MEDICAL UNIVERSITY OF LODZ

Acquired haemophilia A in a Jehovah's Witness

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Introduction

Acquired haemophilia A (AHA) is a rare severe haemorrhagic disorder characterized by bleeding caused by autoantibodies directed against Factor VIII (FVIII). Treatment for AHA requires both control of the bleeding and eradication of the inhibitor. A blood transfusion may be necessary in patients experiencing a large loss of blood.

Case report – 1

This abstract presents the case of a 63-year-old woman, a Jehovah's Witness, with AHA. The patient was initially hospitalized at the Internal Diseases Department due to severe anaemia (haemoglobin concentration 3.8 g/dl). For a period of approximately two weeks before admission, she had been complaining of progressive weakness, fatigue and exercise-induced dyspnea. The patient reported a history of autoimmune hepatitis. She had been under the care of a rheumatologist for three years due to unclassified arthritis, and was receiving prednisone 10 mg orally per day as an ongoing course of treatment. In 2013, she had also been diagnosed with chronic mild anaemia.

During her stay in the Internal Diseases Ward, AHA was initially suspected on the basis of the presence of vast bruises at the lower and upper extremities, as well as a high value for prolongation of partial activated thromboplastin time (aPTT) (75.2, normal range 26-40). AHA was confirmed upon arrival at the Department of Haematology, where tests revealed low FVIII activity (6%) and the presence of FVIII inhibitor. The titer of the inhibitor was found to be 11.2 BU/ml. On admission, the clinical status of the patient was severe. She was extremely weak, her movements were slow and periodic signs of impaired consciousness were observed.

Case report-2

As a consequence of her religious beliefs, the patient refused transfusion of packed red blood cells and activated prothrombin complex concentrate (aPCC). Treatment with recombinant activated factor VII (rFVIIa) at an initial dose of 6 mg (90 µg/kg) every two hours for two days, and then every four hours for the following two days, was introduced immediately after admission. Therapy also included prednisone 1 mg/kg/day and intravenous iron. Ultrasound examination of the abdomen revealed the presence of a large (88 x 69 mm) right iliopsoas muscle haematoma. Over the course of three weeks of therapy intended to eradicate the inhibitor, the general condition of the patient improved and hemoglobin level rose to 8.7 g/dl.

As the APTT and FVIII levels did not change significantly, 100 mg/d cyclophosphamide was added to prednisone. Two weeks later, the APTT level returned to the normal range and FVIII activity increased to 64%. The dose of cyclophosphamide was tapered to 50 mg and the drug was completely discontinued after the following week of therapy. The dose of prednisone was also gradually tapered until the patient was receiving a maintenance dose of 10 mg/day for concomitant arthritis. The results of the laboratory tests at certain time points over the course of therapy are presented in Table 1.

Table 1. Laboratory characteristics of the patient

Date/ parameter	27.10. 2015	03.11. 2015	16.11. 2015	29.11. 2015	10.12. 2015
Hb g/dl	3.8	6.4	8.7	10.6	11.5
RBC x 10^6/µl	1.78	2.67	3.08	3.61	4.02
MCV fl	73.0	86.1	95.8	92.2	84.8
WBC G/l	10.8	10.3	8.67	6.11	4.85
PLT G/l	491	563	335	212	218
APTT (normal range 26-40 s	75.2	69.9	53.2	32.2	34.7
PT (normal range 7,3-11,1 s)	8.9	9.2	7.4	8.0	9.2
TT (normal range 14-21 s)		15.9	16.1	15.3	15.8
Factor VIII %	6	-	11	64	180
Factor IX %	170	-	-	-	-
Factor XI %	102	-	-	-	-
Factor XII %	58	-	-	-	-
Lupus anticoagulant (DRVVT)	negative				
Titre of factor VIII inhibitor	11,2 BU/ml	-	-	-	0

Hb – haemoglobin, RBC – red blood count, MCV – mean corpuscular volume, WBC – white blood count, PLT – platelets, APTT – activated partial thromboplastin time, PT – prothrombin time, TT – thrombin time, DRVVT – dilute Russell's viper venom time, BU – Bethesda units

Conclusions: At the time of writing, no description of AHA complicated by severe post hemorrhagic anemia in a Jehovah's Witness could be found in the medical literature. In such patients, profound anemia needs to be avoided, and this can be achieved by early diagnosis and the use of pro-hemostatic therapy. Among by-passing agents, rFVIIa is a drug of choice since APCC is a blood-derived product. Prednisone is essential for inhibitor eradication. Cytotoxic drugs, such as cyclophosphamide, should be avoided until a satisfactory hemoglobin level is achieved. Intravenous iron may be helpful in post-bleeding anemia treatment.

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