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

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**Intermittent Gastrointestinal Bleeding in a Child: Leech Infestation**

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Leech infestation may cause serious complications like airway obstruction, severe respiratory distress, hemoptysis, hematemeses or rectal bleeding\[^{1,2}\]. One such case presenting with vomiting and intermittent gastrointestinal bleeding is described below.

A previously healthy 9-year-old boy referred to the emergency department of Tabriz children’s hospital with a 5-day history of nausea and vomiting of bloody material. He reported 3 intermittent bloody vomits without abdominal pain. His mother stated that the patient had 38°C fever. The patient's symptoms had continued for 3 days, and then he was brought to us. Upon arrival, he had nausea and vomited with bloody content and coughed. His father said that approximately 3 days before onset of symptoms he went on a camping trip in Northwest Iran, where he bathed in a pond. He stated also that the drinking water there was not filtered.

On physical examination, he was in no acute distress. Body temperature was 36.5°C, heart rate 91 beats per minute, respiratory rate 20 breaths per minute, blood pressure 110/76 mm Hg, and oxygen saturation 97%. Oral mucosa was pink, moist, and free of any lesions or exudates in nasal cavity or oropharyngeal site. The lungs were clear to auscultation. The abdomen was soft and not distended. No organomegaly or masses were palpated, and

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there was no point tenderness. Extremities were without edema.

On presentation to the urgent care center, a complete blood count revealed 10,000 white blood cells/μL, with 72.2% neutrophils and 0.7% eosinophils, hemoglobin was notably 11.7 g/dL; and platelet count 254,000/μL. PT and PTT were normal. A basic metabolic panel and urinalysis were normal. The course in emergency department was uneventful. His stool sample in the emergency department showed only one plus positive guaiac test. He was referred to gastroenterology department for endoscopy.

The results of the upper GI endoscopic examination were negative for any bleeding lesion. In ENT examination with minimal anesthesia a slimy black lesion was seen in the pharynx that moved. With use of lidocaine spray the object detached. It was a leech (Fig. 1).

Attached leech will separate and drop off on its own when it is satisfied on blood, which may last 20 minutes to 1 hour. Internal attachments, inside the nasal passage or vagina are more likely to require medical intervention[3-5].

The approach towards a patient with leech infestation includes a full history and systematic examination followed by appropriate investigation. Management consists of taking away the leech by applying a forceps to the center of the leech’s body and giving a quick pull. Bleeding stops immediately after removal of the leech[6].

Since a leech attaches strongly with its suckers, and because of its soft and slippery body surface, which ruptures easily, it is difficult to hold and remove a leech with force. If it is in the nares or upper pharynx, it can be paralyzed as in our case with topical anesthetics. Agents such as lidocaine are effective for this purpose. If it is in the larynx, hypopharynx or lower pharynx, direct laryngoscopy is essential under general anesthesia, both for diagnosis and removal of the leech.

Leech endoparasitism as a cause of hematemesis and vomiting is very rare. Due to the presence of anticoagulant in the saliva of leech, bleeding may be persistent or intermittent. Because the larynx is not readily visualized, endoscopy under anesthesia is generally required for diagnosis. Therefore great key of suspicion is mandatory in a patient presenting with intermittent bloody retching who gives history of drinking unclean water from, or bathing in pools and lakes.

**Key words:** Leeches; Gastrointestinal bleeding; Endoparasitism; Pharynx; Child

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