
Book Review

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European Respiratory Monographs: Community Acquired Pneumonia. Edited by J. D. Chalmers, M. W. Pletz and S. Aliberti (Pp. 289; €55; ISBN 978-1-849-84049-1.) European Respiratory Society. March 2014.

Community-acquired pneumonia (CAP) remains a major public health problem in both developed and developing countries, despite significant improvements in our knowledge about it. All these advances have not been translated into a reduction in the incidence and mortality of CAP, particularly in the most vulnerable populations. Looking to the future, the panorama does not appear promising. The World Health Organization estimates that by 2030, lower respiratory tract infections will rank fourth among the leading causes of death, with a mortality rate of 43 per 100 000 persons. Given these facts, a comprehensive review of the current status of knowledge of CAP is extremely welcome.

I found this monograph very useful, up-to-date, and well referenced. It has been written for adult clinicians and paediatricians of every speciality, who will certainly welcome it. The book is organized into 20 chapters that cover almost all aspects of the disease from a European perspective, including classical and must-read chapters devoted to epidemiology, microbiology, pathophysiology, treatment and prevention, but it also includes chapters on CAP phenotypes, non-antibiotic therapies, potential role of inhaled steroids as a cause of CAP, and the role of macrolides as anti-inflammatory agents.

The authors recognized an increased incidence of, and admissions for, CAP in Europe in recent decades with variations by age, gender and comorbid conditions, but also acknowledge that the precise determinants of these findings are not yet fully known. A thorough review of the concept of pneumonia triad and its utility in guiding clinicians in managing CAP is provided. The contribution of two subgroups of patients including those residing in nursing homes and the so-called healthcare-associated pneumonia (HCAP) in predicting multidrug-resistant pathogens (MDR) in Europe has been discussed. Contrary to what is seen in other latitudes, these subgroups of patients with CAP do not merit empirical treatment for MDR in Europe, and other predicting rules seem to be more useful.

The role of traditional and molecular methods for the aetiological diagnosis of CAP is thoroughly discussed. Advantages of PCR-based methods are well presented including multiplex panels for bacteria and virus. The contribution of 16S sequencing is also well presented, identifying advantages and disadvantages of this novel diagnostic methodology. Among the latter, proper interpretation of results in patients with negative cultures, or when unusual and mixed pathogens are identified, remained unanswered. The role of atypical pathogens and viruses is also well reviewed. Scoring systems to better identify and treat atypical pathogens are reviewed in detail, recognizing that no perfect score system exists and that more research in this area is clearly needed. Used routinely these score systems may help in identifying atypical pathogens as a cause of CAP, but treating these cases only with macrolides may not be the best advice, in view of the growing resistance of pneumococcus to these drugs. An entire chapter reviews in detail the severity assessment tools available for CAP and the potential role for biomarkers alone or in combination with these clinical tools. The ideal score does not yet exist, but would predict the most important clinical endpoints and would allow the identification a subset of patients who would benefit the most from intensified treatment modalities. CAP phenotypes (elderly and younger patients, nursing home-acquired pneumonia, HCAP, aspiration pneumonia and pneumonia in COPD patients) are reviewed in detail in chapter 8. Differences in aetiology and clinical presentation by age are well known, but discrepancies in the acceptance of the HCAP phenotype remain; no clear evidence that this phenotype is associated with more MDR pathogens and excess mortality is available. Grey areas in our knowledge of CAP in children are well identified in chapter 10.

Empirical selection of antibiotics for CAP and dosing, route, duration, switching from IV to oral route and the role of biomarkers to guide duration of treatment are discussed in two chapters. New tools to identify the agents of CAP rapidly are urgently needed; they will allow avoidance of unnecessary antibiotic use, and on the other hand would permit proper antibiotic stewardship. The next three chapters evaluate acute respiratory failure (ARF), early recognition and treatment modalities of sepsis and septic shock in CAP patients and the issues of clinical failure and non-resolving pneumonia. Several modalities for supporting treatment of ARF are discussed in detail; a proposed algorithm for deciding when to use non-invasive ventilation

versus mechanical ventilation is presented. The authors reviewed the ABCDE approach to patients with severe sepsis and septic shock, which when applied properly will reduce mortality associated with this deadly condition. Several sets of criteria have been developed for defining clinical stability, none of them is ideal and a personalized approach is advised. More research is needed to fully characterize patients with non-resolving pneumonia.

A number of non-antibiotic therapies for CAP have been tried with inconclusive results; chapter 16 reviews all these modalities in detail. Clearly more research is needed to determine their role in its management. The association of inhaled steroids and CAP in patients with chronic obstructive pulmonary disease is well defined, particularly when fluticasone is used. The evidence supporting the use of macrolides in CAP is reviewed in chapter 18. A beneficial effect on mortality was observed in observational studies,

which may not be directly related to its antimicrobial coverage. However, growing resistance to this group of antimicrobials and potential heart toxicity may be taken into consideration. Finally, a thorough review of both pneumococcal and influenza vaccines is presented in chapter 20. Sequential vaccination for individuals at risk for pneumococcal disease is advised. Novel influenza vaccines and potential role of synergistic protection of pneumococcal and influenza vaccines are also reviewed. I fully recommend reading this monograph for everyone involved in the management of CAP.

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