

The Occurrence and Transmission of *Vibrio parahemolyticus* in a Thai Fishing Village Population

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INTRODUCTION: Gastroenteritis has long been a threat to military operations. Numerous studies to determine the agents responsible for gastrointestinal disease among United States servicemen in Southeast Asia have been reported. In these studies there were large numbers of cases from whom a causative agent could not be isolated. Recent work indicates that the organism, *V. parahemolyticus*, may be responsible for a number of these "undiagnosed" cases.

OBJECTIVE: To define the variables important in the transmission of the organism, *Vibrio parahemolyticus*, and to further define the disease it causes.

DESCRIPTION: The study population will consist of persons residing in an isolated Thai fishing village. An isolated village will increase the likelihood that sea food (the presumed vehicle of transmission) is obtained in that village market place, and will allow periodic sampling of that food. The village will be mapped and censused, at which time basic demographic information will be obtained.

A study population will be randomly selected. Families, rather than individuals, will comprise that sampling frame. Individuals in the study population will be interviewed regarding past medical and social history. Rectal swabs will be performed on a regular weekly basis, with culture plates streaked at the house. Each week a history of gastrointestinal symptoms from the previous week will be obtained. Where indicated a food history will be taken and suspected food items will be cultured.

An initial survey of sea water, beach sand, sea food in the market place and cooking utensils, for *V. parahemolyticus*, will provide data on the prevalence of the organism in natural (non-human) sources in the village area. Particular attention will be devoted to areas potentially contaminated through village waste disposal practices.

PROGRESS: Feasibility visits were made to Ban Koh Lan during February and March 1973. There is a class 2 health center in the village staffed with a public health worker (2 years training). The 1st class health center on the mainland supplies a physician and a mobile health team on an irregular basis. During the initial visit contact was made with these people and their cooperation sought and readily obtained.

On the second visit in March a chunk sample of persons both ill and well was done. A total of 62 persons were questioned regarding dietary habits and gastrointestinal history. Responses to questions concerning gastrointestinal history indicate these persons average 3.6 episodes of diarrhea a year. In a random sample of the island using approximately one-quarter of the population we could expect roughly 15 diarrhea cases/week. These persons were also sampled by rectal swab for *V. parahemolyticus*. (See Table 1). There were two people (3%) with positive cultures for *V. parahemolyticus*. One of these was a 65 year old female, apparently asymptomatic. The other, a 2 year old child, had watery diarrhea at the time the swab was done.

Seventy percent of these persons obtain their seafood at the village market; 15% get their sea food from the mainland. Sea food is also obtained from boats (15%) and from self catching (27%). The persons eat sea food on the average of 6.1 days/week.

SUMMARY: Plans are underway to do a larger prevalence survey and, if indicated, proceed with a prospective longitudinal study.

Table 1.
Ages and Sexes of Persons Submitting
Rectal Swabs

Age	Male	Female
0-5	11	10
6-10	4	2
11-20	1	6
21-30	0	7
31+	5	16
Total	21	41