

EFFECT OF RAPID INFLUENZA DIAGNOSTIC TEST ON THE CLINICAL MANAGEMENT OF CHILDREN WITH ACUTE FEBRILE RESPIRATORY TRACT INFECTION

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Background: The burden of influenza on children is underestimated. Children are an important vector for spreading the disease and they are at the increased risk for complications (including otitis media, sinusitis, bronchitis and pneumonia) and hospitalizations. The rapid and appropriate diagnosis of influenza may help to start early antiviral treatment and may rationalize the use of antibiotics and additional laboratory tests. **Objective:** To describe clinical management of children with acute febrile respiratory tract infection with and without of rapid influenza detection test (RIDT). **Methods:** The prospective study was conducted in three primary care clinics in Warsaw during two influenza seasons - 2009/2010 (pandemic influenza A H1N1v season) and 2010/2011 (postpandemic season). The total number of 256 children aged 0-5 years who fulfilled the inclusion criteria (acute onset of the disease, fever >38°C, cough and/or sneezing) were enrolled into the study: 115 of them had been tested with RIDT (rapid test group), 141 children had not been tested with RIDT (control group). In patients from rapid test group the nasopharyngeal swabs were taken using a sterile artificial stick (ending with viscose) and the specimens were obtained by a trained personnel. The nasopharyngeal swab method was chosen for the highest combination of sensitivity and specificity for a chosen RIDT - it was BD Directigen™ EZ Flu A+B. Each patient had a nasopharyngeal swab specimen obtained and tested according to the manufacturer's recommendations. The RIDTs were performed immediately on-site at the general practitioner office according to manufacturer's instructions. Positive and negative test results of RIDT were determined by use of the visual key provided within the test kits. The analysis of medical management of children from rapid test group and control group was performed, including usage of antiviral drugs, antibiotics, administration of additional tests (X-ray examination, blood tests and urinalysis). **Results:** Among 115 children included into the rapid test group, the result positive for influenza A or B was described in 35 (30%) children: 18 in 2009/2010 season and 17 in 2010/2011 season. The antiviral treatment (oseltamivir) was prescribed only for four children with positive result of RIDT. Antibiotics were administered more often in the control group compared to the rapid test group (respectively for 16% vs 7%). No child

with a positive result of RIDT was prescribed antibiotic. Additional blood tests were ordered more often for children from control group compared to the rapid test group (respectively 14% vs 5%), however the frequency of their administration was similar for children with negative result of RIDT and for control group. Urinalysis was conducted in 67% of patients from control group compared with 20% patients from rapid test group. Chest radiograms were made only in 6 cases of children from the control group. **Conclusions:** Performance of rapid influenza detection test in children with symptoms of acute febrile respiratory tract infection performance of rapid influenza detection test provides rational use of antiviral drugs, reduces inappropriate use of antibiotics and decreases number of conducted additional tests.