肺部感染的診斷方式:侵入性及非侵入性診斷方式

Diagnosis of Pulmonary Infection: Invasive and Non-invasive

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Pneumonia is a common cause of morbidity and mortality in adults worldwide. The diagnosis of pneumonia is based on clinical features and X-ray. The three main components of the initial assessment of a patient presenting with suspected pneumonia are confirmation of the diagnosis of pneumonia, assessment of disease severity and identification of the causal pathogen. Initial antimicrobial therapy for pneumonia is almost always empirical. The etiological diagnosis, however, is based on empirical data, culture, serology, nucleic acid amplification techniques (NAAT), and bronchoscopy. When choosing any of these diagnostics, a number of points must be considered. Although very informative, empirical data (i.e. patient history, recent travel, intravenous drug exposure, prior infections, or antibiotic exposure) can only aid in narrowing the scope of infection and is not definitive. In contrast, culture allows bacterial identification and is considered the preferred method in diagnostics.

Despite technological advancements, the etiology of pneumonia is identified less than 60% of the time, thus research looking into atypical pneumonia causing agents is required. Limited information is available regarding atypical bacterial pneumonia. In the event that a definitive diagnosis cannot be reached, more invasive techniques (e.g. bronchoscopy) may be used for sample collection (bronchoalveolar lavage [BAL] or biopsy). Fiberoptic bronchoscopy is a useful, albeit interventional, diagnostic modality that offers the potential for direct inspection of bronchial mucosa and respiratory secretions and for obtaining microbiological samples by using protected specimen brushing and/or bronchoalveolar lavage (BAL). Although very beneficial, bronchoscopy is currently underutilized in respect to immunocompromised patients such as HIV, leukemic and bone marrow transplant patients: and advanced immunosuppression, despite it being recommended for patients with low CD4 cell counts (< 200 cells/μl). This underutilization is perhaps due to the fact that patients are too sick to undergo the BAL procedures, or due to the high volume of immunosuppressed patients admitted to hospital. In addition, it can lead to complications such as bleeding and pneumothorax. No clear evidence to support the routine use of bronchoalveolar lavage for the diagnosis and management of pulmonary infection compared to the standard practice of providing treatment.

I will present the application of invasive techniques (e.g.bronchoscopy) may be used for sample collection (bronchoalveolarvage [BAL] or biopsy) has potential to be clinically useful in some patient populations with pneumonia.