

## Unknown Illness in Country M – 2015

### Background

On July 10, 2015, the Country M Field Epidemiology and Laboratory Training Programme (FELTP) was notified by the Epidemiological unit of the District N Ministry of Health of an outbreak of unknown disease in District N. Based on the preliminary report from the Ministry of Health in Country M from the District Medical Officer (DMO) of District N, it was reported that people from Village B and Village C were taken to hospital presenting with undefined conditions including itching, sensation of hotness in the body, numbness of the limb, pain and needling, general body pain, difficulty during swallowing, pricking sensation of the palm, throat and ear, and weakness of the lower limbs. All these conditions were said to occur soon after eating sea food. By 10<sup>th</sup> July, 2015, a total of 61 cases had been reported from the health center; 26 were males and 35 females. The outbreak started from 3<sup>rd</sup> July 2015, when the index case attended the health facility, followed with a number of patients presenting with the same sign and symptoms.

**Methods:** A total of 170 questionnaires regarding symptomatology, medical care, and food item consumption history were collected for cases and controls. Completed questionnaires were entered into a database analysis system (EPI INFO, Version 3.5). Descriptive case statistics were calculated and a retrospective cohort analysis was performed. Water samples were collected at the source, in the midpoint, and at the end point for toxicological assessment. Fresh sea food samples were collected for investigation. Whole blood samples and serum were collected from cases with presenting symptoms.

**Results:** Seventy-five (75) respondents were cases and 81 were controls. Descriptive analyses of the cases revealed that 88 (56%) were female and that ages ranged from 2 to 80 with a median age of 23 years. Majority were from Village B. Major case symptoms included numbness of limbs (79%), palm needle prickling pain (75%), body itching (70%), and limb needling pain (69%). Diarrhoea was very infrequent and no nausea, vomiting, or painful micturition were reported by the cases. Majority of cases and controls reported buying seafood from the market (89% and 82% respectively) and all consumed seafood which was

cooked and fresh. Most of the cases (75%) reported to consume shellfish more than control (22%). In a bivariate analysis, it was found that eating seafood is statistically significant with the illness (shellfish OR=7.9, 95% CI= 3.8, 16.2; fish OR= 0.27, 95% CI= 0.08, 0.88; Dagua OR=2.3, 95% CI=0.7, 7.1). In a multivariate analysis, consuming shellfish was highly associated with the illness (AOR= 9.8, p=0.000, 95% CI = 4.4 to 21.7).

## **Conclusion**

The undefined illness observed in this outbreak was characterized primarily numbness of limbs palm needle prickling pain, body itching, and limb needling pain. Nausea and vomiting were very infrequent and no painful micturition were reported by the cases. These clinical features closely resemble those of Paralytic Shellfish Poisoning (PSP). Epidemiologic analysis of food consumption histories obtained from questionnaires suggests that the consumption of shellfish was highly significantly associated with illness. This support evidence that this illness probably could be due to consumption of shellfish/seafood. Residents should avoid eating seafood at least for this period of June-October tides. All bivalve mollusca shellfish including clams, mussels, oysters, geoducks, and scallops can contain PSP toxins. Also avoid drinking the broth in which the oysters or crab was boiled.

Word count:555

Word limit: 275