

Disseminated adenovirus 20 infection with pancreatitis in a patient with AIDS

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The etiologic diagnosis of an unexplained fever can be difficult in patients with AIDS. In addition to the most frequent opportunistic pathogens, a wide range of other infective agents needs to be considered. We report a case of acute disseminated adenoviral infection in an HIV-infected immunodeficient patient.

A 41-year-old HIV-1-infected homosexual man was travelling in December 1994 in Bangkok, Thailand, when he experienced sudden high-grade fever associated with chills, malaise, headache, arthralgia, myalgia, vomiting, diarrhea, and non productive cough. A progressive maculopapular rash and a bilateral conjunctivitis appeared 3 days after the onset of fever. The patient had been diagnosed as HIV-1 seropositive in 1984 and had remained asymptomatic, despite a severe immunodeficiency (4×10^6 CD4 cells/L). He had been receiving primary prophylaxis for opportunistic infections with co-trimoxazole for 3 years and with rifabutin for 6 months. Antiretroviral treatment had been discontinued 3 months prior to the acute episode, after 3 years of therapy with zidovudine and didanosine.

Four days after the onset of symptoms, the patient remained febrile (40 °C), confused, and lethargic. The rash predominated on his palms and soles. He suffered from acute conjunctivitis and a watery, non-bloody diarrhea. Physical examination revealed a moderate hepatosplenomegaly. The chest radiograph and cerebral magnetic resonance imaging were normal. The blood cell count showed a moderate lymphopenia (0.29×10^9 /L) and thrombocytopenia (79×10^9 /L) which had been known for several months. Blood lipase levels were 3.5-fold above the normal range. Other biological parameters were within normal values, including tests for hepatic and renal functions. Analysis of cerebrospinal fluid (CSF) showed the presence of six mononuclear cells per mm^3 , a slightly elevated protein concentration (0.5 g/L), and a normal glucose level (3.4 mmol/L). Direct examination and routine cultures of CSF remained negative. Repeated cultures of blood and other specimens, and polymerase chain reaction assays and serology for a range of bacteria and viruses were negative. Viral cultures on MRC-5 fibroblasts and Vero cells were carried out on stools, bronchoalveolar lavage, and eye scrapings. After 8 days

of culture, cytopathic effects typical of adenovirus were observed on MRC-5 fibroblasts inoculated with the patients' stools. The diagnosis of adenovirus infection was confirmed by the finding of positive fluorescence of the fibroblasts with monoclonal antibodies specific for adenovirus (Dako Diagnostics, UK). Serotyping was performed using inhibition of hemagglutination and neutralization tests with hyperimmune type-specific antisera: the strain was of type 20.

High-grade fever persisted for 2 weeks and then progressively decreased. The skin rash and conjunctivitis resolved within 5 days. Abnormal biological parameters for pancreatitis persisted for 4 weeks, but the patient's condition improved rapidly. The adenoviral excretion persisted in stools for 6 months. One year after this episode, the patient was still alive, and had been treated for a recent asymptomatic cytomegalovirus (CMV) retinitis.

In the present case, disseminated adenoviral infection was diagnosed on the basis of the clinical picture and isolation of adenovirus type 20 in stool specimens. No other pathogen was detected. A large number of adenoviral serotypes from all subgenera have been reported in HIV-infected patients, including the new serotypes 43 to 47 of subgenus D [1–4]. Our observation is the first report of an acute infection with pancreatitis associated with the serotype 20. Adenovirus infections occur more frequently in HIV-infected patients, predominantly in the gastrointestinal tract [2,3], but adenoviruses are frequently cultured from the stools of HIV-infected patients who have had no apparent gastrointestinal symptoms [2,3,5,6]. The causative relationship of these viruses with diarrhea has remained speculative. In addition other pathogens are usually present. Adenoviruses have been associated, in AIDS patients, with the occurrence of hepatitis, colitis, pneumonitis, nephritis, encephalitis, neural degeneration, parotitis, and, sometimes, generalized infections with a fatal course [1,2]. Disseminated adenoviral infections with fever and pancreatitis have been recently reported in children with AIDS [7]. Our observation indicates that adenoviral infections should also be considered in adult patients with AIDS in the differential diagnosis of unexplained fever with pancreatitis. However, it should be pointed out that the observed association between acute illness and recovery of adenovirus from stool is no evidence for a causal relationship.

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References

- Hierholzer JC. Adenoviruses in the immunocompromised host. *Clin Microbiol Rev* 1992; 5: 262–74.
- Khoo SH, Bailey AS, de Jong JC, Mandal BK. Adenovirus infections in human immunodeficiency virus-positive patients: clinical features and molecular epidemiology. *J Infect Dis* 1995; 172: 629–37.
- Durepaire N, Ranger-Rogez S, Gandji JA, et al. Enteric prevalence of adenovirus in human immunodeficiency virus seropositive patients. *J Med Virol* 1995; 45: 56–60.
- Hierholzer JC, Wigand R, Anderson LJ, et al. Adenoviruses from patients with AIDS: a plethora of serotypes and a description of five new serotypes of subgenus D (types 43–47). *J Infect Dis* 1988; 158: 804–13.
- Grohmann GS, Glass RI, Pereira HG, et al. Enteric viruses and diarrhea in HIV-infected patients. *N Engl J Med* 1993; 329: 14–20.
- Mayer HW, Wanke CA. Diagnostic strategies in HIV-infected patients with diarrhea. *AIDS* 1994; 8: 1639–48.
- Ross LA, Ferdman RM, Church JA. Adenovirus viremia in HIV-infected children [abstract 430]. In: Program and abstracts of the 3rd Conference on Retroviruses and Opportunistic Infections. Washington, DC, 1996: 133.

Bacterial endocarditis due to *Lactococcus lactis* subsp. *cremoris*: case report

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Lactococci are catalase-negative, Gram-positive cocci formerly classified as group N streptococci (lactic streptococci) and, more recently, transferred to the genus *Lactococcus* [1]. *Lactococcus lactis* subsp. *lactis* and *L. lactis* subsp. *cremoris* – the two main subspecies of *L. lactis*, the type species of the new genus—are widely used in the dairy industries as cheese starters and commonly included in foodstuffs. Although *Lactococcus* species are generally thought to be non-pathogenic for humans, the isolation of several strains of lactococci from human sources has been reported [2,3]. In particular, cases of endocarditis caused by *L. lactis* subsp. *lactis* (formerly *Streptococcus lactis*) have been described

[4–6]. We report herein a case of endocarditis caused by *L. lactis* subsp. *cremoris*, which is to our knowledge the first documented case of endocarditis due to this particular subspecies.

A 56-year-old man was admitted to our department in March 1994 with moderate intermittent fever (maximum 38.5 °C), arthromyalgias, and cough, for more than 1 month. The patient was a civil employee in a military base and denied ingestion of raw milk and/or unprocessed dairy products, alcohol consumption, drug addiction and any potential risk for blood-borne infections. He suffered from mild chronic glomerulonephritis and chronic gouty arthritis. No antibiotic treatment had been administered over 3 months prior to observation.

Physical examination revealed moderate hepatomegaly and spleen enlargement. A grade IV systolic ejection murmur radiated into the axilla and an additional diastolic sound was audible in the third left intercostal space. The admittance screening for fever of unknown origin did not yield significant findings. In particular, dental and sinus foci were excluded by radiologic examination.

Chest X-ray revealed moderate cardiac enlargement but the electrocardiogram was normal. An echocardiogram disclosed evident mitral valve prolapse and very moderate aortic regurgitation, no endocardial vegetation being revealed; repeated echocardiography after 1 and after 2 weeks, showed no modification. The patient refused a transesophageal echocardiogram.

Five days after admission, crops of petechiae and apparent Janeway lesions were observed on the patient's soles. An entire set of seven blood cultures, the first and last of which had been drawn 5 days apart, yielded positive results: catalase-negative, Gram-positive cocci, occurring singly, in pairs, or in short chains. Colonies on blood agar were small, circular, smooth, entire, and weakly α -hemolytic. The strain was originally identified as *L. lactis* subsp. *cremoris* using Api 20 STREP galleries (Bio Mérieux, Marcy-l'Étoile, France), and the identification was confirmed by additional laboratory tests. In particular, identification to the genus level was supported by the following characteristics [2]: susceptibility to vancomycin (22-mm zone of inhibition around a 30- μ g disk); no gas production from glucose; no growth in 6.5% NaCl; growth at 10 °C but not at 45 °C; pyrrolidonyl arylamidase test negative; leucine aminopeptidase test positive; and Voges-Proskauer test positive. Further identification to the species and subspecies level was supported by the following characteristics [1]: growth in 2% but not in 4% NaCl; no growth at 40 °C; arginine dihydrolase test negative; acid production from galactose and lactose; no acid production from maltose, raffinose, and ribose.