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Screening of tetradoxin in pufferfish (lagosephalus sceleratus) using gas chromatography-mass spectrometry in turkish coasts

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Tetrodotoxin is produced in many diverse animal species. One of them is pufferfish which has many common varieties. Poisoning from ingestion of pufferfish is one of the most known intoxications caused by marine species.

Aim: Since tetrodotoxin is concentrated in liver and skin, we aimed to investigate the toxicity of pufferfish which has been located in Turkish coasts, especially in Mediterranean, from an unknown time.

Material & Method: 4 g of biological material from 15 puffer fish (Lagosephalus sceleratus) skin and liver were excised. The samples were homogenized in RETSCH ball-mill with adding 8 ml 0.1% acetic acid solution for 3 min. After homogenization, SPE system is used for isolation of tetrodotoxin. Supernatant was boiled for 10 min and cooled in room temperature. BTSFA was added to 100 µl of supernatant and injected to GC-MS for analyses of tetradoxin and its metabolites.

Results: According to our extraction procedure, only tetradoxin was observed with a retention time of 7.1 min.

Conclusion: In order to our analyses, it can be clearly seen that while consuming puffer fish, people should be careful for an unwanted intoxication or paralyses situation.

Biography

Yavuz Poyrazoglu has completed his connoisseur in general surgery from Gulhane Military Medical Academy on 2008 Ankara, Turkey. He is working in the Mevki Military Hospital in the department of general surgery since then. He has published more than 15 papers in journals.