

## REFERENCES

1. MacArthur WP. A case of infestation of human liver with *Hepaticola hepatica* (Bancroft, 1893) Hall, 1916; with sections from the liver. *Proc R Soc Med* 1924; 17: 83-4.
2. Choe G, Lee HS, Seo JK, Chai JY, Lee SH, Eom KS, Chi JG. Hepatic capillariasis first case report in the republic of Korea. *Am J Trop Med Hyg* 1993; 48: 610-25.
3. Orihel TC, Ash LR. *Parasites in Human Tissues*. Chicago: American Society of Clinical Pathologists Press 1995; 239-41.
4. Glickman LT, Grieve RB, Schantz PM. Serologic diagnosis of zoonotic pulmonary dirofilariasis. *Am J Med* 1986; 80: 161-4.
5. Gutierrez Y, Catellier MJ, Wicker DL. Extrapulmonary dirofilaria immitis-like infections in the Western Hemisphere. *Am J Surg Pathol* 1996; 20: 299-305.
6. Shah MK. Human pulmonary dirofilariasis: review of the literature. *South Med J* 1999; 92: 276-9.
7. Seo BS, Rim HJ, Lee CW, Yoon JS. Studies on the parasitic helminths of Korea. II. Parasites of the rat, *Rattus norvegicus* Erxl., in Seoul

with the description of *Capillaria hepatica* (Bancroft, 1893) Travassos, (1915). *Korean J Parasitol* 1964; 2: 55-62.

8. Pampiglione S, Conconi G. Primo caso di capillariosi epatica osservata nell'uomo in Italia. *Parassitologia* 1970; 12: 125-34.
9. Attah EB, Nagarajan S, Obineche EN, Gera SC. Hepatic capillariasis. *Am J Clin Pathol* 1983; 79: 127-30.

## Silvio Pampiglione and Andrea Gustinelli

Department of Veterinary Public Health and Animal Pathology, University of Bologna, Italy

## Address for correspondence

Silvio Pampiglione, MD, PhD  
 Department of Veterinary Public Health and Animal Pathology, University of Bologna  
 Italy, via Tolara di Sopra, 50-40064 Ozzano Emilia (BO), Italy  
 Tel : +00390512097045  
 Fax : +00390512097039  
 E-mail : fish.vet@unibo.it

## The Author Respond

Dear Sir:

Upon reading the comments on our report of "The first human case of hepatic dirofilariasis" (1), we thank Dr. S. Pampiglione and Dr. A. Gustinelli for providing us a lesson and a chance to correct the inappropriate diagnosis. The case we reported presented degenerated nematode sections in a limited area of the patient's liver. In the process of identifying the nematode sections morphologically, *Capillaria hepatica* was ruled out from the initial stage because egg sections were lacking (1). As shown in Table 1 of the paper by Choe et al. (2), all of previously reported cases of hepatic capillariasis revealed sections of the pathognomonic eggs on histopathologic samples. In this regard, the case was unique and exceptional. The infection with degenerated adult *C. hepatica* without eggs may explain the rarity of human capillariasis. Retrospectively, the absence of egg sections led us to the wrong morphologic identification: while identifying the sections as *Dirofilaria immitis* based on the width, internal structures and estimated length, the coagulated bacillary bands in hypodermis were interpreted as degenerated muscle cells.

Correct identification of helminth sections is not always

easy because, in many occasions, the parasites are in the process of different degrees of degeneration, especially in the granulomatous lesions. We regret that we made a wrong diagnosis, and hope this correspondence be a lesson also to other nematodology specialists.

## REFERENCES

1. Kim MK, Kim CH, Yeom BW, Park SH, Choi SY, Choi JS. The first human case of hepatic dirofilariasis. *J Korean Med Sci* 2002; 17: 686-90.
2. Choe G, Lee HS, Seo JK, Chai JY, Lee SH, Eom KS, Chi JG. Hepatic capillariasis: First case report in the Republic of Korea. *Am J Trop Med Hyg* 1993; 48: 610-25.

## Address for correspondence

Jong Sang Choi, MD  
 Department of Pathology, Korea University College of Medicine, Anam Hospital,  
 127 Anam-dong 5 ga, Sungbook-gu, Seoul 135-701, Korea  
 Tel: +82.2.920-6145  
 Fax: +82.2.953-3130  
 E-mail : jongchoi0404@naver.com