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Title: Role of virus in community-acquired pneumonia (CAP)

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Body: INTRODUCTION It is of increasing interest the role of viruses as etiologic agent of CAP. We tried to assess this subject in our patients. We conducted a prospective observational study to investigate the viral, bacterial and mixed viral/bacterial etiology of patients admitted to hospital with a diagnosis of CAP. Samples were taken for blood culture and sputum culture, serial serology studies, urinary Legionella and S pneumoniae antigens, and nasopharyngeal aspirate to search virus by immunofluorescence and 2 different multiple polymerase chain reaction (PCR). RESULTS Of a total of 262 patients with CAP admitted to our hospital were included, and we found at least one pathogen in 180 (68.7%). Out of the 180 patients with etiological diagnosis, in 70 (38.8%) a bacterial agent, in 64 (35.6%) a viral agent and in 46 (25.6%) had a mixed etiology (virus + bacteria) were found. The bacteria most frequently found was S. pneumoniae, in 67 patients. Rhinovirus was found in 30 patients, and was the most prevalent virus associated with CAP. The most frequent virus/bacteria combination was S. pneumoniae with Rhinovirus, found in 9 patients.

CONCLUSIONS Prevalence of virus in CAP is important, reaching more than half (62%) of all known etiology. The most common pathogen causing CAP is S. pneumoniae, which was also the most often associated with virus. The study of viruses as pathogens of CAP must be taken into account in future studies of this disease.