บทบรรณาธิการ

Pufferfish Poisoning

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Pufferfish are belonged to two families of marine and estuarine fish: Tetraodontidae and Diodontidae. Tetraodontidae refers to the four large teeth, fused into upper and lower plate, which are used for crushing the shells of crustaceans and mollusks; Diodontidae by its name posseses only two cutting teeth.

Fish poisoning by consumption of members of the puffers is one of the most violent intoxications from marine species. The ovary, liver, intestine and skin of pufferfish can contain levels of tetrodotoxin sufficient to produce rapid and violent death. Treatment of the victims consists of supportive care and intestinal decontamination with gastric lavage and activated charcoal, concurrently with diuretic drugs. On the other hand, the flesh of many pufferfish is not usually dangerously toxic and may be beneficial to produce the feeling of well-being for the consumers, and a pharmaceutical product derived from tetrodotoxin called *Tectin* is a potent pain reliever and helper in opiate addicts through withdrawal, when administered in a very small quantities. Both events are conform to the mechanism exercised by hormesis, i.e., an effect of small doses of toxic substance that at higher doses has an adverse effect. A less powerful biotoxin of the puffers, named saxitoxin, the cause of paralytic shellfish poisoning (PSP) can also be found in puffers. It should be noted that puffers toxins seems not to be synthesized by the fish itself, but through the food chain by ingesting toxin-bearing organisms such as starfish, gastropods, crustacean, flatworms, ribbonworms, etc.

Nevertheless the meat of some pufferfish species is considered a delicacy in both Japan (as *fugu*) and Korea (as *Boh-guh*). A good news for staunched pufferfish eaters that non-toxic pufferfish has been produced by netcage or land culture and even the used-to-be toxic liver is now available as a Japanese traditional dish “fugu-kimo” (puffer liver).

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