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***Chlamydia pneumoniae,* possible association with asthma in children**

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Chlamydia pneumoniae has been recognized as a common cause of community-acquired pneumonia (CAP) and other acute respiratory tract infections (ARIs) in various age groups.[1] Lately, the prevalence of *Chlamydia*-associated ARIs decreased to less than 1.5% [2], as a result of (i) changes in epidemiology of *C. pneumoniae* and (ii) increased specificity of new diagnostic molecular methods. Moreover, *C. pneumoniae* infection may remain undetected since clinicians may not screen the infected population. Indeed, *Chlamydia pneumoniae* has been recently identified as an agent of asthma exacerbation and has been associated with its severity, [3,4,5] thus reinforcing the importance to target these patients. In Lausanne, using a duplex real-time PCR, that detects *C. pneumoniae* and *M. pneumoniae* DNA[6], we reported a 0.13% prevalence of *C. pneumoniae* positive PCRs (2/1583) and identified one patient with *C. pneumoniae*-associated asthma, who recovered with antibiotics[7]. Below, we report a case series of *C. pneumoniae* respiratory infections in children.

From 10th September to 5th December 2013, 8 children were detected positive for *C. pneumoniae* from upper respiratory tract specimens (Table). Of these, 5 were admitted for either acute asthma exacerbation or asthmatic bronchitis. All but two patients presented with chronic cough without fever nor systemic symptoms. These two patients presented a co-infection with either rhinovirus or *M. pneumoniae* and were admitted for severe respiratory distress in the intensive care unit, intubated and mechanically-ventilated, respectively for a community-acquired pneumonia (patient 7) and for a severe asthma exacerbation (patient 8). Both patients with severe clinical presentation were known for pre-existing asthma condition. All patients were successfully treated with a macrolide. Interestingly, *C. pneumoniae* infection was detected by chance in 7 patients as a result of the dual format of our PCR, because a *Mycoplasma pneumoniae* PCR was requested.

In conclusion, this report supports the role of *C. pneumoniae* in asthma exacerbation. Whether *C. pneumoniae*-associated asthma may be cured with antibiotics or will also require steroids remains yet unknown and may vary from patient to patient. This case series underlines the importance of screening asthmatic children for *C. pneumoniae*. Moreover, our findings suggest that *C. pneumoniae* prevalence is likely underestimated and children with chronic cough, even in absence of fever, should be tested for *C. pneumoniae*.

Table.

N	Age years	Gender°	Asthmatic condition	Cough duration	Fever	ICU°	Sample	Copies/ml	Co-infection (copies/ml)	Treatment	Treatment duration
1*	7	F	asthma	chronic	yes	no	throat	1'743'796	no	clarithromycin	14 days
2	7	M	asthma	chronic	yes	no	nasal	197'000	no	clarithromycin	10 days
3*	7	M	None	chronic	no	no	throat	3100	no	clarithromycin	10 days
4	6	M	None	chronic	no	no	nasal	60	no	azithromycin	5 days
5*	8	M	asthmatic bronchitis	chronic	no	no	NP°	78'000	no	clarithromycin	7 days
6*	12	F	None	chronic	no	no	NP°	61'000	no	clarithromycin	7 days
7	7	F	asthma	acute	yes	yes	NP°	170	*Mycoplasma pneumoniae* (570)	clarithromycin	14 days
8	10	M	asthma	acute	yes	yes	NP°	208	rhinovirus (13'071'000)	erythromycin	14 days

*patient originated from the same eastern region of VAUD canton (nearby Yverdon);
°F: female, M: male; °NP : nasopharyngeal sample
°ICU: admission to the intensive care unit (patient 7, for a community-acquired pneumonia; patient 8, for a severe asthma exacerbation)

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