key words: *Aplastic anemia, Pregnancy, Management*

ÖZET

Aplastik Anemili Gebenin Yönetimi: Olgu Sunumu

Aplastik anemi ve gebelik birlikteliği ender görülür. Annede anemi, kanama ve enfeksiyon görülebilirken, fetüste gelişme kısıtlılığı, erken doğum, intrauterin ölüm izlenebilir. Yirmisekiz yaşında, gravidite 3, parite 2 ve yaşayanı 1 olan hastanın, aplastik anemi tanısı ile 29 haftalık gebeliği mevcuttu. Hastaya belirli aralıklarla obstetrik ultrason ve hemogram bakıldı. Doğum sancılarının olması üzerine başvuran hasta, tokoliz için geç kalındığından erken doğum yaptı. Destek tedavisi maternal ve fetal komplikasyon oranını düşürebilir. Hastalar olası komplikasyonlar hakkında bilgilendirilmeli, kontrolleri düzenli yapmaları önemle belirtilmelidir. Acil bir durumda erken başvuru yapılması ile hayati komplikasyonlar azaltılabilecektir.

Anahtar Sözcükler: *Aplastik anemi, Gebelik, Yönetim*

Aplastic anemia develops due to insufficient production of peripheral blood cells by bone marrow. It is a serious disease with potential fetal and maternal risks and patients with aplastic anemia usually experience complicated pregnancies. Major complications of aplastic anemia during pregnancy are hemorrhage and infections (1). Cytopenia may involve one or all of erythyroid, granulocytic and megakaryocytic series (2). Anemia; in varying degrees, is present due to decreased production of erythrocytes. Hypocellular bone marrow; characteristic finding of aplastic anemia, observed due to loss of granulocyte and megakaryocytic series. Drugs, chemical agents, microorganisms, hereditary diseases, radiation and leukemia are potential etiologic factors of aplastic anemia. Erythrocyte transfusions and, in some cases delivery or termination of pregnancy may be necessary. Bone marrow transplantation is required for patients that were unresponsive to previously mentioned interventions. Other treatment options are antitimocyte globulins, corticosteroids and immunosuppressive agents. Antibiotherapy must be administered agressively when necessary, however prophylactic antibiotherapy is not recommended (3).

Our aim is to evaluate and represent an aplastic anemia case resulted with preterm delivery.

CASE REPORT

Twenty eight-year-old patient, gravidity 3, parity 2 and 1 alive, was pregnant for 29 weeks and had a history of aplastic anemia for 4 years. Obstetric ultrasonography and total blood count examinations were carried out during regular visits. She received erythrocyte suspansion per 40-60 days before and per 30-45 days during pregnancy. No spontaneous bruising or bleeding was observed. Vital signs during delivery were as follows; blood pressure was 110/60 mmHg, pulse was 80/minute, body temperature was 36,5 °C. Cervical dilatation was 9 cm, effacement was 80% and presentation was in vertex position. 1600 gram in weight, 42 cm in length baby with 4-6 APGAR score was delive-

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red pretermly without tocolysis. Baby was transferred to new born intensive care unit due to prematurity. In the 3rd day of postpartum period, baby was died. Patient had a history of 2 pregnancies. First pregnancy resulted with normal vaginal delivery on time. Second pregnancy was preterm delivery and baby was lost on the 2nd postpartum day. On the previous day of preterm delivery, erythrocyte count was 2,21 M/ul, hemoglobine level was 7,45 g/dl, hematocrite was 19,5% and thrombocyte count was 112.000 K/ UL. Patient received 3 units of erythrocyte suspansion and subsequently hemoglobine was 11,7 gr/dl and thrombocyte count was 123.000 K/UL. No other biochemical abnormality was observed. On the 1st postpartum day, hemoglobine level was 9,65 g/dl, hematocrite was 26,3%, leukocyte count was 9,52 K/UL and thrombocyte count was 89.800 K/UL. Patient was consulted to hematology department and iron replacement therapy was initiated. Patient was discharged on the 2nd postpartum day with health.

DISCUSSION

Aplastic anemia is characterized by pancytopenia and markedly reduced celularity in the bone marrow (4). According to review of literature, rates of spontaneous abortion, preterm labor, intrauterine death and stillbirth are 16,7%, 12,1%, 16,7 and 15,1%; respectively for pregnants with aplastic anemia (5,6). In our case, pretem delivery was settled and baby was lost on the 3rd postpartum day. Our patients had a history of preterm labor in her previous pregnancy and baby loss on the 2nd postpartum day.

Maternal anemia may cause growth restriction and plays vital role on the rate of mortality. Neutropenia related maternal infections may result with corioamnionitis and increase the risk of preterm labor and delivery (7). Regular visits and supportive therapy may prevent intrauterine growth restriction. Vaginal delivery is safe and favorable however cesarean section is recommended when evident indication for surgery exists. Our patient had spontaneous vaginal birth that did not responsed to tocolysis. Hemorrhage is a serious clinical problem that may complicate delivery and cause abortion. Postpartum hemorrhage is associated with thrombocytopenia or functional disorders of platelets. In a study including 7 pregnants with aplastic anemia, it was observed that one out of 7 patients required erythrocyte and thrombocyte transfusions in the postpartum period (8).

Basic principle therapy of aplastic anemia is supportive however bone marrow transplantation is the most effective choice. Bone marrow transplantation is contraindicated during pregnancy due to teratogenic effect of high dose immunosupressive agents and radiotherapy. Antitimocyte globulins, cyclosporine, corticosteroids and granulocyte-colony stimulating factor (G-CSF) are therapies of choice for pregnants. Appropriate supportive therapy that was administered on time plays crucial role on the progress of aplastic anemia during pregnancy. Hemoglobin levels less than 8 gr/dl and thrombocyte count lower than 20.000/mm^3 are indications for erythrocyte and thrombocyte replacement. To maintain sufficient fetal oxygenation, hemoglobine level should be more than 8gr/dl (9). We maintain this level by erythrocyte and thrombocyte suspansions by 30-45 day intervals.

Supportive therapy may diminish rate of maternal and fetal complications. Informing patients about current status of disease and regular follow-up are essential to decrease the incidence of complications.

REFERENCES

1. Cunningham FG, Leveno KJ, Bloom SL, et al. Heamatological Disorders. In: Cunningham FG, Leveno KJ, Bloom SL, Hauth JC, Rouse DJ, Spong CY (Editors). Williams Obstetrics. 23rd edition, USA: McGraw-Hill Companies, 2010: 1085.
2. Türköz-Sucak G: Hematolojik Hastalıklar. In: İliçin G, Ünal S, Biberoğlu K, Akalın S, Süleymanlar G (Editors). Temel İç Hastalıkları. 1. Baskı, Ankara: Güneş Kitabevi, 1996: 1194.
3. Arnett C, Greenspoon JS: Hematologic Disorders. In: DeCherney AH, Nathan L, Goodwin TM, Laufer N (Editors). Current Diagnosis and Treatment, Obstetrics and Gynecology. 10th edition, USA: McGraw-Hill Companies, 2007: 408.
4. Young NS: Aplastic anemia. In: Fauci AS, Braunwald E, Kasper DL et al (Editors). Harrison's principles of internal medicine. 17th edition, New York: McGraw-Hill Companies, 2008: 663.
5. Pavithran K, Thomas M. Pregnancy associated aplastic anemia. J Assoc Physicians India 1996; 4: 273-7.
6. Kwon JY, Lee Y, Shin JC, Lee JW, Rha JG, Kim SP. Supportive management of pregnancy-associated aplastic anemia. Int J Gynaecol Obstet 2006; 95: 115-20.
7. Deka D, Banerjee N, Roy K, Choudhry VP, Kashyap R. Aplastic anemia during pregnancy: Variable clinical course and outcome. Eur J Obstet Gynecol Reprod Biology 2001; 94: 152-4.
8. Deka D, Malhotra N, Sinha A, Banerjee N, Kashyap N. Pregnancy associated aplastic anemia: Maternal and fetal outcome. J Obstet Gynaecol Res 2003; 29: 67–72.
9. Feig SA, Champlin R, Arenson E et al. Improved survival following bone narrow transplantation for aplastic anemia. Br J Haematol 1983; 54: 509-17.

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