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A Case of Imported Taenia asiatica Infection in Japan

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Taeniasis in humans is a parasitic infection caused by 3 tapeworm species, such as Taenia asiatica, Taenia saginata, and Taenia solium (1). T. asiatica infection is caused by eating raw or undercooked pig liver containing the larvae (2) and is conventionally uncommon in Japan. However, between 2010 and 2011, several human cases of T. asiatica infections were reported in the Kanto area (3), while another case was recently confirmed in the Chiba Prefecture, Japan (4). However, studies on imported T. asiatica infections in Japan remain limited (5). Herein, we report the case of a 47-year-old Filipina who presented with an imported T. asiatica infection in Japan.

The patient was referred to our hospital with a 10-day history of excreting proglottids through the anus. She complained of some discomfort in her lower abdomen but had no particular medical history or known allergies and did not take any medications or use illicit drugs. She had lived in Japan for 26 years with a Japanese partner and worked as a housekeeper. The partner did not show similar symptoms. Approximately 10 months previously, she returned to the Philippines for a month and had eaten raw pig liver during her visit. She brought a proglottid to our hospital (Fig. 1A).

No palpable abdominal tumor or abdominal tenderness was observed. Her physical examination was normal. Blood tests revealed a white blood cell count of 5,000/μL, eosinophil count of 150/μL, hemoglobin level of 13.2 g/dL, platelet count of 294,000/μL, C-reactive protein level of 0.13 mg/dL, and albumin level of 4.0 g/dL. Other test results were also within normal limits.

The proglottid was thick and opaque; the uteri stemmed out from the center forming > 20 branches, and the scolex did not have any hooks (Fig. 1B). Based on these findings, clinical data, and her dietary history, T. saginata or T. asiatica infection was suspected. Praziquantel (600 mg/day) and a cathartic were administered, and many proglottids and a worm’s scolex were excreted. The patient was successfully dewormed as evidenced by the excretion of the scolex, which was identified as T. asiatica using multiplex PCR testing (Fig. 2). Her dietary history was investigated, and she confidently confirmed that she had always eaten broiled, but not raw, meat in Japan. Therefore, we finally diagnosed this as a case of imported T. asiatica infection.

Although T. saginata and T. solium are well-known parasitic tapeworms in humans belonging to the genus Taenia, T. asiatica was first reported as a new species quantel (600 mg/day) and a cathartic were administered, and many proglottids and a worm’s scolex were excreted. The patient was successfully dewormed as evidenced by the excretion of the scolex, which was identified as T. asiatica using multiplex PCR testing (Fig. 2). Her dietary history was investigated, and she confidently confirmed that she had always eaten broiled, but not raw, meat in Japan. Therefore, we finally diagnosed this as a case of imported T. asiatica infection.

Although T. saginata and T. solium are well-known parasitic tapeworms in humans belonging to the genus Taenia, T. asiatica was first reported as a new species.
among human Taenia tapeworms in 1993 (6). T. asiatica is distributed mostly in Asian countries, such as Korea, China, Philippines, Taiwan, Indonesia, Thailand, and Vietnam (7). It is very similar to T. saginata and T. solium in regard to the morphology and the intermediate host (i.e., pig), respectively (7). The larvae of T. asiatica are mainly parasitic in the pig liver, and humans become infected on consuming the raw or undercooked liver (8).

In Japan, all reported human cases of T. asiatica infection in 2011 were considered as domestic infections (9), while studies on the imported infections have been limited. In the Philippines, T. asiatica infections occur throughout the country (10) because many traditional food are prepared from raw pig meat or liver. In this case, the patient ate one of these traditional local food that was prepared using raw pig liver. Therefore, this was a case of an imported T. asiatica infection in Japan. Imported cases of T. asiatica infection may gradually increase because of the increased international travel between the Philippines or other Asian countries, which have a wide distribution of T. asiatica infection, and Japan. As it is an imported infectious disease in Japan, T. asiatica infection should be routinely and closely monitored.

In conclusion, we describe a case of imported T. asiatica infection in Japan. We suggest that when examining patients suspected with parasitic diseases, detailed information on their backgrounds, especially their travel and dietary histories should be obtained to facilitate rapid confirmation of the final diagnosis. In addition, the genetic tests such as multiplex PCR testing may be useful in cases where differential diagnosis of parasitic infections is difficult. Finally, imported infections caused by T. asiatica may increase because of the continuous increase in international travel between the Philippines or other Asian countries, which have a wide distribution of T. asiatica infection, and Japan. As it is an imported infectious disease in Japan, T. asiatica infection should be routinely and closely monitored.

Conflict of interest None to declare.

REFERENCES