

**4 AN OUTBREAK OF HERPES SIMPLEX TYPE 1 VIRUS IN A BURNS UNIT**

Between 5-7 July 2017, seven cases of febrile rash were observed amongst children aged 1-5 years who were admitted to a burns unit in Gauteng Province. The rash had a fine, barely visible maculopapular appearance distributed over the trunk and limbs, and was associated with a low-grade fever and coryza. Measles was initially suspected, and appropriate management instituted. However measles and rubella serology was negative.

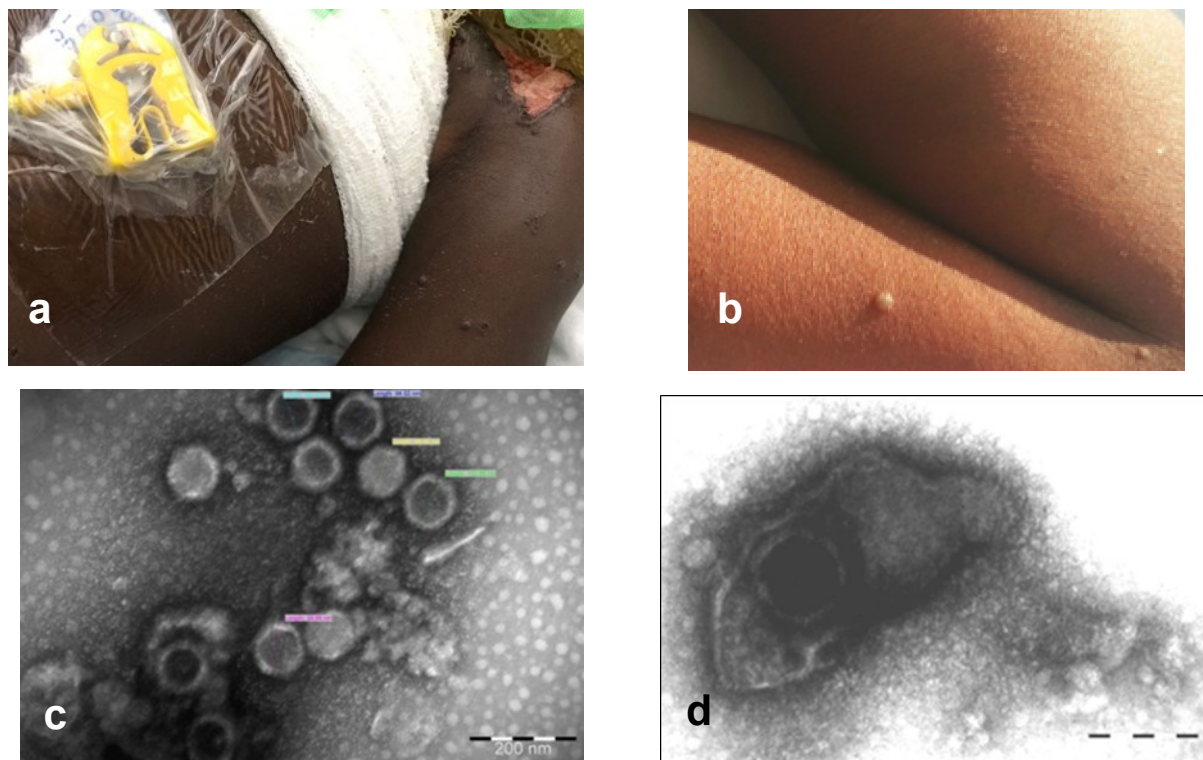
Over the next few days in two cases, vesicular lesions subsequently developed on the limbs of both patients and on the face of a single patient. Lesions were observed in the burn wounds of one of the patients. Vesicular lesions also developed in a third patient (not amongst the initial seven with febrile rash) who developed lesions on the trunk, arms and legs (Figure 7). Samples of vesicular fluid were obtained from all three patients. Electron microscopy revealed herpes virus particles (Figure 7) and HSV-1 was confirmed by molecular (PCR) testing.

HSV infections have been reported in patients suffering from burns and present as a febrile illness one to three weeks after thermal injury. HSV infection is usually associated with more extensive, full-thickness burns. The rash can begin as focal peri-oral maculopapular lesions that evolve into vesicles, but can occur on any part of the body. The

infection can also involve the actual burn wound/s, with vesicles appearing within or around the margins of the wounds, thus impairing wound healing. Atypical presentations, including disseminated vesicular rashes with no peri-oral lesions, are described.

Acyclovir is the treatment of choice, and prophylaxis has been recommended in patients with major thermal injuries, particularly those involving the face. Proper wound care and prevention of transmission are important components of management. Following the diagnosis in this outbreak, ward infection control procedures were reviewed, especially disinfection of the bath, desloughing and wound care areas.

**Source:** Division of Public Health Surveillance and Response, NICD-NHLS; Department of Paediatrics, Chris Hani Baragwanath Hospital; Electron Microscopy Laboratory, NICD-NHLS; (kerriganm@nicd.ac.za)



**Figure 7.** Vesicular lesions due to herpes simplex virus (HSV) type 1 in burns patient illustrating a) lesions in the margin of burn wounds and b) on the limbs of a patient. Electron microscopy of vesicular fluid revealed particles typical of HSV-1 in c), including the viral envelope in d)