

7 UNUSUAL PRESENTATIONS OF COMMON PATHOGENS

a A fatal case of hepatitis due to HSV, presenting as a viral haemorrhagic

In April 2016, NICD was alerted about a 45-year-old previously-healthy male admitted to hospital with a history of fever (temperature of 39°C), myalgia and malaise for 3 days with a request for yellow fever testing. On further enquiry, the NICD established that the patient had travelled to Mozambique (Tete Province) 2 months prior to presenting with illness. He had a low blood pressure, was tachycardic with a pulse rate of 122 beats per minute and tachypnoeic, though his CXR was normal. His admission blood test results showed a profound thrombocytopenia (platelets – $6 \times 10^9/L$) and markedly elevated liver enzymes (ALT – 6 287IU/L; AST – 1 537 IU/L). His clinical condition deteriorated within 36 hours of admission, requiring ICU and ventilation. He progressed to ARDS, arrhythmias, renal and liver failure and significant bleeding and died 4 days after admission. Blood cultures, hepatitis A, B and C, and three malaria smears, were all negative. Clinical specimens were sent to NICD for further testing to exclude Crimean-Congo haemorrhagic fever (CCHF) which is endemic in the area. CCHF testing returned with a negative result; however PCR for herpes simplex virus (HSV) tested positive on blood and was thought to be the cause of the illness.

Herpes simplex virus hepatitis is an unusual but well-described clinical entity following primary HSV infection, and is known to cause fulminant hepatitis in immune-compromised patients, pregnant females and rarely, in immune-competent adults. Two previous cases in immunocompetent adults were described in the NICD Communiqué in 2008 and 2013.

The illness typically presents with a short onset of non-specific flu-like symptoms. Patients frequently present with elevated liver enzymes levels, a minimal increase in bilirubin levels, leucopenia and thrombocytopenia. While positive serology and PCR results can be confirmatory for HSV hepatitis, definitive diagnosis is made by liver biopsy. In the absence of muco-cutaneous herpetic lesions, diagnosis of herpes hepatitis is often difficult and delayed. Mortality outcomes are as high as 90% in the event of acute liver failure. The efficacy of intravenous administration of acyclovir is unknown, though occasional good outcomes have been reported, especially when the diagnosis is made early in disease presentation. However, acyclovir treatment is generally unsuccessful by the time the diagnosis of HSV hepatitis is made.

References:

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- Poley, R. A., Snowdon, J. F., & Howes, D. W. (2011). Herpes Simplex Virus Hepatitis in Immunocompetent Adult. *Case Reports in Critical Care*, 4.
- NICD Communiqué: January 2008 and April 2013

Source: Division of Public Health, Surveillance and Response, NICD-NHLS; Centre for Emerging and Zoonotic Diseases, NICD-NHLS.