Caution Is Needed Concerning Location of Legionella Testing, as 1 Size (Method) Does Not Fit All

To the Editor—We commend Murdoch et al for the interesting report on the utility of routine systematic use of polymerase chain reaction (PCR) testing in Legionnaires’ disease [1]. Routine PCR testing of respiratory specimens of all patients with pneumonia, or immunocompromised patients or those who had a Legionella urinary antigen ordered, yielded 114 cases over 4 years of predominantly Legionella longbeachae (a 4-fold increase after application of routine testing). This strategy detected less-severe disease and resulted in reduced length of stay [1]. The current Infectious Diseases Society of America/American Thoracic Society guidelines recommend testing all patients with severe community-acquired pneumonia (CAP) with both the Legionella and pneumococcal urinary antigen tests [2].

Regional Legionella epidemiology should be considered when generalizing the authors’ approach. Recent data highlight a low incidence of Legionella in Texas, with just 4 cases reported in 2009–2010 compared with 170 cases nationwide [3]. Prior report indicated a 6-fold higher incidence of Legionella in the mid-Atlantic area compared with the South-Central area in the United States [4]. We reported a very low rate of 0.19% of Legionella in our central Texas cohort of 5543 hospitalized pneumonia patients over a decade using the BinaxNOW Legionella urinary antigen test (Binax Inc, Scarborough, Maine), despite a considerable increase in the number of tests ordered over that period [5]. Although 6 of our 11 patients with Legionella pneumonia were admitted to the intensive care unit, all had received appropriate initial empiric therapy. Our data did not strongly support routine urinary antigen testing for all hospitalized pneumonia in our region. The total cost of using the urinary antigen test as a diagnostic screening test in our study was estimated to be $158,936.48 vs an expected cost of $488,928.90 using a Legionella species molecular PCR (LEGRP, Mayo Medical Laboratories). The US Centers for Disease Control and Prevention does not recommend PCR testing for Legionella due to its variability in different laboratories (available at: http://www.cdc.gov/legionella/diagnostic-testing.html). Conceivably, PCR testing could enhance detection of Legionella, but we speculate these infections would be less severe and would be covered by empiric macrolide-based antimicrobial regimens. Systematic PCR testing can be fiscally meaningful in patients with severe CAP, in a suspected outbreak, or in suspected hospital-acquired Legionnaires’ disease.

Note

Potential conflicts of interest. All authors: No reported conflicts.

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