Severe hemolytic anemia and skin reaction in a patient treated with imatinib

Imatinib is an inhibitor of specific protein tyrosine kinases, which was recently approved for the treatment of chronic myelogenous leukemia and gastrointestinal stromal tumors [1]. Although cutaneous reactions are quite common with this agent [2, 3], anemia in patients receiving therapy for gastrointestinal tumors is rare and has been related to myelosuppression [4]. We report a case of hemolytic anemia and cutaneous reaction in a patient treated with imatinib.

A 53-year-old woman with liver, spleen and adrenal metastases from gastric stromal tumor had begun treatment with imatinib (400 mg daily). Three weeks after imatinib therapy was begun, the patient was admitted to hospital due to an extensive pruritic rash, which had developed 24 h previously. The body temperature was 37.8°C, pulse was 100 bpm and blood pressure was 120/60 mmHg. On physical examination the patient was pale and the sclerae were icteric. A maculopapular rash consisting of multiple minimally elevated red lesions was located on the trunk and distal extremities. The hematocrit was 20.3%, hemoglobin level was 70 g/l, with a white-cell count of 17070 /mm³ and a platelet count of 204000 /mm³. The aspartate aminotransferase level was 86 U/l (normal value, <31) and lactate dehydrogenase level was 1656 U/l (normal value, <460). The values for the prothrombin time, urea nitrogen, creatinine and electrolytes were normal. An ultrasound study of the abdomen showed nodular hepatomegaly and normal bile ducts. Blood cultures were negative for bacterial growth. A skin biopsy showed interface dermatitis with vacuolar degeneration, suggestive of dermatitis due to a drug.

Treatment with imatinib was discontinued, and dexchlorpheniramine and prednisone (60 mg daily) were administered. No changes were made in the patient’s regular medications (transdermal fentanyl, omeprazole and metoclopramide). On the third hospital day, the patient was afebrile; however, significant pallor was noted. There were no signs or symptoms of hemorrhage. Laboratory tests were again performed. The hematocrit was 13.2%, hemoglobin level was 43 g/l, mean corpuscular volume was 85 µm³ and reticulocyte count was 6%. No schistocytes were seen on the peripheral blood smear. Biochemical evidence of hemolysis was seen in a haptoglobin level of 1 mg/dl (normal value, >30) and a non-conjugated bilirubin level of 5.7 g/l (normal value, <0.8). A direct Coombs’ test was negative.

Four units of packed red cells were transfused. The rash improved dramatically during the next 4 days and there was no further recurrence of hemolysis. Two weeks after the rash had cleared, the patient was restarted on imatinib at 300 mg daily together with dexamethasone 4 mg daily. The patient has now been on treatment for 1 month with no recurrence of the rash.

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