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CASE REPORT

Severe Autoimmune Haemolytic Anemia Associated with Non-Respiratory Tract Mycoplasma Infection

[1.] Registrar in Medicine, University medical Unit, Teaching Hospital Jaffna.
[2.] Senior lecturer and Consultant Physician, University medical Unit, Teaching Hospital Jaffna.

Abstract :

Mycoplasma pneumoniae is a common respiratory pathogen causing upper airway infection to severe atypical pneumonia and it has variety of extra pulmonary manifestations. Commonest extra-pulmonary manifestation is autoimmune haemolytic anemia and it is usually associated with respiratory tract infection. Here we report a case 34 year-old-lady who presented with severe autoimmune haemolytic anemia associated with non-respiratory tract Mycoplasma infection. She made uneventful recovery with antibiotics, intravenous immunoglobulins and short course steroid.

Keywords: Mycoplasma pneumonia, and atypical pneumonia

Introduction

Mycoplasma pneumonia is a common respiratory pathogen responsible for a variety of infectious manifestations, ranging from upper airway infection to severe atypical pneumonia. Extrapulmonary presentations associated with infection by Mycoplasma Pneumoniae include hematological, dermatological, neurological, musculoskeletal, renal, cardiac and gastrointestinal manifestations. Hematological complication includes hemolytic anemia, thrombocytopenia, thrombotic thrombocytopenic purpura, and hemophagocytosis and is related to cross-reaction of antibodies. We report a case of severe autoimmune hemolytic anemia due to Mycoplasma pneumoniae infection without respiratory tract involvement.

Case History

A 34-year-old woman presented with a history of fever of 3 days duration associated with chills, exertional tiredness and undue fatigability. She had no salient findings on history or clinical examination suggestive of respiratory lower infection or cardiac pathology. She was diagnosed with hypothyroidism and dyslipidemia 5 years ago and has been on regular clinic follow up. she had been treated with oral steroid for biopsy proven minimal change nephrotic syndrome in 2012 for 6month duration and achieved complete remission.

On admission, she was pale and icteric. Her vitas were stable except high grade fever and tachycardia. Rest of the clinical examination was unremarkable. Her initial blood investigations revealed a haemoglobin of 5.7g/dl with normocytic normochromic indices, high reticulocyte Index, unconjugated hyperbilirubinemia (140µmol/L) and high LDH (890U/L). She was initially treated with few units of warmed packed cell transfusions along with antibiotics (meropenam and clarithromycin).

Further evaluation confirmed the diagnosis of autoimmune hemolytic anemia as evidenced by positive direct antiglobulin test for C3d and IgG and highly positive cold agglutination titer. Subsequently, she was initiated with three days course of IV immunoglobulin and short course of oral steroids.

At the meantime, she underwent extensive evaluation to identify the cause for her autoimmune haemolytic anaemia and found to raising titer of Mycoplsma pneumoniae IgM antibody from 1:80 on day 6 to 1:640 on day 10(Ref <1:40).

Other possible infective etiologies were excluded by testing antibody to EBV, CMV, Hepatitis C, Hepatitis B, and HIV and VDRL. Antinuclear antibody, rheumatoid factor and anti-CCP antibody were negative. Her Chest X-ray and HRCT chest didn't reveal any lung lesions suggestive of pulmonary involvement.

She started to show clinical improvement after few days of treatment and she was sent home on day 14 with a haemoglobin of 8.8g/dL.

On review at two weeks, she was asymptomatic with normal vitals and laboratory results.

Discussion

The diagnosis of autoimmune hemolytic anemia is usually established based on evidence of hemolysis and positive DAT and spherocytosis may be present as a result of cell injury. In 50-70% of Mycoplasma pneumonia infections, hemolysis occurs due to cold reactive antibodies IgM and cold agglutinins are formed against erythrocyte 1 antigen. The majority of erythrocyte destruction takes place extravascularly as complement coated erythrocytes are phagocytosed by reticular endothelial cells.1,3

Post Mycoplasma pneumoniae pneumonia associated haemolytic anemia is usually self-limiting and most patients recover with supportive care.3,5 Antibiotics are likely to be limited value; however, treatment of underlying mycoplasma infection has been associated with more rapid resolution of the hemolytic process.5,6 Cold avoidance and blood transfusions by using in-line blood warmer at 37°C could be beneficial to reduce the risk of transfusion related hemolysis.6,7

The use of intravenous immunoglobulin has been proven to be beneficial in inhibiting the process of hemolysis until spontaneous antibody clearance occurs.8 Corticosteroids, alkylating agents, azathioprine, interferon, and purine nucleoside analogs are widely used for treatment of primary cold agglutinin disease.6 Corticosteroids, cytotoxic drugs, and plasmapheresis are of questionable value in secondary disease but may be attempted in refractory cases.5

There are several case reports has been published with rare presentations of Mycoplasma pneumoniae infection including thrombotic events, renal involvement etc. 1,2 Our case is also one of the rare presentation of Mycoplasma pneumoniae infection associated cold antibody hemolytic anemia without clinical and radiological evidence of pulmonary involvement.

Conclusion

Mycoplasma pneumoniae infection is known to cause wide variety of complications. Cold antibody hemolytic anemia is the commonest complication and treatment of this condition needs supportive care and antibiotics. IV immunoglobulin has proven value on hemolysis but corticosteroids, plasmapheresis and cytotoxic drugs are of doubtful value, but may be tried in refractory cases.

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