＜教育報告＞

Risk Factors for Acquiring Symptomatic Japanese Encephalitis in Western Terai, Nepal A Case Control Study

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The study was a case control study attempting to measure risk factors influencing Japanese encephalitis(JE). The study population consisted of 56 cases and 112 controls with a matched case and control ratio 1: 2. JE confirmed cases of ages 1 through 15 years coming from JE hyper-endemic districts (Kailali, Bardiya, Banke and Dang) and admitted in Bheri Zone Hospital during August-September, 2000 were recruited as the cases. The controls of each case were selected randomly, matching as to same age, sex and place of residence of respective cases. Cases and controls were compared with respect to their exposure to each of the risk factors of interest in order to describe the associations of risk factors for acquiring JE. A number of factors including demographic factors, host factors, behavioral factors and environmental factors were examined to measure the association for acquiring JE. Several factors were significantly associated for acquiring JE.

The study revealed that lower the parental education higher the risk of JE. Children of illiterate fathers and mothers were 4.09 and 2.53 times higher risk of JE respectively. Father's occupation as farmer/laborer gave higher risk of JE (OR=2.64) compared to business/service as father's occupation, The presence of domestic animals in the household was associated with a higher risk of JE (OR=2.78). History of previous JE cases in the family was highly associated with a risk of JE (OR=11.96). Sleeping under a bednet, sleeping under blanket and wearing long sleeved clothes were found highly protective for acquiring JE (OR=0.44, 0.33 and 0.06 respectively).

Working/playing in rice fields and staying outside during twilight were highly associated with a risk of JE (OR=5.15 and 17.47 respectively). Fishing activities in summer monsoon and using open field for passing stool were associated with a risk of JE (OR=4.16 and 4.92). Poor quality of houses including mud/cow dung plaster walls, brick/soil floor, poor cleanliness and dampness inside houses were associated increased the risk of JE (OR=2.64, 8.89, 5.65 and 3.54, respectively). Having screened windows/doors and using electric fans in summer was found highly protective from the risk of JE (OR=0.14 and 0.10) respectively.

Improper disposing of waste products, presence of water logged pits, drainage and mosquito breeding in peri-domestic areas gave higher risk for acquiring JE (OR= 4.96, 4.50, 4.13 and 3 respectively). Improper disposing of human and animal excreta was also associated with high risk of JE (9.13 and 5.30 respectively). Presence of irrigation facilities, forest area around the household and peripheral location of house were shown to increase the risk of JE (OR=2.11, 1.96 and 7.18 respectively). Considering the factors, prolific peri-domestic mosquito breeding sites and exposure to mosquitoes were found to be major factors for acquiring JE.

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