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Haemolytic Anemia Systemic Lupus Erythematosus

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Abstract

Cold agglutinin-induced haemolytic anemia is extremely rare as the primary presentation in systemic lupus erythematosus (SLE). Only A new case has been reported in the literature so far. Here, we report a 32-year-old male who presented with features of haemolytic anemia and was later diagnosed as a case of SLE.

Keywords: Autoimmune haemolytic anemia, systemic lupus erythematosus, and LFT.

Introduction

Autoimmune haemolytic anemia (AIHA) is a group of rare but severe blood disorders. They occur when the body destroys red blood cells. Autoimmune haemolytic anemia (AIHA) may be the first manifestation of systemic lupus erythematosus (SLE) and can appear several years before the diagnosis of SLE is made of cells more rapidly than it produces them (Bijaya Mohanty *et al.*, 2019).

Case Report

32-year-old gentleman with no comorbidities presented with complaints of low back pain radiating to bilateral lower limbs for the past 1 month, complaints of Difficulty in walking, and shortness of breath on exertion. History of weight loss (17 kg in one month), decreased appetite, and fatigue present. He has no history of diabetes, hypertension, asthma or heart disease. No surgical history and no relevant family history. On examination, Pallor is present with Bilateral Axillary lymph nodes. Vitals stable. Central nervous system examination reveals Bilateral lower limb power of 4/5. Other systems examination findings are unremarkable. Investigation revealed Hemoglobin of 7gm/dl, Elevated ESR with A/G reversal. LFT, RFT were normal. Anemia workup revealed Normal B 12, folic acid levels, and normal transferrin saturation levels. DAT and cold agglutinins were positive.

Elevated LDH OF 1042, SERUM TSH was elevated (17). Anti-thyroglobulin was found to be positive. Autoimmune profile revealed ANA, dsDNA, Sm, Sm/RNP positive, and C3, C4 levels were low. Bone marrow aspiration was nil significant. PET CT showed metabolically active lymph nodes in bilateral cervical, axillary, mediastinal, retroperitoneal, and iliac region- suggestive of infective granulomatous ethology. Bone marrow biopsy showed mild Erythroid hyperplasia reduced myeloid precursors, and increased iron stores. Investigations were shown in table 1. During the hospital stay, he developed fever spikes with a further drop in haemoglobin. 2 units of PRBC were transfusions were done. Urine culture and sensitivity reveal growth of ESBL *E. Coli* . Right Axillary Lymph node biopsy revealed Non-specific reactive and angio follicular change with interfollicular vascular proliferation and plasmacytosis. Because of lower limb weakness, a Nerve conduction study was done, which reveals sensorimotor radiculoneuropathy of lower limbs and mildly of upper limbs, showing predominantly demyelinating and some axonal changes. The patient was started on thyroid supplements, Steroids, Antibiotics, Hydroxychloroquine and other supportive measures. Patient improved in clinical and laboratory parameters with above mentioned treatment and on follow up.

Table 1. Different parameters of blood biochemistry

TABLE 1	
INVESTIGATIONS	VALUES
Hb	7 g/dl
ESR	54 mm
Transferrin saturation	10%
LDH	1042 mg/dl
TSH	17 mIU/L
Anti-Thyroglobulin	POSITIVE

Discussion

In Systemic lupus erythematosus patients, about 5 to 10 % present with Autoimmune haemolytic anaemia. AIHA is a rare disease comprising of warm, cold, and mixed type antibodies directed against an antigen on red blood cells (Michel, 2011; Velo-García *et al.*, 2016; Gormezano *et al.*, 2017). They are classified into warm and cold type which are differentiated by IgM autoantibodies called cold agglutinins. Treatment for AIHA includes corticosteroids, Rituximab, IVIg or splenectomy. Although cold agglutinin disease induced haemolytic anaemia is a rarer presentation, patients with anemia symptoms should raise suspicion for cold agglutinin disease and Direct coombs test should be managed early.

Author contribution

Ramesh T V1, Gopi Ayyaswamy2, Zioni Sangeetha3, and Vinod Kumar P encouraged and supervised the findings of this work. All authors discussed the results and contributed to the final manuscript.

Acknowledgment: Nil

Conflict of interest: Nil

Study significance

we report a 32-year-old male who presented with features of haemolytic anemia and later diagnosed as a case of SLE.

References

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