EFFECT OF ENVIRONMENTAL SANITATION ON CHOLERA MORBIDITY AMONG THAI WORKERS AT SAMUTPRAKAN PROVINCE

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ABSTRACT

During an occurrence of cholera cases at Samutprakan Province, an unmatched case-control study was conducted to assess the effect of environmental sanitation on cholera morbidity among Thai workers at Samutprakan Provincial Hospital. A total of 228 workers aged 15 - 55 years with eligible criteria were studied.

There were 59 hospitalized cholera cases and 169 controls that were interviewed and swabbed for stool culture by well-trained staff. Standard questionnaires and sanitation forms were used as the study tools for investigation of risk factors.

After adjusting for the effects of several confounders by logistic regression analysis, those workers who used temporarily built latrine had 2.26 times higher risk of developing cholera than those using permanent latrine. (odds ratio = 2.26, 95% confidence interval = 1.00-5.12). Leftover food consumption was significantly associated with cholera morbidity. (odds ratio = 3.04, 95% confidence interval = 1.36-6.77)

This study demonstrated that the cholera cases were associated with eating some cooked foods that could support bacterial growth after contamination of these foods with V. cholerae ol within the household, by either houseflies or asymptomatic carriers. However, those who ate half-cooked seafood were less likely to develop cholera compare to those did not eat.

Laboratory studies also demonstrated that there was no significant association between water supply and the risk of cholera morbidity in this endemic area.

Control measures should include identification of high-risk foods and promotion of proper food handling behaviors to lower the risk of foodborne transmission. Reheating of leftover foods before eating and handwashing with soap should be adequately practiced.

Properly built latrines should also be promoted with adequate water and soap provided . Separate collection of wet garbage such as cooked food , rice , fruit ,vegetable, and etc. in plastic bag would reduce breeding places of houseflies around the living places.