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Does respiratory infection due to *Chlamydia pneumoniae* still exist?

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To the Editor: Since the late eighties, *Chlamydia pneumoniae* is considered as an agent of community-acquired pneumonia (CAP) and of other respiratory tract infections affecting all ages [1]. The common occurrence of *C. pneumoniae* infection is suggested by the high seroprevalence ($\geq$ 70%) observed in adults [2]. However, in recent studies [3-5], the prevalence of respiratory infections due to *C. pneumoniae* was reported to be much lower (<1.5%) than previously (6-22%) [6]. This apparent decrease in *C. pneumoniae* infections prevalence could be due to changes in *C. pneumoniae* epidemiology over time, to increased specificity of new diagnostic methods or to the difficulty for clinicians to target the infected population.

In our university hospital, we routinely use a multiplex real-time PCR for the detection of *C. pneumoniae* and *Mycoplasma pneumoniae* DNA [7]. From October 2001 to June 2010, a total of 2244 respiratory specimens retrieved from 1583 patients were sent to the laboratory for *C. pneumoniae* and/or *M. pneumoniae* PCR, including 884 bronchoalveolar lavages, 843 nasopharyngeal swabs, 354 bronchial aspirates, 111 sputa and 52 other samples. Only 4 (0.2%) samples taken from two patients were positive for *C. pneumoniae*, whereas 76 (3.4%) were positive for *M. pneumoniae* in 65 patients. In both cases, the diagnosis of *C. pneumoniae* infection was not suspected by the clinician and the test was done thanks to the multiplex format of our molecular test.

The first patient with *C. pneumoniae* infection was a 48-year old man receiving immunosuppressive therapy for inflammatory bowel disease. He presented with a chronic cough initially suspected to be asthma and a febrile episode. PCRs performed on sputa obtained on day 0 and day 4 were highly positive with 2’285’300 copies/ml (Ct=24.6) and 2’389’200 copies/ml (Ct=25). The amount of DNA decreased to 465 copies/ml (Ct=37.2) in 17 days. In presence of persistent dry cough despite the falling bacterial load, clarithromycin 500 mg bid was administered for 2 weeks. Clinical evolution was favorable under

antimicrobial therapy with rapid decrease of cough. Follow-up PCRs at day 34 and day 48 were negative.

The second patient with *C. pneumoniae* infection was a healthy 13-year old girl presenting with a third episode of pneumonia over a 5-month period. PCR performed on naso-pharyngeal swab was positive with 153 copies/ml (Ct=36.5). The patient condition improved with clarithromycin therapy.

This study confirms that *C. pneumoniae* is rarely detected, at least in our setting, since only 2 patients out of 1583 were identified with *C. pneumoniae* infection over a ten-year period. This may reflect a low prevalence of the disease and/or suggests that clinicians do not target the right population. The 2nd hypothesis is supported by the fact that both cases were not suspected by the physician in charge and the etiological diagnosis was made thanks to the duplex approach of our molecular test. Since *C. pneumoniae* infection may be associated with persistent cough in adults [8, 9], it should be included in the differential diagnosis of chronic cough and asthma.

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