An epidemiological study on the role of fish in human infection with Salmonella in Damietta Governorate, Egypt

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Abstract

Human salmonellosis is an important worldwide public health problem and the majority of food borne diseases is linked to foods of animal origin including fish and fishery products. This study aimed to determine the prevalence, risk factors and serotypes distribution of Salmonella species among fish species and humans. A total of 256 fish (141 fresh water fish and 115 marine water fish) and 175 human samples (146 stools and 29 hand swabs) were collected from Damietta governorate. All samples were submitted for bacteriological, molecular and serological examinations. PCR results showed that the prevalence of Salmonella colonization in fish was 8.59% with its distribution among fresh water fish at rates of 9.76%, 9.09%, 2.5%, 8.33% and 20% of Oreochromis niloticus,Cyprinus carpio, Bagrus bajad, Mormyrus kannume and Clarias lazera respectively, while in marine fish, were 13.33%, 8%, 4.55%, 4.17% and 7.14% of Liza auratus, Pomadasys stridens, Dicentrarchus labrax, Pagrus pagrus and Sparus aurata, respectively. On the other hand, in humans 11 out of 146 (7.53%) stool samples were positive, while, all of the examined hand swabs were negative for Salmonella. The recovered salmonella serotypes of fish were S. Enteritides , S.Heideberg , S.virchow, S.Derby, S. Infantis, S. Paratyphi A, S.Anatum, S.Typhimurim and S. Rissen. In humans, 6 Salmonella serotypes; S. Enteritides, S. Rissen, S. Typhimurium, S. Infantis, S. larochelle and S. Anatum were identified. The current findings highlight the role of fishes as potential vectors of human salmonellosis and may indicate the high risk of zoonotic transmission of Salmonella via food chain including fishes in the investigated area.

Biography:

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Speaker Publications:

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2." Role of freshwater fishes in the epidemiology of some zoonotic trematodes in Ismailia province; AM Abou-Eisha, RE Saleh, HM Fadel, EM Youssef, YA Helmy SCVMJ 13 (2), 653-675;2008

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