

## Respiratory infections

### ***Streptococcus pneumoniae* urinary antigen test as a useful method in the diagnostics and treatment of pneumonia in children.**

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**Introduction:** *Streptococcus pneumoniae* (*Sp*) is the most common cause of community-acquired pneumonia, especially in children under 5 years of age. *Sp* resistance to  $\beta$ -lactams and 3rd generation cephalosporins is widespread in Poland, so rapid confirmation of etiology is important in choosing the optimal therapy. We assessed the suitability of *Sp* urinary antigen test in diagnostics and treatment of pneumonia in children. **Methods:** Twenty children (50% girls, median age: 3 years) hospitalized in the Pediatric Regional Medical Center in Opole with pneumonia were investigated. We evaluated symptoms on admission, laboratory, imaging and microbiology results and treatment. To detect *Sp* antigen in the urine, Uni-Gold™ *S. pneumoniae* test by Trinity Biotech was performed. **Results:** Pneumonia was diagnosed in all patients. Inflammatory changes on chest X-ray were shown in 18/20 cases. Elevated concentration of CRP (median: 124.5 mg/dl) and procalcitonin (median: 6.26 ng/ml) were observed in all the patients. 9/20 were treated with antibiotics prior to hospitalization; azithromycin in most cases. On admission, blood culture was performed in 13 cases (65%) - all sterile. In 19/20 children *Sp* antigens were detected in the urine. All the patients were treated with i.v. antibiotics, in most cases ceftriaxone (18/20; 90%), in 11 cases (55%) additionally with vancomycin. One child was transferred to pediatric surgery ward due to lung abscess. **Conclusions:** In children with clinical and radiological signs of pneumonia detection of *S. pneumoniae* antigen in urine may be helpful in choosing the optimal antibiotic therapy to prevent complications.