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A CASE REPORT OF EVANS SYNDROME

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ABSTRACT

Evans syndrome is a rare autoimmune disorder in which the body makes antibodies that destroy the red blood cells, platelets and white blood cells. Patients are diagnosed with thrombocytopenia and Coombs positive haemolytic anaemia and have no other known underlying aetiology. We report a case of autoimmune haemolytic anaemia (AIHA) associated with immune thrombocytopenia which is known as Evans's syndrome. We conclude, for the early diagnosis of the disease the direct Coomb's test must be interpreted in conjunction with clinical and other laboratory data to avoid erroneous conclusions, as it can be false-negative. Elution of RBC antibodies is a valid additional procedure to clarify whether auto-antibodies are present in Coomb's-negative patients.

KEYWORDS: Evans syndrome, Autoimmune haemolytic anaemia (AIHA), Thrombocytopenia, Coomb's test.

INTRODUCTION

Evans syndrome is a very rare autoimmune disease in which an individual's antibodies attack their own red blood cells and platelets.[1] Both of these events may occur simultaneously or one may follow on from the other.[2] Affected people often experience thrombocytopenia (too few platelets) and Coombs' positive hemolytic anemia (premature destruction of red blood cells). It was first described by Evans and his associates (1951).[3] The patients may be affected by low levels of all three types of blood cells at one time, or may only have problems with one or two of them. The specific cause for Evans syndrome is unknown. Its overall pathology resembles a combination of autoimmune hemolytic anemia and idiopathic thrombocytopenic purpura (ITP).[1] ITP is a condition in which platelets are destroyed by an

autoimmune process. Platelets are a component of blood that contributes to the formation of blood clots in the body to prevent bleeding.

Diagnosis is based on a complete blood count showing anemia (hemoglobin level <12g/dL) and thrombocytopenia (platelet count <100,000/microL), associated or not with neutropenia (neutrophil count <1500/microL). A raised lactate dehydrogenase (LDH) and/or direct bilirubin level, and a decreased haptoglobin level indicate hemolysis. A positive direct antiglobulin test (Coombs test) confirms the presence of antibodies targeting red blood cells (RBCs) antigens. The presence of auto-antibodies targeting both platelets and neutrophils can also be observed.[3]

Initial treatment is with gluco-corticoids or intravenous immunoglobulin, a procedure that is also used in ITP cases.[4,5] In children, good response to a short steroid course is achieved in approximately 80% of cases.[6] Although, the majority of cases initially respond well to treatment, relapses are not uncommon and immunosuppressive drugs (e.g. cyclosporine.[7,8] mycophenolate, mofetil, vincristine.[9] and danazol).[10] are subsequently used, or combinations of these.

The off-label use of Rituximab (trade name Rituxan) has produced some good results in acute and refractory cases.[12] although further relapse may occur within a year.[2] Splenectomy is effective in some cases.[13] but relapses are not uncommon.[14]

The only prospect for a permanent cure is the high-risk option of a allogenic hematopoietic stem cell transplantation (SCT).[15-17]

CASE REPORT

A 45 years old male patient was admitted in General medicine Department with chief complaints of fever since 1 month, jaundice since 20days, Pedal edema and facial puffiness since 10 days.

Physical Examination

On examination patient was found to be conscious & coherent, Pulse rate and Blood pressure were normal. Pallor, Icterus, Pedal edema and Jugular venous pressure were positive. Per-abdomen was found to be tenderness and Cardiovascular sounds were found to be normal at diagnosis (NAD).

Past history

There were no similar complaints in the past and coming to social history she was found to be chronic alcoholic and occasional smoker.

Laboratory Evaluation

Complete blood picture (CBP): Hemoglobin: 5.9g/dl (13-17), White blood cells: 1200 cells/mm^3 (4000-10,000), Red blood cells: 0.5million/mm^3 (4.5-5.5), Hematocrit: 6% (40-55), were found to be very low. Mean cell volume: 111fL (83-101), Mean cell hemoglobin: 42pg (27-32), Mean hemoglobin: 37g/dL (32-35) and Erythrocyte sedimentation rate: 110mm/hr, Serum iron-190µg/dl (60-150), Ferritin-771ng/ml (30-400), were found to be very high. Total iron binding capacity, Serum folate and Vitamin B12 levels were found to be normal.

Table no 1: Demonstration of platelet count in this patient.

DAY WISE	PLATELET COUNT
Day1(13/8/15)	15,000 cells/mm^3
Day3(15/8/15)	25,000 cells/mm^3
Day6(18/8/15)	60,000 cells/mm^3
Day8(20/8/15)	55,000 cells/mm^3
Day11(23/8/15)	65,000 cells/mm^3
Day14(26/8/15)	90,000 cells/mm^3
Day15(27/8/15)	1,00,000 cells/mm^3

Liver function tests revealed total bilirubin-3.1mg/dl (0.3-1.2), direct bilirubin-0.9mg/dl (up to 0.2), indirect bilirubin-2.2mg/dl and SGOT-98IU/L (upto40), was found to be much higher than the normal. While on the other hand SGPT, Alkaline phosphatase and Total serum proteins were found to be quite normal. Renal function tests revealed BUN was high.

Lactate dehydrogenase-1868u/l (225-450) was much high. Echocardiography revealed the condition as acyanotic congenital heart disease. COOMB'S revealed Direct-2+; Indirect-3+. Ultra scan sound of abdomen gave a impression of Congestive hepatomegaly with fatty infiltration, Bilateral renal parenchymal disease. Bone marrow aspirated from sternum finally confirmed Megaloblastic erythroid hyperplasia with foal microblasts and adequate megakaryocytes.

Based on above investigations and complaints the patient was finally diagnosed and confirmed as HEMOLYTIC ANEMIA WITH ACYANOTIC HEART DISEASE (EVANS SYNDROME).

Treatment

Initially treatment was started with 2 units of blood transfusion, Inj.Lasix 200mg IV BD**,** Inj.Ceftriaxone 1gm IV OD**,** Inj.Pantoprazole 40mg IV OD**,** Tab.Iron & Folic acid OD**,** Tab. Maltida forte OD**,** Inj.Larinate 120mg at STAT dose, Inj.Eldervit 1amp IV OD, Tab.Folic acid 5mg OD, continued for five days and stopped Inj.Larinate.

Then patient complained of vomiting, on day six Tab. B complex and Inj.Ondancetron 4 mg/IV BD added to the treatment with one unit of Platelet transfusion.

On day seven patient was confirmed as Evans syndrome then he was treated with IV Immunoglobulin 0.4gm/kg/day, Inj.Ceftriaxone 1g IV BD, Inj.Pantoprazole 40mg IV OD, Tab.B.complex OD, IV fluids, Inj.Furosemide 40mg/IV OD, Inj.Eldervit 1amp IV OD for seven days and one Packeed blood transfusion for 1 day. Finally IV immunoglobulin, Eldervit stopped on 14th day.

Finally patient was discharged with the following medications Tab. Taxim 300mg BD, Tab. Dolo 650mg SOS, Tab.Neurokind OD and Potassium chloride powder.

DISCUSSION

Evans Syndrome was first described in 1951 by Robert Evans. The diagnosis is infrequent and requires a high index of suspicion with exclusion of other disorders characterized by autoimmune hemolytic anemia and thrombocytopenia.

Table no 2: The criteria for a diagnosis of Evans syndrome, according to Pui (1980).

S .no	Diagnostic criteria	In this patient
1	Direct Coombs test	Direct Coombs test was positive
2	Thrombocytopenia	Positive
3	Unknown Etiology	Unknown

CONCLUSION

In conclusion, Evans syndrome is a chronic and recurrent condition which is often refractory to corticosteroids, IV Ig and Splenectomy. For the early diagnosis of the disease the direct Coomb's test must be interpreted in conjunction with clinical and other laboratory data to avoid erroneous conclusions. as it can be false-negative. Elution of RBC antibodies is a valid additional procedure to clarify whether autoantibodies are present in Coomb's-negative patients. Antigen analysis for autoimmune haemolysis will be considered under condition of primary IgA immunodeficiency syndrome (IgAD).

REFERENCES

1. Evans RS, Takahashi K, Duane RT, Payne R, Liu C. "Primary thrombocytopenic purpura and acquired hemolytic anemia; evidence for a common etiology". Archives of internal medicine, 1951; 87(1): 48-65.
2. Norton A, Roberts I. "Management of Evans syndrome". Br. J. Haematol, 2006; 132(2): 125-37.
3. Chuhl-Joo Lyu, Kuk in Park, Kir-Young Kim. A Case of Evans Syndrome, Successfully Treated with 6-Mercaptopurine. Yonsei Medical journal, 1986; 27(2): 147-51.
4. Mehta JB, Singhal SB, Mehta BC. "Intravenous immunoglobulin therapy of idiopathic thrombocytopenia". The Journal of the Association of Physicians of India, 1992; 40(5): 340-2.
5. Zecca M; Nobili B; Ramenghi U. "Rituximab for the treatment of refractory autoimmune hemolytic anemia in children". Blood, 2003; 101(10): 3857-61.
6. Emilia G, Messora C, Longo G, Bertesi M. "Long-term salvage treatment by cyclosporin in refractory autoimmune haematological disorders". Br. J. Haematol, 1996; 93(2): 341-4.
7. Liu H, Shao Z, Jing L. The effectiveness of cyclosporin A in the treatment of autoimmune hemolytic anemia and Evans syndrome. Zhonghua Xue Ye Xue Za Zhi, 2001; 22(11): 581-3.
8. Yokoyama K, Kojima M, Komatsumoto S. Thrombotic thrombocytopenic purpura achieving complete remission by slow infusion of vincristine. Rinsho Ketsueki, 1992; 33(8): 1084-9.
9. Koike M, Ishiyama T, Saito K. Effective danazol therapy for a patient with Evans syndrome. Rinsho Ketsueki, 1993; 34(2): 143-6.
10. Scaradavou A, Bussel J. "Evans syndrome. Results of a pilot study utilizing a multiagent treatment protocol". J. Pediatr. Hematol. Oncol, 1995; 17(4): 290-5.
11. Shanafelt TD, Madueme HL, Wolf RC, Tefferi A. "Rituximab for immune cytopenia in adults: idiopathic thrombocytopenic purpura, autoimmune hemolytic anemia, and Evans syndrome" (PDF). Mayo Clin. Proc, 2003; 78(11): 1340-6.
12. Hamidah A, Thambidorai CR, Jamal R. "Prolonged remission after Splenectomy for refractory Evans syndrome--a case report and literature review". Southeast Asian J. Trop. Med. Public Health, 2005; 36(3): 762-4.
13. Mathew P, Chen G, Wang W. "Evans syndrome: results of a national survey". J. Pediatr. Hematol. Oncol, 1997; 19(5): 433-7.

14. Martino R, Sureda A, Brunet S. "Peripheral blood stem cell mobilization in refractory autoimmune Evans syndrome: a cautionary case report" (PDF). Bone Marrow Transplant, 1997; 20(6): 521.
15. Oyama Y, Papadopoulos EB, Miranda M, Traynor AE, Burt RK. "Allogeneic stem cell transplantation for Evans syndrome". Bone Marrow Transplant, 2001; 28(9): 903-5.
16. Teachey DT, Manno CS, Axsom KM, Andrews T, Choi JK, Greenbaum BH. Unmasking Evans syndrome: T-cell phenotype and apoptotic response reveal autoimmune lymphoproliferative syndrome (ALPS). Blood, 2005; 105: 2443-48.
17. Karakantza M, Moukaki A, Theodoropoulou M, Bussel JB, Maniatis A. Th 1 and Th2 cytokines in a patient with Evans syndrome and profound lymphopenia. British Journal of Haematology, 2000; 110: 968-70.