Original Paper

Determination of contamination with Clostridium botulinum in two species of processed and non prosecced fish

Tavakoli HR (PhD)[1], Imani Fooladi AA (PhD)*[2]
[1]Associate Professor, Department of Nutrition and Food Hygiene, School of Public Health, Baghyatollah University of Medical Sciences, Tehran, Iran. [2]Assistant Professor, Applied Microbiology Research Center, Baqiyatallah University of Medical Sciences, Tehran, Iran.

Abstract

Background and Objective: The Clostridium botulinum is one of the most important causative of food poisoning. Spores of Clostridium botulinum spread out in the soil, the sea sediments, the marine environments and the marine animals. In recent years use of the marine food products like as fish and cultured fish are elevated. The aim of this study was done to compare between processing and non processing fish infected by predominant type of Clostridium botulinum.

Materials and Methods: This descriptive study was done on the 146 samples of fish in two species of processed and non prosecced that collected from Gilan province in Iran during 2008. These samples included the Liza auratus Fish (45 processed fish and 28 non processed fish) and the Salmo Trutta caspius Fish (34 processing fish and 39 non processing fish). The samples examined according to the APHA2000 and FDA2003 protocols. Data Analyzed with SPSS-13 and Chi-Square test.

Results: 16 (11%) of samples (13% of the processed fish and 7.5% of non processed fish) were confirmed that infected by Clostridium botulinum. Also the dominant type of exotoxin was Type E. The Type E exotoxin was determined from 11 of the samples (6 processed fish and 5 non processed fish).

Conclusion: This study showed that fish are infected by Clostridium botulinum special the type E. also use of fish in bad preparation (half cooking and add material in its stomach) may cause the food poisoning.

Keywords: Processing, Clostridium botulinum, Liza auratus Fish, Salmo Trutta caspius Fish

*** Corresponding Author: Imani Fooladi AA (PhD), E-mail: imanifouladi.a@gmail.com**

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