

Current major events

Anthrax outbreak in Iraq?

An early report received from Dahuk province of Northern Iraq suggests an outbreak of Anthrax in humans. Three villages in the district of Aqra in Dahuk province reported 37 suspected cases of *Cutaneous* anthrax. Earlier anthrax has been laboratory confirmed in animals in same area by the state veterinary services and deaths of livestock have been reported from the same villages reporting suspected cases of cutaneous anthrax.

Similar suspected cases of human *Cutaneous* anthrax and animal deaths have also been reported from Afghanistan and are currently being investigated

Editorial note

Anthrax is a zoonosis and the disease most commonly occurs in grazing herbivores which are infected by ingesting spores from the soil. The disease is transmitted accidentally to humans by contact with infected animals or by contact with animal products. Anthrax is initiated by spores that enter via small abrasions or by inhalation or ingestion to humans and until now, there are no known cases of human-to-human transmission.

Typically, an anthrax outbreak in an enzootic area follows a prolonged hot dry spell. Anthrax may persist in the environment for many years after contamination of a pasture. Environmental persistence appears to be related to a number of factors including ambient temperature. Drought or heavy rains can trigger spore germination and bacterial multiplication, which also appear important in maintaining the organism in potentially infectious quantities.

It is a long-held belief that animals generally acquire anthrax by ingestion of spores while grazing or browsing. However, anomalies in the epizootiology of the disease often arise that are hard to explain in terms of simple ingestion of spores. Flies appear to play an important role in explosive outbreaks. Given the rarity of anthrax infection in humans and

Case classification of Anthrax

A. Confirmed case

A confirmed case of anthrax in a human can be defined as a clinically compatible case of cutaneous, inhalational or gastrointestinal illness that is laboratory-confirmed by:

- isolation of *B. anthracis* from an affected tissue or site; or
- other laboratory evidence of *B. anthracis* infection based on at least two supportive laboratory tests.

B. Suspected case

A suspected case of anthrax in a human may be defined as:

- a clinically-compatible case of illness without isolation of *B. anthracis* and no alternative diagnosis, but with laboratory evidence of *B. anthracis* by one supportive laboratory test; or
- a clinically-compatible case of anthrax epidemiologically linked to a confirmed environmental exposure (infected animal product, contaminated fomite, or other source).

Clinical presentation of anthrax in humans

- *Cutaneous* Anthrax occurs in 95% of natural infections and follows inoculation of spores into damaged skin (with previous cuts or abrasions susceptible to infection). It is self-limiting and has the best outcome with less than 1% mortality
- *Gastrointestinal* disease can develop if spores are ingested (by way of eating badly cooked meat contaminated with anthrax spores). This is a least common form of anthrax but has a high mortality.
- *Inhalation* anthrax is rare, caused by spore inhalation which is usually fatal. A diagnosis of inhalation anthrax should raise the probability of a biological attack.

the possibility that early cases are a harbinger of an impending epidemic, the first suspicion of an anthrax illness must lead to immediate notification of the local health authority. The early detection of an outbreak and rapid identification of infected individuals within an exposed population would, no doubt, allow for a fast and effective response. Anthrax introduces another quandary in planning. Anthrax spores (*Bacillus anthracis*) are effective bio-weapons because they can be dispersed as an aerosol causing fatal disease in a population when inhaled.

Control of anthrax in humans begins with control of the disease in livestock. integration of veterinary and human health surveillance and control programmes, routine cross-notification between these two health surveillance systems and close collaboration between these two sectors during epidemiological and outbreak investigations are key to control of this disease in humans.

Update on outbreaks

in the Eastern Mediterranean Region

CCHF: in Afghanistan, **Cholera:** in Iraq; Iran & Afghanistan **Anthrax:** in Iraq & Afghanistan

Current public health events of international concern

[cumulative N° of cases (deaths), CFR %]

Avian influenza

Egypt	[50 (22), 44%]
Indonesia	[137 (112), 81.7%]

AWD/Cholera

Somalia	[261 (0), 0.0%]
Iran	[195 (4), 2.1%]
Afghanistan	[20 (0), 0.0%]
Iraq	[462 (8), 1.7%]
Guinea Bissau	[7166 (133), 1.9%]

Susp. Cutaneous Anthrax

Iraq	[37 (0), 0%]
Afghanistan	[42 (0), 0%]

Hepatitis E

Uganda	[6530 (104), 1.6%]
Sudan	[224 (23), 10.2%]*

Monkey Pox

DRC Congo	[616 (41), 6.7%]
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Yellow fever

Cote d' Ivoire	[6 (0), 0%]
Guinea	[2 (0), 0%]

Crimean Congo H. Fever

Afghanistan	[24 (4), 16.6%]
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(* = Unofficial figures) CFR = Case-Fatality Rate
? = No data