Serotyping of *Streptococcus pyogenes* isolated from common and severe invasive infections in Japan, 1990-5: implication of the T3 serotype strain-expansion in TSLS

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To clarify the relationship between the epidemics of severe invasive group A streptococcal infections (streptococcal Toxic Shock-Like Syndrome; TSLS) and common group A streptococcal infections in Japan, we examined the T serotypes of *S. pyogenes* strains (group A streptococci) isolated from clinical specimens of the streptococcal infections (17999 cases) in the period 1990-5, including the severe infections (TSLS)(29 cases) in the period 1992-5. Characteristic points of the analyses were: (1) dominant serotypes of the infections in these periods were T12, T4, T1, T28 and TB3264, which were consistently isolated; (2) isolates of T3 rapidly increased through 1990 to 1994 while T6 decreased in the period 1990-3; (3) when Japanese area was divided into three parts, T3 serotype tended to spread out from the northeastern to the south-western area; (4) strains of T3 and T1 serotypes were dominant in the TSLS. Dominant-serotype strains of streptococcal infections did not always induce severe infections and dominance of T3 serotype in the TSLS seemed to be correlated with the increase of T3 in streptococcal infections. These results may indicate that certain clones of *S. pyogenes* are involved in the pathogenesis of the TSLS.