Leiomyosarcoma of the Uterus Presenting with Thrombotic Thrombocytopenic Purpura

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ABSTRACT

Thrombotic thrombocytopenic purpura (TTP) typically presents with consumptive thrombocytopenia, non-immune intravascular hemolytic anemia, renal failure, various neurologic findings and fever. It is a clinical syndrome that can be associated with drugs such as ticlopidine, quinine, mitomycin C and cyclosporine, allogeneic stem cell transplantation, pregnancy, infections, autoimmune diseases and metastatic carcinoma. Here, we describe a 48-years-old women presented with full picture of TTP and diagnosed as leiomyosarcoma with further evaluation. She was successfully treated with multiple exchange transfusions and total excision of leiomyoma thereafter. As far as we know, this is the first case of leiomyosarcoma of the uterus presented with TTP. Therefore, the women with TTP, in whom no other cause can be found, should undergo a careful gynecological examination and pelvic ultrasonography should be performed.

Key Words: Thrombotic thrombocytopenic purpura, Leiomyosarcoma.

ÖZET

Trombotik Trombositopenik Purpura ile Gelen Uterus Leomiyosarkomu

Trombotik trombositopenik purpura (TTP), tüketim trombositopenisi, immün olmayan intravasküler hemolitik anemi, böbrek yetmezliği, çeşitli nörolojik bulgular ve ateş ile gelir. Bu klinik sendrom tiklopidin, kinin, mitomisin C, siklosporin gibi ilaçlar, allojeneik kök hücre nakli, gebelik, infeksiyon, otoimmün hastalıklar ve metastatik kanserlere eşlik edebilir. Bu yazıda TTP tablosu ile başvuran ve ileri incelemede leomiyosarkom tanısı konan 48 yaşında bir kadın hasta sunulmaktadır. Hasta multipl exchange transfüzyon ve bunu takip eden leomiyom çıkartılması ile başarıyla tedavi edilmiştir. Bu olgu bilgimiz dahilinde leomiyosarkom ile seyreden ilk TTP olgusudur. TTP'li kadın olgularda dikkatli jinekolojik muayene yapılması ve pelvik ultrasonografi çekilmesi yararlı olabilir.

Anahtar Kelimeler: Trombotik trombositopenik purpura, Leomiyosarkom.

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INTRODUCTION

Thrombotic thrombocytopenic purpura (TTP) is a disorder clasically characterized with microangiopathic hemolytic anemia (MAHA), thrombocytopenia, neurologic symptoms and signs, renal function abnormalities and fever. TTP is a progressive disease with high mortality rate exceeding 90% without treatment, but plasma exchange therapy dramatically improved its prognosis[1]. TTP is a clinical syndrome that can be triggered by multiple distinct events and may be associated with multiple other disorders. Associated conditions reported are drugs such as ticlopidine, quinine, mitomycin C and cyclosporine, allogeneic stem cell transplantation, pregnancy, infections, autoimmune diseases and metastatic carcinoma[2]. A case of thrombotic microangiopathy in the course of uterine sarcoma was reported from France in 1996[3]. Here, we describe the first case of leiomyosarcoma (LMS) presented with TTP.

A CASE REPORT

A 48-year-old woman was admitted to our hospital with fever, stupor and echymosis on the forearms. In physical examination, she was mentally confused and severely ill with a fever of 38.5°C; systolic blood pressure (BP) was 85 mmHg; diastolic BP was 60 mmHg; pulse rate was 90 per minute. She had extensive echymotic and petechial lesions on the forearms and legs. On abdominal examination a nontender mass of 15 x 15 cm was palpable below the umblicus. Laboratory investigation on admission showed hemoglobin 10.1 g/dL, hematocrite 24%, MCV 82 fL, white blood cell count 11.900/μL, platelet count 20.000/μL. Biochemical tests showed the following: BUN, 41 mg/dL; serum creatinine, 1.7 mg/dL; serum total bilirubin, 3.0 mg/dL; unconjugated bilirubin, 2.4 mg/dL; lactic dehydrogenase (LDH), 1185 IU/L. On coagulation tests prothrombin time (PT) and activated partial thromboplastin time (aPTT) were normal. Six percent fragmented erythrocytes were observed on peripheral blood smear and platelets were decreased. Corrected reticulocyte count was found to be 8%. Bacterial and viral infections were excluded with negative cultures and serological tests. In the light of clinical and laboratory data, the patient was diagnosed as thrombotic thrombocytopenic purpura and exchange plasma transfusion was performed. After plasmapheresis, dramatic improvement was observed in the neurologic findings of the patient. Ultrasonographic examination of the lower abdomen showed a mass lesion of 185 x 135 mm in the uterus. After the 3rd course of plasmapheresis, platelet count was normal and LDH decreased steadiously in the consecutive days. For each course 3000 mL (approximately 40 mL/kg) plasma was exchanged with 2000 mL fresh frozen plasma and 900 mL saline plus 100 mL 5% human albumin. Totally, 11 plasma exchange courses were performed. No underlying cause to explain TTP could be found the except pelvic mass. On the 20th day of the hospital stay she was operated for the pelvic mass lesion and total abdominal hysterectomy and bilateral salphingo-oophorectomy was performed. Histopathological examination of the surgically resected lesion revealed a tumor composed of spindle cells forming intermingling long fascicles. The tumor was hypercellular and neoplastic cells showed marked pleomorphism with high mitotic activity, and diagnosed as leiomyosarcoma (LMS). Now, seven months after the operation, she is on chemotherapy for LMS with no signs or symptoms of TTP.

DISCUSSION

TTP is a rare disease, affecting multiple systems, and occurs in approximately one per million of the population per year. It typically presents with consumptive thrombocytopenia, nonimmune intravascular hemolytic anemia, renal failure, various neurologic findings and fever. Extensive microvascular thrombosis consisting of platelet aggregates and fibrin in capillaries predominantly involves kidneys, brain, adrenals and heart. The diagnosis is suggested by the presence of MAHA and thrombocytopenia, after exclusion of alternative diagnosis, particularly disseminated intravascular coagulation (DIC) and HELLP. Dramatic response to exchange plasmapheresis confirms the diagnosis[4].

The factors that initiate TTP are unknown. However, extensive evidence suggests that endothelial cell damage resulted in accelerated platelet/wessel wall interactions is a critical intermediary in the pathogenesis of the disease[4]. Well known associated conditions with TTP are drugs such as ticlopidine, quinine, mitomycin C and cyclosporine, allogeneic stem cell transplantation, pregnancy, systemic lupus erythematosis, scleroderma and metastatic carcinoma[2,5].

Sarcomas of the uterus are rare tumors, accounting for 2-4% of all uterine malignancies, and LMS, a subg-

roup of sarcomas, compromise 25% of all uterine sarcomas[6]. Uterine sarcomas usuallly occur after the third decade of life and median age of diagnosis is 50[7]. Clinical presentation is diverse and could be abnormal uterine bleeding, lower abdominal pain, vaginal discharge or pelvic mass[7]. Tsatsaris et al reported MAHA, thrombocytopenia and renal failure in the course of sarcoma of the uterus in 1996[3]. As far as we know, this is the first case of LMS of the uterus presented with TTP. The patient presented with the full clinical picture of TTP, dramatically improved with exchange plasmapheresis and now, on chemotherapy for leiomyosarcoma.

In conclusion, LMS of uterus may cause TTP, and the women with TTP, in whom no other cause can be found, should undergo a careful gynecological examination and pelvic ultrasonography should be performed.

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