

Species of Anisakidae nematodes and Clinostomum spp. infecting lisa Mugil curema (Mugilidae) intended for human consumption in Mexico

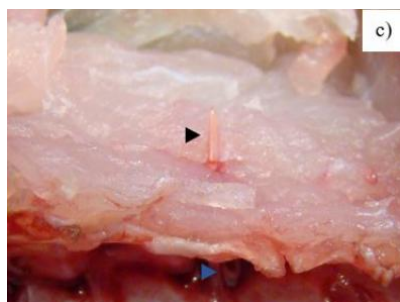
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Abstract

Nematodes of the Anisakidae family have the ability to infest a wide variety of aquatic hosts during the development of their larval stages, mainly marine mammals, aquatic birds, such as pelicans, and freshwater fish, such crucian carp, these being the hosts where the life cycle is completed. The participation of intermediate hosts such as cephalopods, shrimp, crustaceans and marine fish, is an important part of this cycle. Due to morphological changes and updates to the genetic information of the different members of the family, the purpose of this review was to carry out a bibliographic search of the genus and species of the Anisakidae family identified by molecular tests, as well as the geographical area in which they were collected. The Anisakidae family is made up of eight different parasitic genera and 46 different species. Those of clinical importance to human health are highlighted: *Anisakis pegreffii*, *A. simplex sensu stricto*, *Contracaecum osculatum*, *Pseudoterranova azarazi*, *P. cattani*, *P. decipiens* and *P. krabbei*. The geographical distribution of these genera and species is located mainly in the European continent, Asia and South America, as well as in North and Central America and Australia. Based on the information collected from the Anisakidae family, it was determined that the geographical distribution is affected by different environmental factors, the host and the ability of the parasite itself to adapt. Its ability to adapt to the human organism has led to it being considered as a zoonotic agent. The disease in humans manifests nonspecifically, however the consumption of raw or semi-raw seafood is crucial information to link the presentation of the parasite with the disease.



Biography

Andrea Paloma Zepeda Velázquez has developed her research studies in different research areas, such as bacteriology, parasitology, mycology, pathology and histopathology; mainly in birds and fish, which include the generation of experimental infection protocols. Her recent publications are focused on the study of the Anisakidae family and its collection in different species of fish destined for human consumption in Mexico.

Publications

1. Al Quraishy S, Abdel-Gaber R, Dkhil MAM (2019) First record of *Pseudoterranova decipiens* (Nematoda, Anisakidae) infecting the Red spot emperor *Lethrinus lentjan* in the Red Sea. *Rev Bras Parasitol Vet* 28:625-631.
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3. Pekmezci GZ, Yardimci B (2019) On the occurrence and molecular identification of *Contracaecum* larvae (Nematoda: Anisakidae) in *Mugil cephalus* from Turkish waters. *Parasitol Res* 118: 1393-1402.
4. Murata Y, Ando K, Usui M, Sugiyama H, Hayashi A, Tanemura A, et al (2018) A case of hepatic anisakiasis caused by *Pseudoterranova decipiens* mimicking metastatic liver cancer. *BMC Infect Dis* 18: 619.
5. Laffon-Leal SM, Vidal-Martínez VM, Arjona-Torres G (2000) ‘Cebiche’ – a potential source of human anisakiasis in Mexico? *J Helminthol* 74:151-154.

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