ABSTRACT

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Direct antigen detection of the RS-virus using Binax NOW RSV Test- and Coris BioConcept RSV Respi-Strip-rapid diagnostic test-methods.

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Respiratory Syncytial-virus (RSV) is globally considered one of the most significant reasons for childhood respiratory tract infections. In Finland the virus causes epidemics in two years periods especially during the winter season.

The laboratory of Clinical Microbiology in the main hospital of Central Finland has for years been concentrating all its research for RSV-infection suspicions in the Virus Research Laboratory of Turku University, where the samples are analyzed by using Time-Resolved Fluoro-Immunoassay (TR-FIA). The only distinguished problem that this kind of a practice generates, is the fact, that the positive results can not be informed until a few days has lapsed. This routine is particularly impractical during annual community outbreaks, because RS-virus is spread very easily from respiratory secretions through close contact with infected persons or contact with contaminated surfaces or objects. It has been suggested, that the rapid diagnostic test method developed for detection Respiratory Syncytial-virus, might be the imaginable solution for the problem. In the future, by using this test, the laboratory of Clinical Microbiology hopes to be able to indicate the infection caused by RSV reliable and without any difficulties.

Nowadays there are several commercial rapid test methods to diagnose the RSV-infection. Binax NOW RSV Test and Coris BioConcept RSV Respi-Strip-rapid tests were selected for this research. They both are based on direct antigen detection of the RS-virus. 19 nasal wash specimens were collected from symptomatic patients for the experimental part of the study. Taking into consideration experimental character of the inspection, it was still very important to send the collected samples also to Turku. The quality of the observation material turned out to be excellent because it included 9 RSV-positive samples.

The purpose of this study was to compare the performances of these two rapid tests. They were estimated in proportion to TR-FIA and also with each other. According to the research results the Coris BioConcept RSV Respi-Strip turned out to be slightly more reliable compared to the Binax NOW RSV Test. There were also some differences between other explored variables. Although the significance of these differences depends highly on the criterions, which are emphasized by the laboratory, while choosing a rapid diagnostic test-method developed for the Respiratory Syncytial-virus.

Keywords: Respiratory Syncytial-virus, rapid diagnostic test-method, comparative research