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SCIENTIFIC LETTER

Mumps Infection Associated with Intravascular Hemolysis, Acute Renal Failure and Pancreatitis

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To the Editor: Mumps is an acute, self-limiting, systemic viral illness caused by a specific RNA virus, known as *Rubulavirus*. The specific incidence of hemolysis caused by mumps is still unknown.

An eight-year-old girl presented with fever, increasing epigastric pain, fatigability and progressive darkening of urine. One week previously she had had parotid swelling. Physical examination showed deep pallor with jaundice, right parotitis, hepatomegaly, general abdominal tenderness and tachycardia. The initial laboratory values were as follows: hemoglobin 5.8 g/dL, platelet count 139,000/mm^3, reticulocytes 2.2 %, and white blood cell count 10,600/mm^3. Urine dipstick test for hemoglobin was positive. Serum amylase was 3,210 IU/L, lipase 68 U/L, haptoglobin 54 mg/L, creatinine 175 μmol/L and urea 21.5 mmol/L. Patient had oliguria at about 0.8 mL/kg/h. The Coombs' test was negative. The hemoglobin electrophoresis test was normal. The cold agglutinin titer, resistance test, acid hemolysis (Ham-Dacie test), flow cytometry analysis of CD55 and CD59, were negative, and glucose-six-phosphate dehydrogenase level was normal. The syphilis serology was negative. The bone marrow aspiration was normal. The patient's hospital course was marked by restoration of normal renal function by simple hydration and alkalinization with normal diuresis and progressive clarification of urine within 3 d from admission and an enhancement in hemolysis markers and pancreatic enzymes.

To the best of our knowledge, only two cases of intravascular hemolysis associated to mumps infection have been reported in the literature [1, 2]. It is possible that in the present case, hemolysis, caused by a direct effect of the virus on red cells, resulted in the activation of F proteins in paramyxovirus [3]. The main differential diagnosis is paroxysmal cold hemoglobinuria. In fact, mumps infection is reported to be an etiologic factor for this disease, with a positive Donath-Landsteiner test generally after a free period of clinical mumps; but no evidence of this type of antibody was found in the present case [4].

In conclusion, this new observation confirms the possible involvement of mumps and its strong relationship with intravascular hemolysis.

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