readiness and collaboration between the different clinics is essential.

doi:10.1016/j.ijid.2008.05.1195

69.015

Emergence of Clonally Related SHV-5 ESBL-producing Escherichia coli Strains in the Community

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Background: Extended-spectrum beta-lactamase (ESBL)-producing Escherichia coli is an emergent cause of urinary tract infections in nonhospitalized patients in different countries. The aim of this study was the molecular characterization of ESBL-producing E. coli strains isolated from urine of outpatients in Zagreb region.

Materials and Methods: During the five-month study period a total of 2,451 E. coli strains were isolated from urine of nonhospitalized patients with significant bacteriuria. ESBL production was detected by double-disk diffusion technique and by < 3-dilution reduction in the minimal inhibitory concentration of ceftazidime in the presence of clavulanate. A total of 39 ESBL-producing E. coli strains (1.59%) were collected and characterized. Molecular relatedness between the strains was analyzed by pulsed-field gel electrophoresis (PFGE) and isolates were considered to be genetically related if the Dice coefficient correlation was > 80%. Beta-lactamases were characterized by isoelectric focusing, substrate profile determination, polymerase chain reactions at the Ambler positions 238 and 240 were found in all high level of ceftazidime and aztreonam resistance. Mutations in the blaSHV genes enzymes of five strains were identified as SHV-5 beta-lactamase which conferred on the producing isolates high level of ceftazidime and aztreonam resistance. Mutations at the Ambler positions 238 and 240 were found in all gene sequences. The blaSHV genes were encoded on related plasmids which also carried resistance genes for aminoglycosides. Plasmids were assigned to nine fingerprinting patterns (A-F).

Conclusions: The study demonstrated community-associated emergence of clonally related SHV-5 beta-lactamase-producing E. coli strains. Other studies on ESBLs in the outpatient populations reported CTX-M ESBLs to be most prevalent in the community setting. The fact that the strains were clonally related, that produced the same type of ESBL and that the high proportion of strains were resistant to aminoglycosides which are not prescribed outside of hospitals, could indicate the possible food origin of ESBL E. coli strains.

doi:10.1016/j.ijid.2008.05.1196

69.016

Botulism - A Risk of Traditionalist or Underdeveloped Countries?

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Background: In the past 4 years the number of patients diagnosed with botulism has increased in Bihor county, situated in the western region of Romania. The hospitalized cases presented medium and severe forms, fortunately not leading to death due to timely administration of antitoxic serum. Meat and vegetables products (cans) are incriminated as a source of infection, being manipulated in conditions of deficient hygiene.

Methods: We conducted a retrospective clinic-epidemiological study of botulism cases hospitalized in Bihor county during 2004—2007. Diagnosis was based on clinical signs, epidemiological data and in a small number of cases (6) on identifying botulinum toxin through biological tests.

Results: In the period 2004—2007, 29 persons were diagnosed with botulism in Bihor county (4.83% inhabitants), with an almost equal distribution on sexes, mostly adults - 22 cases (75%). Clinical forms of disease were: mild - 7 cases (24%), moderate - 13 cases (44.5%) and severe -9 cases (31.5%). The frequently encountered symptoms were: mydriasis, xerostomia, diplopia, palpebral ptosis, dysphonia, digestive disorders, in severe forms respiratory muscles paralysis with respiratory failure. Administration of bivalent antitoxin A+B immediately after admission and supportive care stopped paralyses’ progression and prevented death. The source of infection was identified in 93% of consumers, consisting in smoked ham, other home-made meat dishes and vegetable cans. In the close vicinity of those households or rural areas, bovines and equines are reared, which are intestinal carriers of Clostridium botulinum.

Conclusion: The preparation of vegetable cans and keep- ing of smoked meat products in unhygienic conditions in the presence of vectors (flies, cockroaches) is the cause of botulism cases in Transylvania. This traditional practice is interwoven with the economical rationale of impoverished Romanian peasants, who should, however, respect alimentary hygiene.

doi:10.1016/j.ijid.2008.05.1197