



Short Communication

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Puffer fish poisoning: summary of case reports from Thailand

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ABSTRACT

Puffer fish poisoning is a common seafood poisoning. The problem is due to tetrodotoxin in puffy fish meat. It can be seen in many countries with seacoasts. The problem is resulted from tetrodotoxin (TTX) in puffer fish meat. This toxin is an important natural toxin. Here, the authors report summary of case reports from Thailand. The authors use standard search engines (PubMed and Thai Index Medicus) for searching on the reports on puffer fish poisoning from Thailand. According to this work, there are at least 3 reports on 55 cases of puffer fish poisoning. All cases visit to the physician within 30 min. Focusing on severity, stage 1, 2, 3 and 4 can be seen in 16%, 8%, 4% and 72%, respectively. In the present report, the summary of the cases presenting to the physician at hospital is shown. Of interest, most patients have severe intoxication and the respirator failure is an important problem to be managed. It is clearly shown in the present report that if good respiratory support is done, the full recovery without problem can be derived. It is no doubt that there is no death case in the present series since the present report focuses on the cases that are successfully delivered to the hospital for management.

1. Introduction

Puffer fish poisoning is a common seafood poisoning. The problem is due to tetrodotoxin (TTX) in puffer fish meat. This toxin is an important natural toxin[1]. It can be seen in many countries with seacoasts[2]. As noted by Hwang and Noguchi, "poisoning cases due to ingestion of TTX-containing marine animals, especially for puffer, have frequently occurred in Asia since a long time ago[3]." Also, Noguchi and Arakawa noted that "there have been many cases of human intoxication due to the ingestion of TTX-bearing puffer fish, mainly in Japan, China, and Taiwan, and several victims have died[4]." Here, the authors report summary of case reports from Thailand.

2. Materials and methods

The authors use standard search engines (PubMed and Thai Index Medicus) for searching on the reports on puffer fish poisoning from Thailand. The literature reports on intoxication due to intake of sea puffer fish are recruited for further summarization. Descriptive statistical analysis is used where it is appropriate.

3. Results

According to this work, there are at least 3 reports on 55 cases of puffer fish poisoning[5-7]. Focusing on sex of the patients, 90% are male. Paresthesia is the main chief complaint seen in all patients. All cases visit to the physician within 30 min. Focusing on severity, stage 1, 2, 3 and 4 can be seen in 16%, 8%, 4% and 72%, respectively. All patients with stage 4 severity require acute flaccid paralysis and respiratory failure.

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Complete recovered without any sequelae could be seen in all cases within 2 d.

4. Discussion

In Thailand, there are some reports on problematic sea puffer fish intoxication. Chulanetra *et al.* noted that “not only Thais but also inhabitants of other countries situated on the Andaman coast; consuming puffers of the Andaman seas are risky due to potential TTX intoxication[8].” In the present report, the summary of the cases presenting to the physician at hospital is shown. Of interest, most patients have severe intoxication and the respirator failure is an important problem to be managed. It is clearly shown in the present report that if good respiratory support is done, the full recovery without problem can be derived. It is no doubt that there is no death case in the present series since the present report focuses on the cases that are successfully delivered to the hospital for management.

In fact, puffer fish intoxication can be lethal. “Giddiness, numbness and tingling sensation of the mouth” can be the starting symptoms[9]. Cardiovascular arrest and death can be expected if no rapid management is given[10,11]. In lethal case, identification of toxin from autopsy specimen can confirm the diagnosis[12]. The problem is usually due to the intake of tainted seafood product. Sometimes, there are many intoxicated cases in an episode[11]. Cohen *et al.* proposed for “the need for continued stringent regulation of puffer fish[13].” Cohen *et al.* also proposed for “education of the public regarding the dangers of puffer fish consumption, and raising awareness among medical providers of the diagnosis and management of foodborne toxin ingestions and the need for reporting to public health agencies[13].”

Based on the summary of the case reports from Thailand, the nature of the disease is not different from other countries. The patients usually get problem after intake of the problematic puffer fish. As a country with sea coast, the problem can be expected. The respiratory distress is the main problem that can be severe and can result in fatality. If the patient is delayed deliver to the physician, fatality is common. The good recovery can be expected in any cases with early presentation and early treatment. The delayed presentation, delayed diagnosis and delayed treatment is totally unwanted. The physician in any coastal areas with sea puffy fish should recognize the problem and has early diagnosis and management for the patients.

Conclusively, In the present report from Thailand, the summary of the cases visited to the physician at hospital is analyzed. Of interest, most of the cases have severe intoxication. Clinically, the respirator failure is an important problem that needs proper critical care. It no doubt that in the present report

that if good respiratory support is done, the full recovery without problem can be derived. It is no doubt that there is no death case in the present series since the present report focuses on the cases that are successfully delivered to the hospital for management.

Conflict of interest statement

We declare that we have no conflict of interest.

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