Mixed infection with two types of echinococcosis misdiagnosed as hepatic alveolar echinococcosis

Qiancheng Du[1]*, Chenliang Hu[2]* and Yanfei Li[2]

[1]. Department of General Surgery, Shanghai Fourth People’s Hospital Affiliated to Tongji University School of Medicine, Shanghai, China.
[2]. Department of Hepatopancreatobiliary Surgery, the Affiliated Hospital of Qinghai University and Qinghai Province Key Laboratory of Hydatid Disease Research, Qinghai University, Xining, China.

A 40-year-old female visited our hospital with a chief complaint of pain in the right superior abdominal quadrant for the last 2 months. The serological tests were positive for Echinococcosis IgG antibodies. Contrast-enhanced computed tomography of the abdomen revealed multiple irregular lesions in the liver, with a maximum cross-sectional area of 17.4×10.8 cm² involving mainly the right lobe and partially segments 3 and 4 (Figure A). The preoperative diagnosis was hepatic alveolar echinococcosis (P4,N1,M0) based on the typical imaging characteristics, serological test results, medical history, and contact history of the epidemic area, among other factors1.

The patient underwent hepatectomy after full preoperative preparation. Upon separation of the lesion from the normal liver tissue, hepatic cystic echinococcosis were unexpectedly found next to the hepatic alveolar echinococcosis (Figure B: 1 and 2). Hydrocortisone (100 mg) was administered approximately 30 minutes before surgery to prevent cystic fluid allergy according to the WHO Informal Working Group on Echinococcosis recommendations for the management of human cystic echinococcosis2. Fortunately, the lesion was almost completely calcified and there was no allergic reaction during the operation. Postoperative anatomopathological findings confirmed hepatic echinococcosis (Figure B: 3 and 4). A review
of the preoperative CT images verified that the lesions located in segment 3 and near the first hepatic portal area might have been caused by complete calcification of cystic echinococcosis (CE4 or CE5). Although the probability of a mixed infection with hepatic cystic and alveolar echinococcosis is only 1/10⁵, the consequences of intraoperative fluid leakage cannot be ignored.

Institutional review board statement

The study was reviewed and approved by the local ethics committee (P-SL-2018005).

Informed consent statement

All study participants, or their legal guardian, provided informed written consent before study enrollment.

Conflict of Interest

The authors declare that there is no conflict of interest.

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