Sandfly fever virus as a rare cause of acute viral hepatitis

Ergin Ayaslioglu a,*, Sefa Guliter b,1, Cigdem Karabicak a,2, Kenan Ecemis a,3, Muhammet Gulhan a,4, Cigdem Torun Edis c,5

a Department of Infectious Diseases and Clinical Microbiology, Kirikkale University Faculty of Medicine, Kirikkale, Turkey
b Department of Gastroenterology, Kirikkale University Faculty of Medicine, Kirikkale, Turkey
c Department of Infectious Diseases, Kirikkale Government Hospital, Kirikkale, Turkey

Received 14 August 2013; received in revised form 31 January 2014; accepted 6 February 2014

Sandfly fever (SF) is one of the emerging arboviral diseases caused by sandfly fever viruses, which are transmitted to humans by the bite of phlebotomine sandflies. The disease is a self-limited febrile illness, and presents as a rapid onset of high fever, severe myalgia and arthralgia, headache, and in some cases photophobia, abdominal discomfort and nausea.

An elevation in aminotransferases may be encountered during the course of the disease, but extremely high levels have been reported rarely. Herein, we report a diagnostic challenge with sandfly fever virus (SFSV) who presented with very high levels of aminotransferases and with the clinical and laboratory findings of typical acute viral hepatitis, which caused diagnostic confusion with the classical hepatotropic viruses.

A 33-year-old female was admitted to the emergency service with fever malaise, anorexia, nausea, vomiting, abdominal discomfort for four days. A complete blood count revealed: white blood cells (2900/mm3), hemoglobin (10.9 g/dL) and platelets (177,000/mm3). Abnormal biochemical tests included: alanine aminotransferase (929 U/L), aspartate aminotransferase (385 U/L), gamma-glutamyl transpeptidase (GGT): 52 U/L and lactate dehydrogenase (LDH): 403 U/L. Erythrocyte sedimentation rate (ESR) and C-reactive protein did not show an increase, at 9 mm/h (h) and 1.1 mg/dL, respectively. Abdominal ultrasonographic (USG) examination revealed minimal hepatosplenomegaly, three small lymph nodes within the hepatoduodenal ligament and increased periportal echogenicity, suggesting viral hepatitis.

All clinical and laboratory findings of the present case — right upper quadrant pain with hepatomegaly, elevation in aminotransferase levels, (mainly ALT), and USG findings compatible with viral hepatitis — primarily suggested acute viral hepatitis. However, serological testing for acute hepatitis A, B and C was negative. She was also evaluated for the other possible viral etiologies, and all results were negative. Her serum sample was analyzed by using a commercial mosaic immunofluorescence test (Euroimmun, Lübeck, Germany) in the virology reference and research center and was found strong positive (+++) for sandfly fever Sicilian virus (SFSV)-IgM and positive (+) for SFSV-IgG antibodies.

Arboviruses are often forgotten in the differential diagnosis of acute viral hepatitis. SF is generally entirely overlooked as a causative agent in this respect. SF is usually expressed in a self-limiting pattern, and fever lasts for...
three days. However, laboratory findings return to normal more slowly than clinical findings. Our patient presented during a fever-free period with an elevation in amino-transferase levels, which may have facilitated the diagnostic confusion. Clinicians should consider SF in the differential diagnosis of patients with symptoms similar to those described above, particularly if the patient has been living or has recently visited an endemic region.

There are considerable geographic and seasonal variations in the dissemination of arboviral disease worldwide. Crimean-Congo hemorrhagic fever and SF, two emerging viral vector-borne zoonotic diseases in Turkey, exhibit very similar clinical features. In addition to elevation in aminotransferases, leukopenia, thrombocytopenia and increased levels of CPK and LDH are also noted in the majority of patients. In our region during the summer season, presentation of febrile patients with elevated aminotransferase levels accompanied by thrombocytopenia/leukopenia and elevated CPK/LDH levels generally indicates one of these two diseases. A history of fly bite and presentation during a SF outbreak are the important clues and facilitated the diagnosis of SF in our case. Fortunately, SF is a self-limited disease, and the patient improved in a short period without any complication, and her recovery was favorable.

Conflict of interest

None declared.