

ABSTRACT:

The main objective of this study has been to determine the presence or absence of anisakid nematodes in aquaculture fish from the Spanish coast.

For the study, it has been used different detection techniques: direct visualization, acid digestion and UV visualization. It has been studied a total of 4,080 samples from fish farms on the Spanish coast in a study divided into two phases. In addition, it has been also performed an study to determine the presence of anisakid nematodes in fish from fisheries of Valencia Region. In this work 217 samples were studied by the technique of direct visualization.

The obtained results by the diagnostic techniques used indicate no anisakid larvae in aquaculture fish bred in Spain, independently of the production system, geographic location and season.

From aquaculture samples, it has been analyzed the following species: gilthead seabream (1.741), european sea bass (907), european eel (601), rainbow trout (441), meagre (246) and turbot (144). Similar results has been obtained from other authors previously (Kapota, 2012; Peñalver *et al.*, 2010).

The processing methods for raw materials utilized to the manufacture of extruded aquaculture feed, mainly those used to the production of fish meal and oils, prevent the transfer of viable anisakid through the extruded feed.

However, in fish from fisheries, comparable to synanthropic species of fish farms, the prevalence was 5.53 %.

The hypothesis that the breeding and food techniques used in Spain minimizes the possibility of the presence of anisakid nematodes on this fishes is confirmed, so the risk of human transmission of these parasites through fish aquaculture consumption is negligible.

The conditions that would be necessary for the presence of anisakid nematodes in fish occur in fish farms on the Spanish coast: presence of definitive hosts of anisakid nematodes; presence of anisakid nematode paratenic hosts; presence of intermediate hosts, because the life cycle of the parasite is closed; breeding of susceptible species in aquaculture facilities of the Spanish coast. However, it has not been found anisakid larvae, so it can be concluded that the absence of anisakid larvae nematodes is not due to species kept are not affected, or the absence of nematodes in waters where they are raised, as there are definitive, intermediate and paratenic hosts, but growing and feed conditions used in Spanish fish farms.

Although the presence of anisakid larvae can not completely be discarded, in the fish farming conditions that currently are used in Spain, the probability of finding anisakid larvae in these fish is negligible. Therefore, consumption of fish from spanish aquaculture does not represent a significant risk to consumer of infection by anisakid larvae and reduces the risk of sensitization to the parasite.