Anisakis infection in fish: An ecoparasitological study in different fishing grounds of the central-southern Adriatic Sea

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Anisakis parasites are widely detected in marine organisms and are responsible to cause a fish-borne zoonosis through the consumption of larvae in raw seafood. Due to either ancient or new trends in eating habits, a significant increase of Anisakiasis has occurred, including Italy. Because of its fame for being one of the most important fishery market worldwide, the need to create the "*Anisakis* risk's map", as suggested by EFSA, has become vital in order to guarantee an high food security for customers. Main aim of this study was to determine the distribution of *Anisakis* parasites in fish caught in different central-southern fishing grounds of the Adriatic Sea. Out of 2332 fish examined, composed of several commercial species, an overall prevalence of 8.1% for Anisakis larvae was detected. The results obtained were compared with data available for the northern Adriatic areas, which showed a total prevalence of 0.2%, in order to find possible correlations with environmental and ecological factors. As a result, the survey displayed notable differences among fishing grounds, with more parasites when moving southward. The differences were linked with the hydrological, morphological and ecological features that distinguish the different parts of the Adriatic Sea and divide it into two ecosystems. The northern portion is defined as a coastal and eutrophic area, both for its shallow waters and for the Italian rivers that enter freshwater rich in nutrients. The central-southern portion, instead, is considered as an oceanic and oligotrophic ecosystem characterized by higher depth and salinity, as well as reduced nutrient loads from rivers. Consequently, these features strongly influence the distribution and abundance of *Anisakis*' hosts involved in its biological cycle, leading to significant differences also in the distribution of larval stages of the parasite in marine fish populations.

Speaker Biography

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