

Efficacy of single-doses SA 14-14-2 vaccine against Japanese encephalitis: a case control study

연세대학교 의과대학 오희철

Background: In China, since 1989, an estimated 120 million children have been immunised with the SA 14-14-2 live-attenuated Japanese encephalitis(JE) vaccine at ages 1, 2, and 6 years. A case-control study of licensed vaccine found two doses to be 98% effective. Subsequently, researchers found that single-dose vaccine efficacy was high; we aimed to confirm this result.

Methods: During July 11-24, 1999, 1600,000 doses of JE vaccine were given to children aged 1-15 years, resident in three districts of Nepal. Several cases of JE were admitted to hospital from early August. We obtained names and addresses of cases with serological evidence of a recent infection from Bheri Zonal Hospital, Nepalgunj. We did a matched case-control study and calculated the odds ratio of vaccination among JE cases and age-sex matched village controls.

Findings: 20 children, aged 1-15 years, were identified whose illness conformed with the JE case definition and were resident in villages receiving the vaccine. None of 20 JE cases had received JE vaccine compared with 326 of 557 age-sex matched village controls. The efficacy of a single dose of JE vaccine was 99.3%(CI 94.9-100%).

Interpretation: A single dose of JE vaccine is highly efficacious in preventing Japanese encephalitis when administered only days or weeks before exposure to infection.

Lancet 2001; 358: 791-95