

Salmonellosis

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Salmonellosis includes typhoid fever, caused by *Salmonella typhi*, and nontyphoid salmonellosis. It is one of the most common bacterial infections worldwide. The overall incidence of typhoid fever has been decreasing with the improvement of sanitary condition and progress of antimicrobial therapy, while gastrointestinal infections caused by nontyphoid *Salmonella* continue to be a problem of great magnitude in different areas of the world, including Taiwan. Although most of these infections are self-limiting, serious sequelae, including invasive infections and death, can occur. There are more than 2,000 *Salmonella* serotypes. The most common serotype that caused nontyphoid salmonellosis in Taiwan was *S. typhimurium*, followed in the order of frequency by *S. schwarzengrund*, *S. choleraesuis*, *S. agona*, *S. derby*, *S. panama*, and *S. newport*. It's notable that *S. choleraesuis* infection is rampant in this area and this serotype usually shows the highest predilection for extra-intestinal infections. Antimicrobial agents should not be routinely used for uncomplicated enterocolitis because they do not speed resolution of symptoms, but may prolong convalescent fecal excretion of *Salmonella*. On the other hand, they should be used in young infants ≤ 3 months, in patients who are at high risk of a disseminated disease, and in those with a severe and protracted course. Antibiotics that can be used in this setting include ampicillin, chloramphenicol, trimethoprim-sulfamethoxazole, or the third generation cephalosporins. More than 50% of nontyphoid *Salmonella* isolates in Taiwan are resistant to ampicillin, chloramphenicol, trimethoprim-sulfamethoxazole so that in patients with life-threatening illness, initial empiric therapy with a third generation cephalosporin is recommended until antibiotic susceptibility is known. Fluoroquinolones are generally effective, but they are not approved for use in children yet. Duration of therapy depends on the site of infection. Therapy usually is continued for 10 to 14 days in children with bacteremia, 4 to 6 weeks for acute osteomyelitis, and at least 4 weeks for meningitis. The resistance rate to conventional antibiotics of nontyphoid *Salmonella* is relatively higher in Taiwan than those reported from other countries, and with the increasing use of newer antimicrobial agents, the emerging resistance to these agents has become an important issue that needs more attention. *Salmonella* infection is a zoonosis. A more cautious selection and use of antimicrobial agents, in

both humans and food animals, along with a continuous surveillance are critical to combat the increasing antimicrobial resistance in *Salmonella*.