

Serotype occurrence and antimicrobial susceptibility of Salmonella isolates recovered from pork carcasses in Taiwan (2000 through 2003)

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摘要

Abstract

One hundred fifty-eight Salmonella strains isolated from pork carcasses in a nationwide screening program in Taiwan from 2000 through 2003 were analyzed for serotype distribution and antimicrobial susceptibility. Twenty Salmonella serotypes were obtained, among which Derby, Anatum, Typhimurium, and Schwarzengrund were the most frequently isolated, accounting for 76% of the strains. Antimicrobial susceptibility tests with the microdilution method were performed on these serotypes to determine the MIC. All strains tested were sensitive to ceftriaxone, with an MIC₉₀ (minimum concentration inhibiting 90% of isolates tested) of 0.25 to 8 μ g/ml. More than 60% of the strains were resistant to ampicillin, chloramphenicol, tetracycline, nalidixic acid, and sulfamethoxazole, with MIC₉₀ values of 128 to >512 μ g/ml. More than 80% of the Salmonella Schwarzengrund strains were resistant to ciprofloxacin (MIC₉₀ = 8 μ g/ml) and enrofloxacin (MIC₉₀ = 16 μ g/ml). The Salmonella Typhimurium strains exhibited 17 and 23% resistance to ciprofloxacin and enrofloxacin, respectively, with an MIC₉₀ of 8 μ g/ml, and these two antibiotics also were active against Salmonella Derby and Salmonella Anatum. Cephalothin, gentamicin, and trimethoprim had limited activity against Salmonella Anatum and Salmonella Schwarzengrund, with MIC₉₀ values of 256 to >512 μ g/ml. Cephalothin and gentamicin were moderately active against Salmonella Derby and Salmonella Typhimurium, but 30 to 40% of these strains were resistant to trimethoprim. The Salmonella strains isolated from pork carcasses in Taiwan were relatively resistant to the antimicrobial agents tested, with the exception of ceftriaxone. Although a variety of MIC values were obtained, generally these values were high.