Acute Cervico-facial Oedema and Loss of Consciousness following Ingestion of Barracuda Fish

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SUMMARY: A young male presented with acute cervico-facial swelling and loss of consciousness, following ingestion of barracuda flesh. He recovered after administration of anti-histamines and steroids. Toxicity associated with barracuda is discussed.

Case Report

A 20 year old Royal Air Force bar steward was admitted to the British Forces Hospital in Belize, Central America, having been found unconscious in his room 4 hours after he had last been seen. No other history was available at that time. He had gross swelling of the neck and face, including the peri-orbital region. He was unconscious and unresponsive to painful stimuli. There were no other abnormalities of the nervous system. He was afebrile and cardio-respiratory function was normal apart from a tachycardia of 105/min. He was able to maintain his own airway and had an oxygen haemoglobin saturation of 99% breathing room air.

Blood count, serum electrolytes and glucose were all normal and no obvious cause could be found for his clinical condition.

In an effort to treat the oedema, he was given chlorpheniramine 10mg and hydrocortisone succinate 100mg intravenously. Within 15 minutes of this treatment he had regained full consciousness and was completely orientated. During the day he had been on a boat trip to one of the offshore Caribbean islands. On the trip out the local boatman had caught a barracuda, a carnivorous fish common to tropical reef waters in the Atlantic and Pacific oceans. At lunchtime the fish had been barbecued but the only people willing to eat it were the patient and the boatman; moreover, the patient claimed to have had only 1 mouthful of the fish. On returning to the camp that afternoon he had felt peculiarly tired, though not unwell, and had gone to his room to lie down. He was found 4 hours later and brought to the hospital. He had no previous history of allergy to fish and had not eaten barracuda before.

He remained in hospital for a further week; treatment consisted of hydrocortisone 100mg 4 times daily for 2 days and chlorpheniramine 4mg 3 times daily for 7 days. His neck swelling subsided from 44cm diameter on admission to 37cm at 7 days. He was discharged with no

further sequelae.

Discussion

The barracuda (*Sphyrna barracuda*) is a carnivorous fish and a known carrier of several toxins. Implicated are tetrodotoxin and ciguatera, both naturally derived(1); barracuda are also known to have significant accumulations of man-made toxins, namely the organochlorine pesticides such as DDT(2).

Ciguatera causes symptoms such as lip tingling, colicky abdominal pains and painful joints; it has known anti-cholinesterase activity as well as other unidentified mechanisms of action(3). Up to 70% of barracuda in the Caribbean may be ciguateric during August(4), the month in question; however, our patient did not show the characteristic symptomatology. Neither did he exhibit the muscle weakness, respiratory depression and convulsions associated with tetrodotoxin poisoning. Acute DDT poisoning is only encountered with ingestion of very large amounts and could not be a cause here.

This case was characterised by the presence of cervico-facial oedema, rapid onset of symptoms and the recovery of consciousness following the administration of anti-histamines. Some parallels can be drawn here with scombroid poisoning; the symptoms are those of histamine toxicity, onset may be within 2 hours and anti-histamines produce rapid reversal of symptoms(3,5). Facial swelling has been implicated in 1 reported case(5). The condition is usually associated with tuna, mackerel and other fish of the Scombroidei family. Perhaps our case represents similar mechanisms of toxicity, hitherto undescribed following barracuda ingestion.

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