nonpregnant or dry dairy cows that had
been held in the same pasture, distant
from the main farm structures, during
October 15–November 15, 2011; dur-
ing the stamping out process, a second
dairy cow from this group had a posi-
tive test result by ELISA.

Hunting of wild boar (Sus scrofa)
had been organized during September–December 2011 in the adjacent
forest, and wild boar offal was dis-
carded in a corner of the pasture, with
no biosecurity precautions. A recent
study confirmed the high prevalence of B. suis biovar 2 infection in wild
boars in this province (2). These find-
ings suggest that these animals were
naturally infected with B. suis biovar 2; because of the period between in-
fec tion and testing, the results indi-
cate that antibodies can be detected in
cattle by ELISA performed on milk or
serum >16 weeks after infection.

Blood samples were taken from
the farmer, his wife, and their 2 chil-
dren, all of whom regularly consumed
raw milk. No clinical signs or symp-
toms suggestive of brucellosis were
reported, and slow agglutination test
results for all family members were
negative (titer <160), which suggests
they had no exposure to B. suis biovar
2 (3). A total of 111 cattle carcasses,
including that of the second sero posi-
tive cow, were sampled at the abattoir,
and all other samples were negative for
Brucella spp.

Our findings indicate that pre-
ventive measures against the spread
of pathogens such as Brucella spp.
should be implemented by hunters (i.e.,
awareness campaigns, biosecurity
ducation, and responsible hunting prac-
tices). In addition, biochemical
typing of Brucella spp. is necessary
to trace the source of infections (4,5),
and epidemiologic inquiry of positive
test result(s) should be conducted to
identify or exclude bovine brucel-
losis and to investigate possible B. suis
biovar 2 infections. Our bacteriologic
results (absence of isolation of B. suis
biovar 2 from all samples collected
at the abattoir) suggest that stamping
out is not necessary because B. suis
biovar 2 is not likely to be transmitted
between cattle because they are spill-
over hosts, not preferential hosts for B.
suis biovar 2, and are thus not likely
to sustain the infection. Finally, from
a veterinary public health perspective,
B. suis biovar 2 has a low residual
pathogenicity in humans (5,6).

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Hepatitis E and Lymphocytic
Leukemia in Man, Italy

To the Editor: Hepatitis E is an enterically transmitted infection with
worldwide distribution and high prev-
ance in developing countries. This
disease can occur as large water-borne
epidemics associated with hepatitis E
virus (HEV) genotypes 1 and 2. Hepa-
titis E is less common in industrialized
countries, including Italy (1), where
sporadic autochthonous cases associ-
ated with genotypes 3 and 4 have been
reported. Virus strains of these geno-
types are widespread in different mam-
alian species, including wild boar (2).

We report a case of hepatitis E
in a 60-year-old man born and liv-
ing in Vicenza, Italy, who was ad-
mitted to the Emergency Department
of Vicenza Hospital on May 9, 2012
with symptoms of acute icteric hep-
titis. He had been given a diagnosis
of chronic lymphocytic leukemia and
hemolytic anemia in 2003 and
underwent 8 treatment cycles of cy-
clophosphamide and steroids, which
were completed 20 days before he
came to the Emergency Department.

His liver function test results at
admission were the following: alanine
aminotransferase 1,804 IU/L, total
bilirubin 24.1 mg/dL, and alkaline
phosphatase 137 IU/L. Test results for other causes of viral hepatitis were negative (Figure). A liver biopsy performed on June 1 showed severe acute lobular hepatitis with necrosis and cholestasis. Serum obtained at admission was positive for IgM and IgG against HEV (Dia.Pro Test, Milan, Italy).

HEV RNA was detected by reverse transcription PCR and open reading frame 2 (3) was detected in serum and feces samples on May 9. Phylogenetic analysis of sequences identified HEV genotype 3 subtype h in serum and fecal samples (GenBank accession nos. KC782933 and KC782934).

Three months after admission, the patient had viremia, and results of liver function tests were abnormal. Recent data suggest that immunosuppressed persons who are viremic 3 months after HEV infection do not spontaneously clear HEV (4). Therefore, the patient was given antiviral therapy to achieve viral clearance. Ribavirin, 1,000 mg/day in 2 doses (400 and 600 mg), was administered during August 2–November 2, 2012. This drug was well tolerated, although the patient experienced mild anemia (hemoglobin level 10.5 mg/dL), which did not require any treatment.

Liver function test results returned to reference levels on day 14 of treatment. HEV RNA was detected in blood and feces on day 18 of treatment (August 20). Viral clearance (HEV absent from feces and serum) was achieved on day 54 of treatment (September 27) and was sustained over a 6-month period after the end of therapy.

The source of the HEV infection was uncertain. The patient had never traveled outside Italy. However, he had butchered a wild boar that he had hunted in Barberino del Mugello (Tuscany) in March 2012. The patient’s wife, who also butchered the animal, was positive for IgG against HEV but negative for IgM against HEV and for HEV RNA in February 2013. No boar meat was available for HEV testing, which indicated that this route of transmission was likely, but not confirmed.

Autochthonous hepatitis E in industrialized countries is usually an acute, self-limiting disease, but chronic disease can occur in immunocompromised hosts (5). These hosts include transplant recipients, persons infected with HIV, and patients with hematologic malignancies. Chronic infection with HEV has only been documented with genotype 3 strains and has been observed in many countries in Europe. However, to our knowledge, no cases of chronic infection with HEV have been reported in Italy. Our results indicate that chronic infection with HEV genotype 3 occurs in Italy.

Acute and chronic hepatitis E have been reported in patients with hematologic malignancies. An autochthonous case of acute hepatitis E was recently described in Germany in a patient with chronic lymphocytic leukemia that had been treated with chemotherapy, a bone marrow transplantation, and hemodialysis (6). He did not receive any specific treatment for hepatitis E and died of acute liver failure 39 days after diagnosis. Reactivation of hepatitis E in a patient with acute lymphoblastic leukemia was reported after allogeneic stem cell transplantation (7). HEV can also be transmitted directly from an infected transplanted organ.

Ribavirin monotherapy is an effective treatment for most patients with chronic HEV infection (8). It has also been used successfully to treat acute severe infection by genotype 1 of HEV in developing countries and by genotype 3 in industrialized countries (9), and is used to treat hepatitis C,
Although its mechanism of action against HCV and HEV is uncertain. Data are limited on the use of ribavirin in patients with chronic hepatitis E and hematologic malignancies (10). The outcome for our patient suggests that ribavirin might be useful for treating hepatitis E in such patients.

In conclusion, all patients with hepatitis of unknown origin should be tested for HEV, in particular, immunocompromised patients, because they are at risk of acquiring chronic hepatitis and having an adverse outcome. Ribavirin appears to be efficacious in treating hepatitis E and should be considered for any immunocompromised person who has viremia 3 months after acute infection.

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Q Fever Surveillance in Ruminants, Thailand, 2012

To the Editor: Two cases of fatal endocarditis in Khon Kaen Province in northeastern Thailand were found to be caused by Coxiella burnetii (1). Although C. burnetii is known to be present in many countries, including in Thailand (2), human infection is more commonly associated with sheep and goats, possibly because these animals shed the organism more frequently in vaginal secretions and feces than do large ruminants (3).

Surveillance for Q fever, which is caused by C. burnetii, in livestock is currently based primarily on serologic or PCR testing of milk (4). However, problems in estimating prevalence include serologic assay insensitivity (5,6) or unavailability of milk from nondairy animals.

For diagnosis of Q fever, the placenta of the animal is commonly tested, but testing is usually conducted only when abortions occur, which is only likely when uninfected animals first encounter C. burnetii. Therefore, this approach might underestimate true organism distribution in a disease-endemic area (7). In addition, nearly all abortion storms have occurred in sheep or goats, which are rare in Thailand. Ruminant abortion is rarely reported to veterinary authorities in Thailand.

Comparison of paired colostrum and placental samples from sheep showed that C. burnetii was found more frequently in placental samples (8), which suggested that the placenta is a better sample than milk for surveillance purposes. Also, a placenta may be more useful because it is more likely to contaminate the farm environment. Milk is an unlikely source of Q fever in adults because it is seldom consumed by adults in Thailand.