BACTERIAL PATHOGENS ISOLATED FROM RAW MEAT AND POULTRY COMPARED WITH PATHOGENS ISOLATED FROM CHILDREN IN THE SAME AREA OF RURAL THAILAND

Ladaporn Bodhidatta\textsuperscript{1}, Apichai Srijan\textsuperscript{1}, Oralak Serichantalergs\textsuperscript{1}, Aroon Bangtrakulnonth\textsuperscript{2}, Boonchai Wongstitwilairung\textsuperscript{1}, Philip McDaniel\textsuperscript{3} and Carl J Mason\textsuperscript{1}

\textsuperscript{1}Department of Enteric Diseases, Armed Forces Research Institute of Medical Sciences (AFRIMS), Bangkok; \textsuperscript{2}World Health Organization (WHO) National Salmonella and Shigella Center, Bangkok; \textsuperscript{3}Kwai River Christian Hospital (KRCH), Sangkhla Buri, Kanchanaburi, Thailand

Abstract. To better understand the epidemiology of bacterial food borne pathogens in children, in relation to pathogens in meats from a market in rural Thailand, we collected 73 cultures samples from raw chicken, pork and fish at a local market where diarrheal disease surveillance was conducted. Standard methods were employed to isolate, identify and serotype enteric pathogens from children and food samples. Antibiotic susceptibility testing was performed. Ninety-seven percent of food samples were contaminated with at least one enteric pathogen. The pathogens most commonly isolated from food were \textit{Salmonella} spp (84\%), \textit{Arcobacter butzleri} (74\%) and \textit{Campylobacter} spp (51\%). The most common serovars of \textit{Salmonella} obtained from humans with diarrhea were \textit{S. Risen}, \textit{S. Stanley} and \textit{S. Anatum}. Most common serovars of \textit{Salmonella} isolated from food were \textit{S. Anatum}, \textit{S. Stanley}, and \textit{S. Corvallis}. Fifty-one percent and 25\% of children infected with \textit{Salmonella} and \textit{Campylobacter}, respectively, infected with the same serotypes isolated from food samples, suggesting these pathogens are widespread in food and humans. Pulsed-field gel analysis of \textit{Salmonella} spp revealed 65 pulsotypes, but no point-sources of salmonellosis were identified. Joint epidemiologic/laboratory studies are useful to describe the epidemiology of enteric pathogens in rural populations.

Keywords: \textit{Campylobacter}, \textit{Salmonella}, \textit{Arcobacter}, diarrhea, food, Thailand