Association of Henoch-Schoenlein Purpura with Hepatitis A

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Received: Feb 22, 2011; Accepted: Dec 16, 2011

Henoch-Schoenlein purpura (HSP) is a small vessel vasculitis which is common in children and its etiology is unknown, but it is thought to be the result of immune complex reaction to various antigens. So far the association of HSP and hepatitis A has been reported in only five cases[1-5]. We report another case of HSP after hepatitis A with a short review of the literature.

In April 2009, an eight-year-old boy was admitted in our hospital with chief complaint of pain and swelling of knees and ankles and rash on lower limbs. He had abdominal pain and vomiting 3 days before admission. He was admitted in a local general hospital 36 days ago because of jaundice. Alanin aminotransferase (ALT) was 3102 IU/L and IgM anti- hepatitis A virus (HAV) positive. He was discharged with the final diagnosis of non complicated Hepatitis A. He didn’t have history of taking any medicine, vaccine or blood product during the past 2 months. On physical examination, temperature was 37.2°C, blood pressure 80/60 mmHg and pulse rate 100/min. Non blanching red-brown papules were distributed over both thighs and legs, the range of motion was reduced in both knees and effusion was apparent in left knee, otherwise physical examination was normal.

Laboratory evaluation showed leukocyte count 10100/mm³, hemoglobin 13.1 g/dL, platelet 513000/mm³. Prothrombin time (PT), activated partial thromboplastin time (aPTT), urine analysis, stool examination and urinary system sonography were normal. Erythrocyte sedimentation rate (ESR), ALT, aspartate aminotransferase (AST), and alkaline phosphatase (ALP) were 34mm/h, 15IU/L, 19 IU/L and 168 IU/L respectively. HAV antibody (IgM) was positive and HBs Ag, HBC Ab (IgM) and hepatitis C virus (HCV) Ab were negative. Ibuprofen (10mg/kg/8h) was started with diagnosis of HSP. Although we often do not hospitalize HSP patients, and this boy was a uncomplicated case that only needed outpatient follow-up. But because he was from a far rural area we decided to keep him in hospital for a short time. At the second day of admission the patient developed abdominal pain and frequent vomiting followed by hematemesis, hematochiesia and melena in the third day, abdomen was soft and nontender at that time. Hemoglobin and platelets were 12.1 g/dL and 462000. PT, PTT, urine analysis, blood urea nitrogen (BUN), and creatinine were normal. Methylprednisolone 2 mg/kg was started in second day and pediatric surgery consultation was requested. The surgeon recommended close monitoring and continuing of medical treatment. Gastrointestinal problems were resolved completely by the fifth day (without any more intervention). The patient was discharged at the seventh day (with prednisolone 1.5 mg/kg for another week), while he was able to eat and walk and felt completely well, although some degree of asymmetrical non pitting edema and brownish papules still were present on both shins. The boy was followed up for six months after discharge; he was completely well since the second week after discharge.

The first case of HSP associated with hepatitis A, was reported by Garty[1]. Four other cases (three boys and a girl) have been reported since then[2-5]. The average age of these cases was 10.4 years and all of them had a fully symptomatic
hepatitis A between two to three months before the first manifestations of HSP. Serum sickness can be the first presentation of acute viral hepatitis (especially hepatitis B)\(^6,7\). Serum sickness and HSP can be very similar to each other (both of them present with skin rashes and arthritis, and GI involvement also is common in both) but serum sickness occurs in the antigen excess phase of acute hepatitis before the appearance of jaundice, while in all of the reported cases of HSP with HAV, the vasculitis started after resolution of hepatitis, also C3 is normal or increased in HSP while is decreased in serum sickness\(^8,9\).

During HSP itself (without accompanying viral hepatitis) hepatomegaly is not an unusual finding and hepatitis with jaundice can be seen in severe cases of HSP, but serologic markers of viral hepatitis are negative in these unusual forms of HSP. Chronic viral hepatitis with HCV or HBV can be accompanied with vasculitis but these are not common problems in children and clinical course and serology makes them different from HSP after hepatitis A.

**Key words:** Henoch-Schoenlein purpura; Hepatitis A; Vasculitis

**References**