rate of the algorithm of 39% (12 of 31) is somewhat misleading. This rate includes both patients for whom isolation was delayed for >24 hours (n=7) or not implemented (n=5) and does not differentiate by level of infectiousness. Of the 12 patients with pulmonary TB who were not placed in negative-pressure isolation rooms within 24 hours of admission to the MGH, 5 were AFB smear-positive, 6 were smear-negative, and 1 patient had no smear obtained (TB diagnosed on autopsy). If only high-risk patients (ie, smear-positive, more infectious) are prioritized for immediate isolation, then only 5 of 31 patients with pulmonary TB were not isolated appropriately (algorithm failure rate=16%). The timing and duration of isolation of smear-negative patients is more uncertain, given the knowledge that only a small minority of such patients will be found to be culture-positive. The use of more rapid and sensitive diagnostic tests that currently are undergoing evaluation at our hospital and others may assist in the assessment of these patients.

Finally, we agree that clinical algorithms are subject to limitations and cannot substitute for careful clinical judgment. However, use of the TB algorithm at the MGH has improved the awareness of TB among clinicians and other healthcare workers and has assisted infection control personnel in the ongoing evaluation of TB control program needs and priorities throughout the hospital. We agree that new, as well as feasible, approaches to the management of this problem are needed.

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Triple Combination Antiretroviral Prophylaxis for Needlestick Exposure to HIV

To the Editor:

Zidovudine has been used widely for prophylactic treatment of persons exposed to human immunodeficiency virus (HIV) through needlestick exposures. There is limited evidence of efficacy due to the relatively small risk of infection after needlestick and the difficulty of implementing randomized, placebo-controlled trials.[1] There are, however, clearly documented failures, despite high doses of zidovudine given soon after HIV exposure.[2] There is also increasing frequency of zidovudine resistance in persons with HIV who have been taking zidovudine. Recent work has demonstrated that triple antiretroviral therapy with protease inhibitors is extremely effective at decreasing viral load among patients with established HIV infection.[3] Although the Centers for Disease Control and Prevention (CDC) recently recommended triple combination antiretroviral prophylaxis for needlestick exposure to HIV, there is no data on the tolerability or effectiveness of this therapy.[4]

A healthy, 38-year-old healthcare worker was performing femoral vein phlebotomy on a patient with acquired immunodeficiency syndrome. The healthcare worker accidentally sustained a deep intramuscular index-finger needlestick with an 18-gauge needle that had just come out of the femoral vein with obvious blood on it. The wound was bled, and triple therapy with D4T, 3TC, and indinavir was begun within 2 hours of the needlestick. Triple therapy was continued for 2 weeks without any side effects. Human immunodeficiency virus serology at baseline and at 3- and 6-month follow-up was negative. The healthcare worker remained in excellent health.

This is the first reported case of triple combination antiretroviral therapy, including a protease inhibitor, to prevent HIV infection after a significant exposure. The absence of HIV infection after this needlestick exposure is not surprising, given the low likelihood of developing subsequent HIV infection. As noted in the recent CDC recommendations, triple combination therapy is likely to be more effective than zidovudine; however, it is certainly more expensive, and there is potential for increased toxicity. Zidovudine was not used in this case because the index patient had been on zidovudine for many years. Consideration of a patient's prior antiretroviral treatment may be useful in guiding appropriate prophylactic strategies in the event of occupational exposure.[5] We are encouraged that a registry of prophylactic treatment has been established (telephone: 1-888-737-4448). It will be important to describe the regimen taken and its tolerability, the extent of needlestick injury, and the rate of seroconversion. These data should be interpreted in the context of index patient viral load and previous antiretroviral therapy.

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