density, these attractants should be removed. Homeowners with small children should remove latrines as quickly as they are discovered (2). The risk of children acquiring potentially fatal baylisascariasis can be reduced if parents understand how to reduce the likelihood that children will come into contact with raccoon latrines.

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a concurrent disease or immunosuppressive therapy (including corticosteroids, sometimes used to treat symptoms of the unrecognized infection or the concurrent eosinophilia), disseminated strongyloidiasis may occur (2–4), causing a massive and almost invariably fatal invasion of virtually all organs and tissues by filariform larvae and even adult worms (Figure), often combined with bacterial superinfection. This complication is believed to be rare but is probably underestimated because of the extreme variability of the clinical presentation.

Although strongyloidiasis can be suspected in the presence of symptoms or eosinophilia (which is frequent but not mandatory), the low sensitivity of direct diagnostic methods often lets the disease go unrecognized (5–7). By far the most sensitive diagnostic tools are serologic tests: sensitivity and specificity of indirect fluorescent antibody test (IFAT) (in-house produced IFAT) are 97.4% and 97.9%, respectively, at a dilution ≥1/20, and 70.5% and 99.8% at a dilution ≥1/80 (6). A suspected case is defined by a positive antibody titer ≥20 (IFAT); a case is confirmed by a positive direct test result (culture in agar being the most sensitive and specific) test. Because the reported cases involve only a few patients every year (of whom some are anecdotally reported as dying from the infection, usually unpublished), we suspect that most strongyloidiasis cases remain undetected.

If relevant transmission still exists in the area, it is unknown but is unlikely because of the improvement of hygienic conditions in the past 5 decades. Reports of the infection in children or young adults with no travel history outside Italy are lacking. Strongyloidiasis in the elderly is therefore most likely to result from an infection that occurred much earlier in life, either in infancy or at a young age, while walking or working barefoot in agricultural fields. The long persistence is the consequence of the autoinfection cycle typical of this parasite as described above. The result is an important and unrecognized public health problem affecting the geriatric population of northern Italy. These preliminary results confirm the need for the already planned, multicentered study involving a larger sample and a wider geographic area.

Figure. Adult female of *Strongyloides stercoralis* collected in bronchial fluid of a patient with disseminated disease. Scale bar = 400 µm. A color version of this figure is available online (www.cdc.gov/EID/content/15/9/1531-F.htm).
Salmonella enterica Serovar Typhi with CTX-M β-Lactamase, Germany

To the Editor: Infection with Salmonella enterica serovar Typhi, the causative agent of typhoid fever, is an acute systemic illness with a high proportion of illness and deaths, especially in developing countries. In Europe, S. enterica ser. Typhi infections occur among travelers returning from disease-endemic areas. After emergence of multidrug-resistant S. enterica ser. Typhi strains that confer resistance to chloramphenicol, trimethoprim, and ampicillin, quinolones have become the primary drugs for treatment (1). Here we report the isolation of CTX-M–producing S. enterica ser. Typhi in Germany.

We isolated S. enterica ser. Typhi from blood and feces specimens from a 30-year-old Iraqi woman who was admitted to the hospital in Cologne in August 2008. The patient was febrile, dizzy, and had epigastric pain and headache. The symptoms began 2 weeks earlier, after she had returned from a month-long visit to her relatives in Sulaymaniya, the capital of As Sulaymaniya Governorate in the northeastern Iraqi Kurdistan region. The interview indicated that the same symptoms had developed in other family members in Iraq. The patient was treated successfully with mero- penem (1 g 3×/day) for 2 weeks, and no relapse was observed in a follow-up period of 6 months.

The isolated strain was identified as S. enterica ser. Typhi with the VITEK2 system (VITEK2 GN-card; bioMérieux, Brussels, Belgium) and by slide agglutination with Salmonella antiserum (SIFIN, Berlin, Germany) in accordance with the Kauffmann-White scheme. By using Vi-phage typing according to the International Federation for Enteric Phage Typing (L.R. Ward, pers. comm.); the strain was classified as S. enterica ser. Typhi Vi-phage type E9. Antimicrobial drug susceptibilities were determined according to the guidelines of the Clinical Laboratory Standards Institute with the VITEK2 AST-N021 card and Etest (bioMérieux). The extended-spectrum β-lactamase (ESBL) phenotype was confirmed with a combined disk diffusion test (MASTDISCS ID, Mast Diagnostica GmbH, Germany). PCR and sequence analyses were performed with universal primers for the ESBL genes blaCTX-M, blaTEM, and blavShV as described previously (2). Primer CTX-M-F 5'-G TTCGTCTTCTTCCAGAAATGG-3' and primer CTX-M-R 5'-CAGCACCAGTGTTTGCCTTAAAG-3' were used for sequencing the entire blaCTX-M gene. Investigation of the CTX-M environment was performed with primers IS26-F (5'-GCCCTGTTAAGCAGAGTTTTTGC-3') and IS26-C-REP-3'-CACGCGCACACTTTCCAA-3'. The presence of plasmid-mediated quinolone resistance genes (qnr) was determined by PCR and sequencing of qnrB (3), qnrS (primer F, 5'-CCGCAACAACTTTTTCA3'–primer R, 5'-CAACATACCCGCTTCGCA3'), and qnrA (primer F, 5'-ATTCTTACAGCGCAAGTGG-3'–primer R, 5'-CGGCAAAGTGG-3'). In addition, the nucleotide sequences of the quinolone resistance-determining regions of the gyrA, gyrB, parC, and parE genes were determined as previously described (4). Transfer of β-lactam resistance was tested by broth mating assays with a sodium azide–

References


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