



## Case Illustrated

## Cat-scratch disease with hepatosplenic lesions in two brothers



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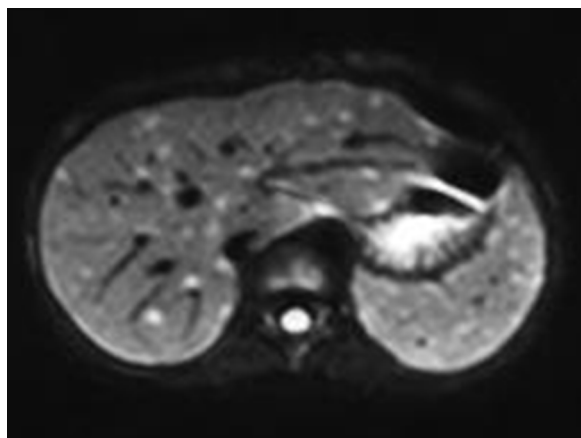
*Bartonella henselae*

Fever of unknown origin

Zoonotic infection

Children

A one-year-old boy was hospitalized after 6 days of high fever. Antimicrobials were administered for a suspected lower respiratory tract infection, but the fever persisted. On day 23, a diffusion-weighted magnetic resonance imaging (MRI) revealed multiple cystic lesions in the liver and spleen (Fig. 1).

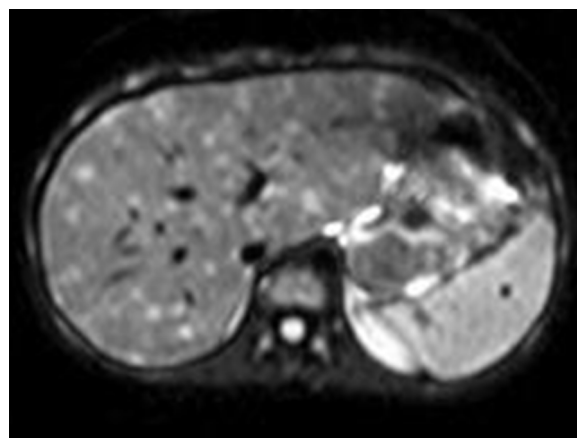


**Fig. 1.** In case 1, diffusion-weighted magnetic resonance imaging showed multiple cystic lesions in the liver and spleen.

About 3 years later, his 2-year-old younger brother was hospitalized after 12 days of fever. Both brothers had been in contact with the same cat. Abdominal ultrasonography showed hepatosplenomegaly and multiple cystic lesions in the spleen. Furthermore, MRI showed multifocal small diffuse cystic liver lesions (Fig. 2).

Suspecting cat-scratch disease (CSD), azithromycin and rifampin were administered in both cases; the fever gradually abated. In the first case, the *Bartonella henselae* IgM antibody titer was 1:160; in both cases, the IgG antibody titer was >1:1024, confirming CSD. Immunological screening tests showed no abnormal findings. We could not find any skin lesions showing injury by the cat.

CSD is caused by the Gram-negative bacterium *B. henselae*, which causes zoonotic infections, primarily through domestic cats, particularly kittens [1]. Although localized necrotizing lymphadenitis is the most typical presentation, some cases display atypical symptoms such as Parinaud's syndrome, encephalitis and, as in these cases, fever with hepatic and splenic involvement. It is also important in the differential diagnosis of fevers of unknown origin in children. *B. henselae* colonizes about 10% of cats and is transmitted by cat fleas. There have been some cases of multiple infections in the same household [2–4]. These cases suggest that multiple family members may be infected with CSD from the same pet over several years.



**Fig. 2.** In case 2, magnetic resonance imaging showed multifocal small diffuse cystic liver lesions.

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**Conflict of interest**

On behalf of all authors, the corresponding author states that there is no conflict of interest.

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