

Case report: paralytic shellfish poisoning in Sabah, Malaysia

ABSTRACT

During the months of January–February and May–June 2013 coinciding with the red tide occurrence in Kota Kinabalu, Sabah, Malaysia, six episodes involving 58 cases of paralytic shellfish poisoning (PSP) or saxitoxin (STX) poisoning and resulting in four deaths were reported. Many of them were intoxicated from consuming shellfish purchased from the markets, whereas others were intoxicated from eating shellfish collected from the beach. Levels of STX in shellfish collected from the affected areas were high (mean $2,920 \pm 780$ and 360 ± 140 mg STX equivalents/100 g shellfish meat respectively for the two periods). The count of toxic dinoflagellates (*Pyrodinium bahamense* var *compressum*) of the sea water sampled around the coast was also high (mean $34,200 \pm 10,300$ cells/L). Species of shellfish containing high levels of STX were *Atrina fragilis*, *Perna viridis*, and *Crassostrea belcheri*. The age of victims varied from 9 to 67 years. Symptoms presented were typical of PSP, such as dizziness, numbness, vomiting, and difficulty in breathing. Recommended steps to prevent or reduce PSP in future red tide season include better monitoring of red tide occurrence, regular sampling of shellfish for determination of STX level, wider dissemination of information on the danger of eating contaminated shellfish among the communities, fishermen, and fishmongers.