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Serotypes and multidrug-resistance profiles of *Salmonellae* isolated from pigs infected simultaneously with various strains

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Salmonellosis is a major zoonosis worldwide distributed. Pigs infected asymptotically are an important source of human salmonellosis. To determine whether pigs could be simultaneously infected by multiple strains of *Salmonella* spp., 2-12 (when available) isolated colonies of *Salmonella* spp. were analyzed from mesenteric lymph nodes in each of 13 infected pigs, selected from farms previously identified with multiple circulating strains. Isolated strains were serotyped by Kauffman-White and analyzed by Kirby-Bauer against 19 agents. A total of 60 *Salmonella* spp. strains, belonging to 7 serotypes and 5 serogroups, and showing 12 antimicrobial resistance (AR) patterns were isolated. The most frequent was Typhimurium, Rissen and Kapemba serotypes, and ACSSuT(Nx) and CSSuT multidrug resistance patterns. Most of animals were coinfected with strains of 2-3 serotypes (7 out 13) and AR patterns (all). Strikingly, serotype coinfections were caused by strains of different serogroups, suggesting infections from multiple sources in a period and/or reinfections at different periods of its productive life, and also a possible specific serogroup protection against reinfection. If this latter observation is confirmed in controlled experiments in pigs, it would be crucial in the development of effective vaccines against porcine salmonellosis. Only 3 isolates were susceptible to all the agents tested, but they occupied the same niche that multi-AR strains. The ACSSuT(Nx) family pattern was predominantly associated to S. Typhimurium (6 pigs) and CSSuT, to S. Kapemba (3 pigs). However, horizontal transfer of mobile genetic elements between serotypes could exists. To our knowledge, this is the first report describing the existence of coinfections with *Salmonella* strains in pigs. Epidemiologically, it could explain differences between baseline studies and to amend some of the results on prevalent *Salmonella* strains in pigs. Further experiments are now being conducted to genetic characterization of these strains.