

Methods: We studied antimicrobial resistance patterns of 457 *S. Typhimurium* strains, isolated from salmonellosis patients in year 2004. Antimicrobial susceptibility testing for ampicillin (A), chloramphenicol (C), nalidixic acid (N), ciprofloxacin (P), tetracycline (T), gentamicin (G), trimethoprim/sulfamethoxazole (R), cefotaxime (F) was checked by the disk diffusion method following the recommendations of the NCCLS. WHONET 5 program was used for storage and analysis of microbiological data. External quality assurance of laboratory researches was carried out within the framework of the program EQAS (WHO). We compared antimicrobial resistance patterns of *S. Typhimurium* strains isolated from children under 3 years old (n=244) and from adults aged 18 and older (n=90).

Results: The majority of *S. typhimurium* strains were multiresistant. Resistance to 4 preparations revealed in 9.8% of strains; to 5 - in 22.1%; to 6 - in 48.4%. 10.5% of strains were resistant to all of preparations tested with the exception of ciprofloxacin. Resistance to ceftriaxone was revealed in 90.7% of strains. We found no statistical differences between *S. typhimurium* strains resistance in early age children and adults. Pattern ACTGRF was observed in 48.8% of strains from children and in 53.3% of strains from adults; pattern ACTRF - in 12.3% and 7.7%; ACTGF - in 8.2% and 6.7%; ACNTGRF - in 7.8% and 14.4% respectively (differences were not significant). The main route of transmission of salmonellosis typhimurium in adults was food born, in children—contact (59.7%) including nosocomial (12.2%).

Conclusions: *S. typhimurium* strains antimicrobial resistance levels isolated in Belarus were comparable to those in the rest of world, with the exception of resistance to cephalosporins of the 3rd generation. The comparable levels of antibiotic resistance and similar resistance profiles in children and adults suggest similarity of epidemiology processes in children and adults populations. In spite of different routes of salmonellosis typhimurium transmission in children and in adults, etiological agents in all the age groups are multiresistant strains with similar resistance patterns.

2.009 The incidence of *Mycoplasma pneumoniae* infection in hospitalized patients with community acquired pneumonia

I. Kondova Topuzovska, A. Anastasovska, S. Petrushevska, V. Semenakova Cvetkovska. Clinic of Infectious Diseases, Skopje, Former Yugoslav Republic of Macedonia

Objective: The aim of the study was to determinate the incidence of the acute *Mycoplasma pneumoniae* infection in relation of age in hospitalized patients with community acquired pneumonia (CAP) and to provide epidemiological dates for the annual incidence.

Materials and Methods: A total of 213 children and 235 adult hospitalized patients with CAP within three year period (1st September 2002 to 31st August 2005) were included in our study. The mean age was 4.81 years (range: 1–17) for children and 48.42 years (range: 18–84) for adults. From children there were 129 (60,56%) male and 84 (39,44%) female and from adults 138 (58,72%) male and 97 (41,28%) female. Children were divided in two age groups: preschool children (1–6 years)—158 patients (74,18%) and school children (more than 7 years)—55(25,82%). Diagnosis of *Mycoplasma pneumoniae* infection was established by serological confirmation by detection of IgM and IgG antibody against *Mycoplasma pneumoniae* Ag with Pneumoslide M and G (Vircell) IF test and/or *Mycoplasma pneumoniae* IgM, IgG (Vircell) ELISA test in paired sera.

Results: Acute *Mycoplasma pneumoniae* infection as a cause of CAP from 213 children was detected in 43(20,19%); in 26(16,46%) preschool and in 17(30,9%) school children; from 235 adults patients was detected in 30(12,77%). The incidence per year was 8,33% (2002/03), 15,80% (2003/04) and 13,24% (2004/05) among adults and 11,96% (2002/03), 27,27% (2003/04) and 25,45% (2004/05) among children.

Conclusions: The results show high incidence of *Mycoplasma pneumoniae* in the etiology of CAP in Macedonian hospitalized patients, especially in children aged more than 7 years old. The incidence per year ranged between 8,33% and 15,80% among adults and 11,96% and 27,27% among children was the highest in the winter and springtime in 2003/2004 year. The importance of timely diagnosis and treatment is obvious.

2.010 The Incidence of Atypical Agents as A Cause of CAP in Hospitalized Adults

I. Kondova Topuzovska¹, A. Anastasovska¹, G. Kondov², S. Petrushevska¹, T. Grdanovska³. ¹Clinic of Infectious Diseases, Skopje, Former Yugoslav Republic of Macedonia; ²Clinic of Thoracocardiavaskular Surgery, Skopje, Former Yugoslav Republic of Macedonia; ³Institute of Microbiology, Skopje, Former Yugoslav Republic of Macedonia

Objective: The aim of the study was to determinate the incidence of the acute *Mycoplasma pn.*, *Coxiella burneti*, *Chlamydia pn.* and *Legionella pn.* infection in hospitalized adult patients with community acquired pneumonia (CAP) and to provide epidemiological dates for the annual incidence.

Materials and Methods: A total of 235 adult hospitalized patients with clinical and radiographic findings of lower respiratory tract infection, within a three year period (1st September 2002 to 31st August 2005), were included in our study. The mean age of patients was 48,42 years (range: 18–84), 138 (58,72%) were male and 97 (41,28%) female. Diagnosis of acute atypical lower respiratory tract infection was established by serological confirmation by detection of IgM and IgG antibody against *Mycoplasma pn.*, *Coxiella burneti*, *Chlamydia pn.* and *Legionella pn.* Ag with Pneumoslide M and G (Vircell) indirect immunofluorescent assay in paired sera.

Results: Atypical agents as a cause of CAP was detected in 97(41,28%) patients with incidence per year ranged between 23,53% and 60,00%. From them acute *Mycoplasma pneumoniae* infection was detected in 30(12,77%) patients with incidence per year ranged between 8,33% and 15,80%; acute *Coxiella burneti* infection in 41(17,45%) patients with incidence per year ranged between 4,42% and 28,42%; acute *Chlamydia pn.* infection in 14(5,96%) patients with incidence per year ranged between 2,94% and 9,47% and acute *Legionella pn.* in 12(5,11%) patients with incidence per year ranged between 2,94% and 6,32%.

Conclusions: The results show high incidence of atypical agents in the etiology of CAP in Macedonian hospitalized patients, especially for *Coxiella burneti* in the winter and springtime in 2003/2004 year with incidence of 28,42%, which suggested epidemical appearance in that year. Those dates make the point of the importance of timely diagnosis and treatment of the atypical agents with adequate antimicrobial agents with intracellular penetration and activity.

2.011 Epidemiology and Outcome of Infective Endocarditis in the New Millennium

E.E. Hill, P. Herijgers, P. Claus, S. Vanderschueren, M.C. Herregods, W.E. Peetermans. UZ Gasthuisberg, Leuven, Belgium

Background: This study investigated trends in epidemiology and predictors of outcome in infective endocarditis (IE).

Methods: From June 2000 through December 2004, we prospectively recorded 203 definite IE episodes according to modified Duke criteria in 193 patients.

Results: Sixty-one% were males; median age was 67 years. Forty-four% (90/203) were nosocomial. Thirty-four% (70/203) involved prosthetic valves. Causative microorganisms included: staphylococci in 43% (87/203) [*S. aureus*: 31% (62/203), coagulase-negative staphylococci: 12% (25/203)], streptococci in 26% (52/203), enterococci in 17% (34/203), others in 3% (7/203) and 11% (23/203) were culture-negative. *S. aureus* was the most frequent microorganism, 23% (14/62) were methicillin-resistant. Enterococcal IE was nearly equally distributed between community and nosocomial origin. At least one complication occurred in 79% (161/203). Surgical intervention was performed in 63% (127/203), mainly indicated because of congestive heart failure. Median time from diagnosis to surgery was 6 days. Six-month mortality was 22% (42/193); Eighteen% (22/123) for native valve IE and 31% (19/61) for prosthetic valve IE. In bivariable analysis, factors associated with 6-month mortality were age, gender, causative microorganism, nidus of infection and therapeutic policy. In multivariable analysis, predictors of 6-month mortality were age (OR, 1.05; 95% CI, 1.01-1.1; P=0.03), causative microorganism (OR, 0.74; 95% CI, 0.55-1; P=0.049) and contraindication to surgery (OR, 32.26; 95% CI, 7.2-145; P<0.001).