ANTHRAX, HUMAN, BOVINE - ROMANIA (02): (TULCEA), CONFIRMED
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<http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=20008>
Two cases of infection with _Bacillus anthracis_, Romania, October 2011. R. Popescu et al Eurosurveillance, Volume 16, Issue 45, 10 Nov 2011
Abstract
A cluster of 2 confirmed cases of anthrax were reported in October 2011 from a small village with a population of 3400 people, in southeastern Romania. One was a fatal case of cutaneous and anthrax meningoencephalitis, while the other had cutaneous anthrax. Both cases had been exposed to one _Bacillus anthracis_-infected cow via consumption of its meat or being involved in its slaughter.
Two cases of anthrax were reported to the National Centre for Communicable Diseases Surveillance and Control on 7 and 8 Oct 2011, respectively by a local public health authority in southeastern Romania.
Case description
Case 1
On 7 Oct 2011, a person in their 20s was admitted to a local hospital with fever (40 C), chills, malaise, pustular lesions on both forearms (symptom onset on 6 Oct 2011), blood pressure 65/40 mmHg and respiratory arrest (symptom onset on 7 Oct 2011). After that, the patient developed meningitis symptoms and died on 9 Oct 2011. During the hospital stay, the patient was mechanically ventilated and received dopamine, penicillin and ciprofloxacin intravenously. The cause of death was reported as cardiovascular and respiratory failure and septic shock due to disseminated infection with _B. anthracis_, confirmed by presence of the bacterium on the skin and in the bloody cerebrospinal fluid (CSF).
Case 2
Following the identification of Case 1, during the epidemiological investigations conducted by the local public health department, a 2nd person in their 20s was identified from the same village and subsequently confirmed as a case of cutaneous anthrax. The onset of symptoms in this case was 3 Oct 2011, and they included pustules on the left-hand index finger. The case was hospitalised on 7 Oct 2011 and received penicillin and ciprofloxacin intravenously. The patient responded well to the treatment; the general condition is now good, and the patient was discharged from hospital.
Background information
According to data published by the European Centre for Disease Prevention and Control, the number of notified cases of anthrax continues to be sporadic in Romania, as well as in other EU countries, and are mainly related to occupational exposure. Between 2006 and 2008, 13 confirmed cases of anthrax were reported from 5 EU countries: Romania (n=3), Spain (n=3), Bulgaria (n=3), Greece (n=2), United...
Kingdom (n=2). Between 2008 and 2010, no confirmed cases of anthrax were reported in Romania [6-8]. None of the 3 cases identified in Romania between 2006 and 2008 were in the district where the cases described in this report occurred. In some cases, the source of infection was sick animals, and in others, the disease was contracted due to possible contamination of pre-existing skin lesions with \_B. anthracis\_ spores from the ground [9].

In the past 5 years, there were 2 cases of infection with \_B. anthracis\_ in animals (pigs) in this district in 2009, 62 miles from the district where the cases described here were located (data not shown).

Laboratory investigation
On 10 Oct 2011, biological samples (smears from pustules from both patients and CSF from Case 1 who presented with meningitis symptoms) were sent for diagnostic tests to the National Reference Laboratory for Zoonotic Infections, "Cantacuzino." Microscopic examination of the smears from both cases and the CSF from Case 1 showed the presence of Gram-positive rods, typical of \_B. anthracis\_. The sample from CSF from Case 1 did not grow in culture.

The laboratory results, based on mouse inoculation and culture on blood agar, were received on 13 Oct 2011 and confirmed the presence of \_B. anthracis\_ in both cases.

Epidemiological investigation
In the epidemiological investigation, a \_B. anthracis\_-infected cow from the village where the cases lived, slaughtered on 28 Sep 2011 in a private backyard, was identified as the source of infection.

According to the local veterinarian, the cow had been vaccinated against anthrax in April 2011, but on 11 Oct 2011, the district Veterinary Department confirmed \_B. anthracis\_ in the meat of the slaughtered cow. No other suspected human anthrax cases or anthrax-suspected deaths in animals were reported in the village previously or since this cluster.

Nine people were exposed to the infected animal through consumption of its meat that was not thoroughly cooked, and 4 of them took part in the slaughtering of the cow, including Case 1 described above. Even though the 2nd case declared only having consumed the meat and not having participated in the slaughtering, he was diagnosed with cutaneous anthrax. He probably contracted the infection while handling the raw or insufficiently cooked meat.

Control measures
All persons at risk and all household contacts of the cases are being carefully monitored during the maximum incubation period (until 12 Nov 2011) by the local general practitioner. So far, none of them have presented symptoms of anthrax.

Veterinary control measures included disinfection and decontamination of the household where the cow had been slaughtered. All the remaining meat of the slaughtered cow and its organs were collected and incinerated. The Veterinary Department vaccinated all animals (cattle, sheep, goats and horses) in the village against anthrax and banned the movement of animals in or out of the village until immunity is installed.
Conclusions

In this cluster, due to the rapid implementation of measures by the local health authorities, after the suspected diagnosis in the index case, the 2nd case was detected in a timely manner and treated appropriately, thus preventing further spread of the disease. At present, it is thought that the public health impact of this outbreak is only local. The infected cow was raised in the village, and there was no notification of the animal's movement to other localities. The meat had not been sold commercially, and the village is not usually visited by tourists.

The 2 anthrax cases described could have been prevented if the national legislation that requires examining the animal carcasses in authorised slaughtering units by the official veterinarian or by a person nominated by the authority had been taken into account [Amen! - Mod.MHJ].

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[On the whole, anthrax is sporadic in Romania, with the occasional overflow, as here, from slaughtered livestock into humans, e.g., 2009 in Botosani, where 2 dead cows infected 2 persons; the 3 pigs in the Tulcea outbreak that year did not. The named counties with recent outbreaks are Bistrita-Nasaud, Botosani, Constanta, Ialometa, Neamt, Suceava, and Vaslui.

Actually, if you look at the dates, there was not a short interval between exposure, 28 Sep 2011, and the onset of symptoms on 6 Oct 2011 by the index cases, who came to medical attention on the 7 Oct 2011. "Short" in anthrax is from 2-4 days. The 2nd case's onset was 3 Oct 2011 and was found through back tracing and would probably have recovered without treatment. The index case was unlucky -- he was the only one out of the 5 butchering the carcass who was affected -- but he raises an important point: meningoencephalitis from anthrax is much more common than many realise and can be found in some 30-40 percent of systemic cases. It is hard to treat successfully.

Tulcea is in the Danube Delta, an area with a long history of sporadic anthrax outbreaks. To find it, go to: <http://www.fallingrain.com/world/RO/37/Tulcea.html>.

- Mod.MHJ]

[see also:
Anthrax, human, bovine - Romania: (TL) susp. 20111010.3037 2009
Anthrax, human, bovine - Romania (02): (BT) 20090917.3257
Anthrax, human, bovine - Romania: (BT) 20090911.3206 2007
Anthrax, bovine - Romania (Suceava): OIE 20071228.4165 2006
Anthrax, human, bovine - Romania (South East) 20061002.2824 2005
Anthrax, livestock - Romania 20050807.2301 ]
Anthrax, human, fatal - Romania (Neamt) 20050517.1351
2004

Anthrax, human & bovine - Romania (Constanta) 20040701.1755
2000

Anthrax, human - Romania (02) 20000731.1271
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Anthrax, human - Romania 20000506.0694
1999

Anthrax, cattle - Romania 19990625.1072]