Open Access to Infectious Disease Case-Based Learning on the Internet

To the Editor—I read with great interest the recent article by Falagas et al. [1] about the compilation of a list of open-access educational cases in infectious diseases, which is available on the Internet. The article provides a valuable resource for educators and those who wish to expand their knowledge using a problem-based learning approach.

Falagas et al. [1] acknowledge that the list they compiled is not an exhaustive one, and I wish to bring to their attention an educational Web site that I and a number of other international clinicians have been involved with since 2003. This is the Academy for Infection Management Web site (http://www.infectionacademy.org/), which has free registration and unrestricted access to >30 cases. The case studies were developed by a faculty of international specialists with a keen interest in education—specifically, about the optimal prevention and management of nosocomial infections. These cases are intended to be learning tools and are not necessarily examples of best clinical practice. The case studies are in the form of slide presentations, with photos of imaging and cytology results, and include questions (often with multiple-choice answers) designed to test the reader’s understanding of, for example, the most suitable laboratory and imaging tests to order or the most appropriate antibiotic therapy to administer.

The case studies are divided into 3 general areas according to the type of infection—pneumonia, surgery, and intensive care unit—and encompass both pediatric and adult patients. Because the Web site is aimed at an international audience (primarily junior doctors), we endeavor to emphasize that the most appropriate course of action should not only follow the reader’s knowledge of the patient’s infection and possible comorbidities but should also take into account the specific recommendations of the geographic region, hospital, and/or specific unit or ward.

The Web site also contains other education-based documents and materials—all involving infection control strategies and appropriate management of hospital-based infections—and new items are added on a monthly basis. Such materials include a repository of infection-management guidelines, a review by a faculty member of a recently published article relevant to Academy for Infection Management, and slide presentations that cover topics key to the appropriate management of nosocomial infections. I and the other members of the faculty generate and approve all the documents that appear on the Web site. The Academy for Infection Management program is sponsored by AstraZeneca.

I would be pleased if Falagas et al. [1] would consider adding the Academy for Infection Management Web site to the compiled list of open-access case-based learning resources, because we believe that our Web site provides unbiased and truly relevant problem-based learning materials that are centered on case studies.

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Marin H. Kollef
Department of Internal Medicine, Pulmonary and Critical Care Division, Division of General Medical Sciences and Biostatistics, Washington University School of Medicine, St. Louis, Missouri

Reference

Reply to Kollef

To the Editor—I thank Dr. Kollef [1] for his letter in this issue of Clinical Infectious Diseases and his interest in our article [2] about free Internet educational resources about infectious disease cases. I also thank him for adding to our list another Web site that contains useful educational material in the field of infectious diseases, including educational cases (http://www.infectionacademy.org/).

The main goal of our effort was to put together an initial list of World Wide Web resources about infectious diseases cases that are free to use (open access) and that have educational value for medical students, residents, fellows, and practitioners. We hope that this list will be gradually expanded as we become aware of other useful, relevant electronic resources. We believe that the Internet offers a unique opportunity for remote education in the modern era that is particularly useful to trainees and clinicians with a limited availability of local, high-quality educational resources. For this reason, we have also generated a list of open-access Internet resources about educational cases in internal medicine [3]. In addition, we have identified free World Wide Web resources in various fields, currently focusing on infectious diseases [4, 5]. Much of this material is included in the open-access educational Web site of our Institute (http://www.e-medication.org/).

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Matthew E. Falagas
Alfa Institute of Biomedical Sciences, Athens, Greece; and Department of Medicine, Tufts University School of Medicine, Boston, Massachusetts

References
Predictive Value of Surveillance Cultures and Subsequent Bacteremia with Extended-Spectrum \(\beta\)-Lactamase–Producing Enterobacteriaceae

To the Editor—We read with great interest the article by Reddy et al. [1] about screening for extended-spectrum \(\beta\)-lactamase (ESBL)–producing Enterobacteriaceae by rectal surveillance cultures in high-risk patients and the subsequent acquisition of bacteremia. Their study revealed that 54.9% of the bloodstream infections caused by ESBL-producing Enterobacteriaceae occurred in patients who were not screened, whereas in patients with surveillance cultures that were positive for ESBL-producing Enterobacteriaceae, the risk of developing bloodstream infections with this multidrug-resistant (MDR) pathogen was substantial, and bloodstream infections with these MDR pathogens in patients with negative surveillance culture were more rare. On the basis of their database, it would be interesting to calculate the positive and negative predictive values of presence of ESBL-producing pathogens in rectal surveillance cultures to assess the risk of subsequent bloodstream infection being caused by this MDR pathogen. Involvement of MDR pathogens in bloodstream infection is a known risk factor for inappropriate empirical therapy and, as such, for adverse outcome. Depending on the test characteristics of surveillance cultures, knowledge of colonization by ESBL-producing pathogens by systematic surveillance cultures would identify a subset of patients who would benefit from broad-spectrum empirical coverage—for example, with use of a carbapenem as core antibiotic—as well as identify a subset of patients who could be treated with narrower spectrum antimicrobial therapy [2, 3]. In our intensive care unit, surveillance cultures are obtained for all patients at the time of admission to and during stay in the intensive care unit. These surveillance cultures consist of endotracheal aspirates (at intubation and thrice weekly, as long as patients undergo mechanical ventilation), urinary culture (on admission to the unit and thrice weekly), and nasal, oral, and rectal swabs (on admission to the unit and once weekly). This strategy was introduced in the mid-1980s to control an outbreak of infection with ESBL-producing Klebsiella pneumoniae, and it is still used for infection control purposes. Throughout the years, however, the data provided by surveillance strategy have been progressively used to assist the empirical prescription of antibiotic therapy in case of infection.

This approach allows achievement of high rates of appropriate therapy while minimizing antibiotic selection pressure because last-line, broad-spectrum antibiotics, such as carbapenems or glycopeptides, are generally used only for patients who are colonized with MDR pathogens. This strategy has been proven of value in patients in the intensive care unit who have either nosocomial pneumonia or bacteremia [4, 5]. For example, tracheal surveillance cultures predicted the causative etiology in \(~70\%\) of the bacteremic pneumonia episodes [5], resulting in higher rates of appropriate therapy and survival as well [5, 6]. Previously, we failed to demonstrate a significant attributable mortality among patients with bacteremia caused by gram-negative bacteria. We believe that this is due to the high rate of appropriate therapy that was achieved through this surveillance-assisted prescription strategy [7–10]. Obviously, the efficacy of such a surveillance-assisted approach depends on the positive and negative predictive value of surveillance culture. Therefore, we wonder whether Reddy et al. [1] can provide these on the basis of information included in their database.

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S. Blot,1,4 P. Depuydt,2 D. Vandijck,7 K. Vandewoude,3,4 R. Peleman,1,4 and D. Vogelaers1,4

1Infectious Diseases Department and 2Intensive Care Department, Ghent University Hospital, 3Faculty of Healthcare, University College Ghent, and 4Faculty of Medicine and Health Sciences, Ghent University, Belgium

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