**INTRODUCTION**

Auto Immune Hemolytic Anemia (AIHA) is one of the earliest immune disorders described in early 20th century yet it remains uncommon. The incidence in children is as low as 0.2 /100,000 population. There are two main types of Immune Hemolytic Anemias on the basis of the nature of the antibody involved. The warm antibodies are mainly IgG type which hemolyse red blood cells at normal body temperature producing clinical anemia. The cold antibodies are IgM type which destroy red cells at temperature lesser than 37°C, e.g. exposure of distal body parts in cold weather. The resulting anemia is mild, transient and generally of no clinical importance except for diagnostic value in certain disorders.

There is no identifiable etiology in about half the cases. It can occur concurrently with a systemic illness most often Systemic Lupus Erythematosus (SLE) or certain malignancies. Immune hemolysis may also follow a number of viral infections or certain medicines. It is postulated that viruses or drugs alter the red blood cells morphology in a way that initiates the autoimmune process leading to destruction of red blood cells. The hallmark of the disease is positive direct Coomb’s test in as many as 98% cases. In this method polyclonal antisera is used which can detect both IgG and IgM antibodies.

We report a case of an adolescent girl with AIHA, a rare disorder, which was precipitated by chicken pox. Her clinical course over 3 years duration, till remission is described.

**CASE REPORT**

The patient presented about 3 years back at the age of 12 years with symptoms and signs of severe anemia, jaundice and hepatosplenomegaly while she was recovering from chicken pox. Prior to her illness she had no history of blood transfusion, blood loss, repeated jaundice or gallstones. There was no family history of hemolytic anemias.

On admission, the child was markedly unwell and in respiratory distress. There was tachypnoea and tachycardia. She had a temperature of 99° F. On general physical examination, she had severe pallor and mild jaundice. There were no petechiae, bruises or lymphadenopathy. Systemic examination showed that hepatomegaly of 5 cm and splenomegaly of 6 cm. The apex beat was shifted outside mid clavicular line. She had gallop rhythm.

On investigations, hemoglobin was 3.0 gm/dl, MCV of 166 Fl and reticulocyte count of 60%. Direct Coomb’s test was strongly positive while hemoglobin electrophoresis and G6PD estimation were normal. This confirmed autoimmune hemolytic anemia. The tests for other systemic immune disorders were negative. Bone marrow biopsy showed hypercellularity and erythroid hyperplasia. The level of folic acid and B12 were also normal.

A final diagnosis of autoimmune hemolytic anemia was made. The predisposing factor was chicken pox. She was treated with steroids (tablet Prednisolone 2mg/kg/day). She also received 7 pints of blood transfusion as supportive therapy.

On follow up visits, her hemoglobin was stabilized and maintained above 10 gm/dl. The liver and spleen regressed completely. However, Coomb’s test remained positive; hence she was kept on low dose steroids. After 1 - 1/2 years, parents discontinued the treatment on their own. Six months after stopping the steroids, she presented again with severe anemia. Preceded by low

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**ABSTRACT**

Auto Immune Hemolytic Anemia (AIHA) is a rare entity in children. We report a case of an adolescent girl with AIHA, which was precipitated by chicken pox. Clinical course over 3 years, till remission is described.

**Key words:** Auto immune hemolytic anemia. Chicken pox. Coomb’s test.

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**CASE REPORT**

Auto Immune Hemolytic Anemia in a Child Precipitated by Chicken Pox

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grade fever one month earlier. The mother also noticed her pallor, which became more marked one week prior to admission. At the same time child also developed jaundice, dyspnea, vomiting and extreme lethargy. On examination, the child was very pale and in cardiac failure. The liver and spleen were again enlarged significantly. She was managed with injection Methyl Prednisolone and blood transfusion. She showed complete clinical recovery and hemoglobin was restored to normal. Coomb’s test became negative after her second presentation and continued to be so after 6 months of her relapse. Therefore, steroids were tapered and stopped. She was maintaining her hemoglobin and negative Coomb’s test and doing well till the last follow-up.

**DISCUSSION**

The case report describes the presentation, clinical course and outcome of AIHA in an adolescent girl. In this patient, the process of hemolysis started after chicken pox. Varicella antibody titer estimation was not done, as the diagnosis was clinically obvious. Other studies have documented AIHA after chicken pox infection.6

Another unusual feature of our patient was a very high reticulocyte count of 60%. This unusually high retic count was present in only one patient out of a series of 17 patients described over a span of 14 years.7 This response of the body is related to rapidity and severity of hemolysis.

The prognosis is dominated by the primary cause. AIHA is often transient in children, particularly when it follows a viral illness but our patient had a prolonged course. She had a direct Coomb’s test positive for over one and a half year, but hemolysis was reduced on long-term treatment with steroids as evidenced by maintenance of her hemoglobin above 10gm/dl. The child relapsed 6 months following cassation of steroid therapy. The second episode was controlled with high dose of steroids.8

The other treatment modalities include immuno-suppressant8 and splenectomy. A newer agent is Rituximab,10 which is a monoclonal antibody and is of use in refractory cases.

The child was in full clinical recovery and treatment had been discontinued. As the clinical severity and course of AIHA is variable, she was advised for regular follow-up and to maintain her medical record. The disorder may become chronic lasting many years with exacerbation and remissions but long-term prognosis in children is good.

**REFERENCES**


