Time from Illness Onset to Death, 1918 Influenza and Pneumococcal Pneumonia

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To further analyze the time course of death from influenza in relation to that of pneumococcal pneumonia in 1918, we examined data collected by Tilghman and Finland (4) from the pre–antimicrobial drug era of the 1920s and 1930s. The Figure shows the distribution of time from onset of illness to death due to influenza-related pneumonia in 1918 compared with time to death due to untreated pneumococcal pneumonia in the 1920s and 1930s. The Figure indicates a close concordance of the times to death. Similar times to death do not prove the specific bacterial etiology of the 1918 deaths. However, pneumococcal bacteremia was associated with most of the pneumonia deaths reported by Tilghman and Finland (4), and most 1918 influenza-related deaths were due to bacterial pneumonia (5). Also, up to 50% of patients dying from pneumonia in 1918 had pneumococcal bacteremia (3). These similar times to death provide additional evidence that the influenza-related pneumonia deaths during the 1918 influenza pandemic were largely due to the pneumococcus.
To the Editor: Toscana virus (TOSV) causes acute meningitis and meningoencephalitis in Mediterranean countries (1). In Spain, neurologic TOSV infection has been reported since 1988. All cases have been self-limited aseptic meningitis (2). Since 2003, we have routinely investigated TOSV in cerebrospinal fluid (CSF) specimens from patients with suspected viral meningitis and encephalitis by using cell culture and reverse transcription–PCR (RT-PCR) (3,4). Also, as part of a regional project (05/305, Consejería de Salud, Junta de Andalucía, Spain), we investigated TOSV in mild nonneurologic syndromes by detection of immunoglobulin (Ig) M against TOSV by using enzyme immunoassay (Diese Diagnostica Sénese S.p.A, Siena, Italy). From May through September of 2006 and 2007, a total of 358 serum samples were randomly selected from patients for whom microbiologic determinations had been requested to investigate febrile illnesses.

As a result of these virologic and serologic surveys, we detected 7 cases of TOSV infection. Mild aseptic meningitis developed in 4 patients; in 3 patients, the infection had an atypical manifestation, as described below.

Patient 1, a 45-year-old man, was referred to the Hospital Universitario Virgen de las Nieves in Granada Province in November 2007. He was confused and agitated, and he reported having fever and headache 2 days before. On admission, he was receiving treatment with corticosteroids for Crohn disease. Analysis of the CSF specimen showed lymphocytic pleocytosis, a normal glucose level, and increased protein levels. Results of PCR for HSV, VZV, and enterovirus were negative. TOSV was detected in the CSF sample by cell culture and real-time RT-PCR (4). The patient was treated with antimicrobial drugs and acyclovir. He recovered and was discharged 3 weeks after admission. One month later, he returned with paresis and aphasia, secondary to an ischemic...