

ウシ・ブタ，市販鶏肉およびヒトから分離された β -ラクタマーゼ産生大腸菌の性状解析

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The characteristics of extended-spectrum β -lactamase (ESBL) producing *Escherichia coli* strains derived from domestic animals, chicken meat and humans were examined. ESBL-producing strains were isolated from 4 (4.0%) of 100 cattle fecal samples, 4 (4.0%) of 100 swine fecal samples, 14 (23.3%) of 60 chicken samples and 18 (7.2%) of 249 human fecal samples. A total of 40 ESBL-producing *E. coli* strains (5 bovine-derived strains, 3 swine-derived strains, 14 chicken-derived strains and 18 human-derived strains) were characterized. By molecular typing of ESBL genes, *bla*CTX-M-15 (CTX-M-1 group) and *bla*CTX-M-14 (CTX-M-9 group) were commonly found in bovine, swine, chicken and human-derived strains; *bla*SHV-12 was a dominant type in chicken-derived strains. Among those 40 strains, 6 strains were belonged to five different serotypes: O78:H9 (2 chicken-derived strains), O6:H untypeable (1 chicken-derived strain), O1:H45 (1 chicken-derived strain), O25:H4 (1 human-derived strain) and O86a:H4 (1 human-derived strain). The antimicrobial sensitivity test using 12 different antimicrobial agents by disc diffusion method (ampicillin, cefepime, cefmetazole, imipenem, fosfomicin, streptomycin, kanamycin, chloramphenicol, tetracycline, nalidixic acid, norfloxacin and sulfamethoxazole-trimethoprim) revealed that all 40 strains were sensitive to cefepime, cefmetazole, imipenem, and fosfomicin; 6 strains (1 bovine-derived strain, 4 chicken-derived strains and 1 human-derived strain) were resistant to only ampicillin and other 34 strains showed multi-drug resistance to 2 to 6 agents. Genotyping by pulsed-field gel electrophoresis revealed that the 40 strains were very diverse and heterogeneous.