PRELIMINARY EVALUATION OF THE CHORUS SYSTEM FOR THE SEROLOGICAL DIAGNOSIS OF INFLUENZA

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Introduction. Serological diagnosis of influenza has historically been performed by the complement fixation test method (CFT), which cannot distinguish between the different classes of antibodies and ideally would require paired samples (acute and convalescent phase sera). In recent years, ELISA kits that allow the distinction of the various antibody classes have been developed; specific IgA for the influenza A and B viruses, considered as markers of recent infection, are of particular interest. In this study we evaluated the performance of the recently developed. kits Chorus Influenza A IgG and IgA and Chorus Influenza B IgG and IgA (Diagnostics DIESSE Siena SpA, Italy) for the serological diagnosis of infection with Influenza type A and B viruses.

Materials and methods. samples from 145 consecutive patients with symptoms of respiratory infections sent to our laboratory were analyzed. The serological study was performed by analyzing all samples with the Chorus method in comparison with Anti-Influenza A IgG and IgA and Anti-Influenza B IgG and IgA ELISA kits (Euroimmun, Germany) and with an immunofluorescence (IFA) method developed in-house, considered as the "gold standard".

Results. The correlation between the Chorus and Euroimmun methods was:

Influenza A IgG = 97.2%
Influenza A IgA = 86.2%
Influenza B IgG = 99.3%
Influenza B IgA = 95.9%.

The relative sensitivity and specificity of the Chorus kits compared to the Euroimmun kits were respectively:

Influenza A IgG = 99.2 and 82.3
Influenza A IgA = 94.0 and 82.1
Influenza B IgG = 100.0 and 93.3
Influenza B IgA = 75.0 and 97.0

The discordant sera were analyzed by IFA method for all parameters, and the recalculated values of sensitivity and specificity for the Chorus kits were:

Influenza A IgG = 100.0 and 93.7
Influenza A IgA = 98.4 and 98.8
Influenza B IgG = 100.0 and 93.3
Influenza B IgA: = 100.0 and 99.3.

Conclusions. The new Chorus kits show high sensitivity and specificity and are therefore a useful tool for the serological diagnosis of influenza-like illnesses.

INNOVATIVE CLINICAL DIAGNOSTIC SYSTEMS