

Case Reports

Atypical presentation of infectious mononucleosis

Maxi Fernandopule¹, Nilesh Fernandopulle², A P Kurukulasuriya³

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Introduction

Epstein-Barr virus (EBV) infection / Infectious Mononucleosis (IMN), known in layman's terminology as "kissing disease", is one of the most common human viral infections. Virus occurs world wide and most people are infected with it sometime during their lives. In children EBV infections cause minimal symptoms and are indistinguishable from common viral infections of childhood.

Classic triad of fever, pharyngitis and lymphadenopathy is well known but the dynamic nature of the clinical presentation and occasional presence of unusual features can mislead clinicians, resulting in delayed diagnosis or misdiagnosis. Splenomegaly is seen in about half the patients. Liver is enlarged in only a third, but elevation of hepatic enzyme activity, signifying anicteric hepatitis, occurs in 80%. Frank jaundice is seen in about 5%. A rash, usually maculo-papular, is reported in about 3-15% and 80% will develop a rash if treated with ampicillin¹.

Laboratory findings include a leucocytosis (10-20 x 10⁹/l) with a lymphocytosis in 90% of cases, of which 20-40% are atypical lymphocytes seen in the blood picture (figure 1). Less than 5% of these atypical lymphocytes (or Downey cells) are EBV-transformed B lymphocytes; More than 95% are "counterattacking" T lymphocytes². Similar atypical lymphocytes also occur in infections with cytomegalovirus, hepatitis A, adenovirus and toxoplasmosis³. A mild thrombocytopenia (50-200 x 10⁹/l) is seen in about 50% of cases and a mild haemolytic anemia in 3%⁴.

¹Consultant Paediatrician, ²Demonstrator, ³Consultant Haematologist/Senior Lecturer, Department of Pathology, Faculty of Medicine, Colombo.

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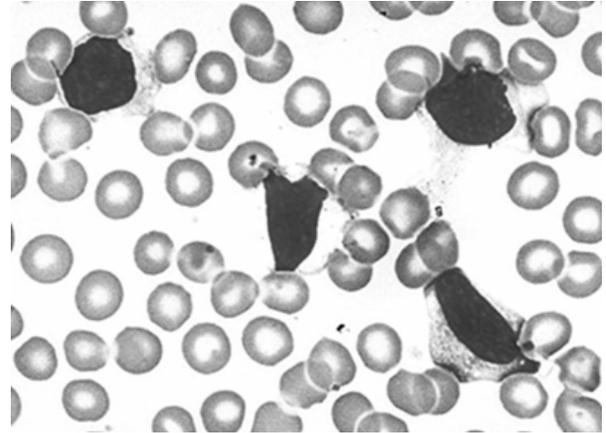


Figure 1 Blood film in infectious mononucleosis (IMN) showing "atypical" lymphocytes (Leishman stain x 40)

Tests that identify IgM antibodies specific for EBV capsid antigen can confirm acute EBV infection but are neither 100% sensitive nor 100% specific^{5,6}.

Case report

A previously well 5 year old girl presented with 8 days of high intermittent fever with no chills or rigors, associated with abdominal pain, headache, anorexia and vomiting. On examination she had a temperature of 100⁰F, blood pressure of 100/70 mm Hg with no lymphadenopathy or organomegaly. Examination of the respiratory, cardiovascular and nervous systems did not reveal any abnormal findings. Investigations at this stage revealed a white blood cell (WBC) count of 11.8 x 10⁹/l (N 70%), a platelet count of 212 x 10⁹/l, PCV of 38.9% and an ESR of 22 mm (first hour).

On the 14th day of fever, she developed an enlarged tender liver 1 cm below the right costal margin, a non tender soft spleen 1 cm below the left costal margin and a petechial rash. At this point WBC count had dropped to 3.7 x 10⁹/l (N 20%, L 70%). Platelet count remained normal (243 x 10⁹/l) and the ESR was 8

mm (first hour). Blood picture read “features of a florid viral infection. There is no evidence of a haematological malignancy”. EBV antibodies (IgG and IgM) done on the 14th day were positive. Fever settled on the 16th day and she had an uneventful recovery.

Discussion

At initial presentation the differential diagnosis was influenza, dengue fever or IMN. Both influenza and dengue fever were quite prevalent during this time and patient’s symptomatology could not exclude either. With the normal PCV and platelet count on the 8th day dengue fever was excluded. Examination findings on the 14th day made IMN a more likely diagnosis but the decreased WBC with a neutropenia and petechial rash compounded the diagnosis. Blood picture, a less expensive (Rs300/=), simple and sensitive test, was requested to look for atypical lymphocytes³. However, it did not reveal the expected finding and diagnosis was further delayed. The leucopenia together with the clinical picture in an ill child, made it necessary to consider a haematological malignancy which the blood picture and low ESR made very unlikely. Hence, to solve the clinical dilemma the more specific but more expensive test (Rs1300/=) for EBV specific antibodies was performed and it revealed a positive result.

Conclusion

EBV can be present with a low WBC count and without the expected typical IMN cells in the blood picture even during the second week of infection.

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