

## Editorial

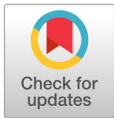
# Challenging diagnosis of parasitic infection and practical guidance to clinical microbiology laboratories in Korea

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Parasitic diseases affect over three billion people worldwide and contribute significantly to morbidity and mortality, as reported by the World Health Organization [1]. The landscape of parasitic infections in Korea has undergone a dramatic transformation in recent decades [2]. National surveys show a decline in intestinal parasite prevalence from an alarmingly high 84.3% in the 1970s to just 2.6% by 2012 [2]. Currently, stool ova examination remains the primary diagnostic method of detecting intestinal parasites in domestic clinical laboratories. However, as the prevalence of these infections has become less common, the sensitivity of this diagnostic method has declined. This underscores the critical role of qualified specialists in accurately diagnosing parasitic diseases. A review article by Sohn et al. [3] offers a comprehensive guide to stool examination techniques and the identification of helminth eggs, providing valuable insights for both laboratory and field settings. Since the last national survey in 2012, nationwide epidemiological data on intestinal parasites in Korea have been lacking. Shin et al. [4] addressed this gap by analyzing 10-year data from 1,211,799 individuals who visited the regional branches of the Korea Association of Health Promotion between 2011 and 2020. Their findings indicated that intestinal helminth infections remained above 2.0% from 2011 to 2014 and decreased to 1.0% by 2020. Notably, fish-borne trematodes, particularly *Clonorchis sinensis* (1.3%) and *Metagonimus yokogawai* (0.3%), emerged as the primary causes of parasitic intestinal infections in Korea. Anisakidosis, another fish-borne parasitic infection, is relatively common in Korea due to the cultural preference for eating raw or undercooked marine fish or cephalopods. Chai et al. [5] extensively reviewed the Korean literature on human and animal anisakidosis, detailing the prevalence of anisakid larvae in fish and cephalopods, larval morphology, molecular analyses, and resistance to physicochemical agents. This review is particularly relevant for laboratory physicians and clinicians, providing essential information for the accurate diagnosis and effective treatment of anisakidosis. This issue of the *Annals of Clinical Microbiology* also explores the advancements and challenges in molecular and serological diagnostics of parasitic diseases [6,7]. Serodiagnosis, commonly employed to detect infections caused by tissue-invading parasites, cannot distinguish between past and current infections and may be prone to cross-reactivity, necessitating careful interpretation. Molecular diagnostic kits have gained popularity but are only available for certain parasites, such as *Giardia lamblia*, *Entamoeba histolytica*, *Cryptosporidium hominis*, *Cryptosporidium parvum*, *Trichomonas*, and *Plasmodium*. Well-validated molecular assays are essential for broad application in clinical practice.

These reviews also highlight that no single diagnostic method is conclusive and emphasize the importance

**OPEN ACCESS**pISSN : 2288-0585  
eISSN : 2288-6850Ann Clin Microbiol 2024 June, 27(2): 39-40  
<https://doi.org/10.5145/ACM.2024.27.2.1>**Corresponding author****Eun Jeong Won**E-mail: [ejwon@amc.seoul.kr](mailto:ejwon@amc.seoul.kr)**Received:** June 7, 2024**Revised:** June 13, 2024**Accepted:** June 20, 2024

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of interpreting diagnostic results in a clinical context. Collectively, the articles presented in this editorial shed light on the ongoing efforts and advancements in diagnosing parasitic infections. The evolving landscape of parasitic diseases in Korea and the development of sophisticated diagnostic techniques underscores the importance of continued research and innovation in this field.

## Ethics statement

This was not a human population study, and thus, approval by the institutional review board and informed consent was not required.

## Conflicts of interest

Eun Jeong Won has been an associate editor of the *Annals of Clinical Microbiology* since January 2024 and she served as a guest editor for this issue's special topic. However, she was not involved in the review process of this article. No other potential conflicts of interest relevant to this article were reported.

## Funding

None.

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