Hodgkin’s Disease and Autoimmune Hemolytic Anemia: A Case Report

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Introduction

Hodgkin’s disease is a distinct malignant disorder of the lymphatic system and is more common in males. The age-specific incidence of the disease is bimodal, with its greatest peak in the 3rd decade of life and a second smaller peak in the 7th decade. Histologic structure and the affected sites differ according to the age of the patients. Viral infection, environmental or occupational exposures and a genetically determined host response are believed to be etiologic factors of this disease. Patients usually have painless lymphadenopathy at initial presentation. Extra-lymphatic tissue involvement is rare. Mediastinal involvement is present in half of the patients. Systemic symptoms such as fever, night sweats, and weight loss may occur with lymphadenopathy. Mild normocytic normochromic anemia is common at diagnosis; mild leukocytosis, monocytosis and lymphopenia may occur, but are more commonly seen in patients at advanced stages. These hematological findings may occur as paraneoplastic effects of the disease or due to bone marrow involvement. The diagnosis of Hodgkin’s disease requires an expert hematopathologic interpretation of a lymph node specimen. Hodgkin’s disease has four histologic subtypes: lymphocyte predominant, nodular sclerosing, mixed cellularity and lymphocyte depletion. Nodular sclerosing Hodgkin’s disease is the most common subtype and typically affects young females while the mixed-cellularity subtype is seen in the elderly.

The stage of the disease is the most important determinant of treatment options, which include chemotherapy, radiotherapy or both [1]. Immune hemolytic anemia is very rare in Hodgkin’s disease, and it was first

Key Words
Autoimmune hemolytic anemia · Hodgkin’s disease

Abstract
Objective: To report a case of Hodgkin’s disease presenting with immune hemolytic anemia. Clinical Presentation and Intervention: A 47-year-old man was admitted to hospital because of weight loss, fever, and inguinal lymph node adenopathy. Biopsy of the inguinal lymph node revealed mixed-cellularity Hodgkin’s disease. Three days after starting combined chemotherapy, the patient showed evidence of autoimmune hemolytic anemia, which responded well to prednisolone. Conclusion: This case shows that clinicians should be aware of the possibility of autoimmune hemolytic anemia in patients with Hodgkin’s disease presenting with anemia, and distinguish it from the anemia of chronic disease.

Case Report

Med Princ Pract 2005;14:205–207
DOI: 10.1159/000084642

Received: December 31, 2003
Revised: September 6, 2004

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1011–7571/05/0143–0205$22.00/0
Accessible online at:
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reported in 1966 [2]. In this report, we describe a case of Hodgkin’s disease that presented with immune hemolytic anemia.

**Table 1.** Hematologic and biochemical values of the patient

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hemoglobin</td>
<td>5.1 g/dl</td>
</tr>
<tr>
<td>MCV</td>
<td>103 fl</td>
</tr>
<tr>
<td>Hematocrit</td>
<td>13.5%</td>
</tr>
<tr>
<td>White blood cell count</td>
<td>2.6 × 10^9/l</td>
</tr>
<tr>
<td>Platelet count</td>
<td>51 × 10^9/l</td>
</tr>
<tr>
<td>Blood urea nitrogen</td>
<td>15 mg/dl</td>
</tr>
<tr>
<td>Creatinine</td>
<td>0.5 mg/dl</td>
</tr>
<tr>
<td>LDH</td>
<td>1,266 IU/l</td>
</tr>
<tr>
<td>Direct bilirubin</td>
<td>0.9 mg/dl</td>
</tr>
<tr>
<td>Indirect bilirubin</td>
<td>2.3 mg/dl</td>
</tr>
<tr>
<td>ALT</td>
<td>18 IU/l</td>
</tr>
<tr>
<td>AST</td>
<td>31 IU/l</td>
</tr>
<tr>
<td>Total protein</td>
<td>6.1 g/dl</td>
</tr>
<tr>
<td>Albumin</td>
<td>3.2 g/dl</td>
</tr>
<tr>
<td>Vitamin B12</td>
<td>628 pg/l</td>
</tr>
<tr>
<td>Folic acid</td>
<td>2.8 ng/l</td>
</tr>
<tr>
<td>Reticulocyte count</td>
<td>20%</td>
</tr>
</tbody>
</table>

**Discussion**

Autoimmune hemolytic anemia may occur in lymphoproliferative diseases especially chronic lymphocytic leukemia and non-Hodgkin’s lymphoma but is rarely seen in Hodgkin’s disease [3, 4]. When it occurs, it is usually seen in adults rather than children [5–8]. It can be the presenting finding of the disease and it can occur during disease progression [5]. Immune-mediated hemolytic anemia is mostly seen in the nodular sclerosing subtype and in mixed cellularity subtypes, as in this case. There are only two reports showing the relationship of Hodgkin’s disease with autoimmune hemolytic anemia in the literature [8, 9]. It was reported that 90–100% of Hodgkin’s disease patients with immune hemolytic anemia were in stages 3 or 4 [8]. In a study from Germany, the incidence of Coombs-positive immune hemolytic anemia in Hodgkin’s disease was found to be 0.2% [9].

The direct Coombs’ test must be done in patients who show evidence of hemolysis and who have high reticulocyte counts. It may be an appropriate treatment modality to give chemotherapy against primary diseases concomitantly with steroids, as in our patient.

**Conclusion**

This case shows that clinicians should be aware of the possibility of immune hemolytic anemia in patients with Hodgkin’s disease presenting with anemia, and distinguish it from the anemia of chronic disease.
References


