CHLAMYDOPHILA PNEUMONIAE: QUALITY AND RAPIDITY IN SEROLOGICAL DIAGNOSIS

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Introduction. Chlamydophila pneumoniae is an infectious agent of worldwide clinical and epidemiological relevance, responsible for respiratory infections, atypical community-acquired (CAP), acute and chronic re-infections as well as extra-pulmonary diseases, with a possible role in atherogenesis. The timely detection of antibody isotypes is the most widely used diagnostic method in clinical settings as it allows to understand the status of the infection and the clinical management of the patient based on sound etiological findings.

Materials and Methods. 140 sera from adult and pediatric patients with a diagnosis of CAP or suspected infection of the respiratory tract were examined for the presence of anti-*C. pneumoniae* IgA, IgG and IgM antibodies using a new single test automated ELISA system (Chorus-*Chlamydophila pneumoniae*, DIESSE Diagnostica Senese SpA, Italy). A second ELISA test routinely used in our laboratory has been employed for comparison (Cp Quant Savyon, Israel); the reference microimmunofluorescence method (MIF Chlamydia - Focus, USA) was used to resolve the discordant IgM results, obtained with the two ELISA tests.

Results. analyzing single class antibody test results for Chorus-*Chlamydophila pneumoniae*, the correlation was 88% for IgA (49 positive, 73 negative, 2 border-line); 90% for IgG (66 positive, 58 negative); 92.1% for IgM (33 positive, 94 negative, 2 border-line). In 20 confirmed cases of infection with evidence of presence of all isotypes, the correlation was 19/20 for IgA, 19/20 for IgG, 18/20 for IgM. Of the eleven IgM discordant cases, on which the MIF test was performed, 5 turned out as true positives, 4 false positives, 2 indeterminate. The corrected correlation for IgM rose to 95.7%.

Conclusions. The quality of a serological test in *C. pneumoniae* infections is closely associated with the selectiON of the antigen used for coating the slid phase. Under this point of view, the new Chorus-Chlamydophila pneumoniae EIA tests showed high diagnostic efficiency, together with rapidity and ease of use, complete automation, short-time reporting and optimization of the reagents.