Risks of Anisakiasis in Thailand: The Importance of Awareness, Food Safety, and Public Health Education

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Anisakiasis, a parasitic infection caused by the larvae of the *Anisakis* species, namely *A. simplex* (sensu stricto) and *A. pegreffii* (Mattiucci et al., 2018), is contracted by humans upon the consumption of raw or undercooked seafood, such as sushi, sashimi, or ceviche. Although anisakiasis is not a significant public health issue in Thailand compared to other infectious diseases, its potential impact on the population should be considered due to the country's unique cultural and dietary practices.

The life cycle of *Anisakis* is complex, involving multiple stages and hosts, including marine mammals, crustaceans, and fish. Humans are accidental hosts and can become infected when consuming raw or undercooked seafood containing third-stage *Anisakis* larvae. These larvae can attach to the human gastrointestinal tract, causing either gastric or intestinal anisakiasis. Awareness of the *Anisakis* life cycle can help understand its transmission and implement appropriate prevention strategies.

Fig.1. Risks of Anisakiasis from raw seafood consumption

Thai cuisine, renowned for its rich and flavorful dishes, includes a variety of seafood preparations. While raw seafood consumption is less common in Thailand compared to countries like Japan, some traditional dishes do incorporate raw or undercooked fish. The growing popularity of Japanese cuisine, particularly sushi and sashimi, in Thailand potentially increases the risk of anisakiasis among consumers.

Several studies have examined the prevalence of *Anisakis* in marine fish in Thailand, although the findings are often limited to specific regions or fish species, making nationwide generalization challenging. The actual prevalence of *Anisakis* infection in marine fish and the incidence rate of human anisakiasis cases may be underestimated due to factors such as inadequate surveillance, awareness, and diagnostic capabilities. The scarcity of reported human anisakiasis cases in Thailand suggests potential underdiagnosis or underreporting (Daschner et al., 2002).

To mitigate this risk, strict adherence to proper seafood handling, storage, and preparation practices is crucial. Restaurants, street food vendors, and food service establishments in Thailand

should follow stringent food safety guidelines, including sourcing seafood from trusted suppliers with rigorous quality control measures and implementing safe food handling procedures.

Public health education campaigns can effectively promote safer consumption practices within the community. These initiatives can raise awareness about the risks and symptoms of anisakiasis and emphasize the importance of proper seafood preparation, thereby reducing potential cases (Bao et al., 2017). To prevent anisakiasis, it is recommended to thoroughly cook seafood before consumption, as heat kills the larvae and ensures food safety. Freezing fish at temperatures of -20°C (-4°F) for at least 7 days can also eliminate the larvae and reduce the risk of infection (FDA, 2001).

Given Thailand's status as a top tourist destination, attracting millions of visitors annually, addressing the anisakiasis risk among tourists is crucial. Tourists who are unaware of the risks associated with anisakiasis may be more susceptible to infection if they consume raw or undercooked seafood during their stay. Increasing awareness about potential risks among tourists and promoting safe food consumption practices can help mitigate this issue.

Further efforts should involve ongoing surveillance and research to monitor the prevalence of *Anisakis* in marine fish and track human anisakiasis cases in Thailand. Such information is invaluable for public health officials in developing and implementing effective prevention and control measures.

In conclusion, although anisakiasis is not a primary public health concern in Thailand, it is important to recognize its potential impact on the population due to distinct cultural and dietary practices. Increasing awareness, enhancing food safety practices, and conducting public health education campaigns can effectively mitigate the risks associated with this parasitic infection.

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