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Lower respiratory tract infections in adults : a clinical diagnostic study in general practice

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Citation

Graffelman, A. W. (2005, June 16). *Lower respiratory tract infections in adults : a clinical diagnostic study in general practice*. Retrieved from <https://hdl.handle.net/1887/3732>

Version: Corrected Publisher's Version

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Chapter I

Introduction and aims of this thesis

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1.1 Introduction

In this thesis the results of investigations on lower respiratory tract infections (LRTIs) in adults, a diagnostic study in general practice are presented. LRTI comprise different kinds of pulmonary infections. They range from mainly self-limiting bronchitis to pneumonia. The latter often results in hospital admittance and still causes high rates of mortality. The recommendations for treating of the various entities within LRTI differ, i.e. for acute bronchitis only symptomatic treatment is recommended, whereas for pneumonia antibiotic treatment is obligatory.¹ Especially seen in the light of the increasing resistance to antibiotics it is important to treat only those patients with antibiotics who definitely need them. To identify those patients it is relevant to develop proper diagnostic methods. Most investigations on LRTIs have been done on patients with pneumonia admitted to hospital. Studies on patients identified and managed in general practice settings are rare. The question arises how the diagnostic work-up should be in the general practice setting. Respiratory tract diseases have been a focus of interest of the Department of General Practice and Nursing Home Medicine in Leiden, the Netherlands. Previous studies have been published on acute bronchitis², sinusitis³ and the diagnosis of asthma and COPD⁴.

1.2 Aims of this thesis

The following questions will be addressed:

1. Which pathogens are involved in patients with lower respiratory tract infections in a general practice setting? (Chapter 3)
2. What is the range of findings on chest radiographs in patients with lower respiratory tract infections in general practice and are these findings related to the aetiology of the infection? (Chapter 4)
3. To what extent can prediction rules from existing literature be applied to assess the presence of pneumonia in our group of Dutch general practice patients with lower respiratory tract infections? (Chapter 5)
4. Is it possible to predict the presence of a bacterial infection in patients with lower respiratory tract infections in general practice? (Chapter 6)
5. Can the presence of *Mycoplasma pneumoniae* be predicted by information obtained from medical history taking, physical examination and simple laboratory tests? (Chapter 7)

In chapter 2 we describe the literature about the definition of lower respiratory tract infection, its epidemiology and aetiology, the prediction of pneumonia or

the prediction of bacterial infections and the use, resistance and efficacy of antibiotic treatment in patients suspected to have a lower respiratory tract infection.

1.3 References

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