SEROTYPES OF STREPTOCOCCUS PNEUMONIAE IN CHILDREN OF RUSSIAN FEDERATION

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Objective: To describe serotypes of *Streptococcus pneumoniae* from healthy children and paediatric patients < 5 years old.

Study design: Multi-center microbiological and epidemiological study.

Materials and methods: 584 strains of *pneumococci* from 18 cities of Russian Federation were studied using PNEUMOTEST-LATEX test (Statens Serum Institut, Denmark). Among those 306 from healthy carriers, 14 from patients with invasive pneumococcal disease (IPD), 262 from non-invasive pneumococcal disease (NIPD). Population included children of day-care centers (163), orphanages (143) and paediatric hospitals (278).

Results: In children of day-care centers predominant serotypes were as follows: 19 (28.8%), 6 (15.9%), 15 (10.4%), 23 (9.2%), 3 (6.7%) and 9 (6.7%). In orphanages serotype 19 was predominant (67.8%), followed by 6 (9.8%), 23 (9.2%), 14 (4.2%), 18 (2.1%). In 1.2% of cases serotype was not identified. Ten-valent vaccine coverage for healthy carriers was 80.7%. In paediatric patients with AOM serotype 19 was detected in 31.0%, 3 (10.2%), 14 (7.7%), 15 (5.1%), 23 (5.1%), 4 (5.1%), 6 (5.1%), 8 (2.5%), 9 (2.5%), 20 (2.5%), 22 (2.5%). Serotypes not included in vaccine composition, were detected in 20.7%. Vaccine coverage for AOM was 56.5%. In CAP patients, serotype 19 was detected in 33.6%, 6 (15.8%), 23 (8.9%) and 14 (7.2%). Vaccine coverage for CAP was 70.6%. Among strains from IPD, 50% were of 19 serotype.

Conclusion: An average vaccine coverage in this study was 75.2%. All penicillin-resistant strains were covered by 10-valent vaccine.