RAPID RISK ASSESSMENT

Transmission of Foot and Mouth disease to humans visiting affected areas

21 February 2012

Source, date and content of request

Request from Malta, 10 February 2012 for assessment of the risk to humans, precautionary measures to be taken for persons visiting Libya, risk in relation to food consumption in Libya and precautionary measures to be taken when arriving in Malta (including measures at customs).

Main conclusions and recommendations

The risk of Foot and Mouth disease being transmitted to humans visiting affected areas is extremely low, if consumption of unpasteurised milk, dairy products or unprocessed meat from infected animals and direct contact with such animals is avoided.

Specific EU requirements stipulate precautionary measures to mitigate the risk of animal disease, as defined in Commission Regulation (EC) No. 206/2009 of 5 March 2009 on the introduction into the Community of personal consignments of products of animal origin, amending Regulation (EC) No. 136/2004.

Consulted experts

ECDC experts.

Disease background information

Foot and Mouth disease (FMD) is an animal disease caused by an RNA Aphtovirus, belonging to the *Picornaviridae* family. FMD is the most contagious of all infectious diseases in animals, affecting cattle and swine most severely. It also affects sheep, goats, deer and other cloven-hoofed ruminants. Infected animals present fever and blister-like sores in the mouth, on the teats and between the hooves. Transmission occurs through direct contact between infected and susceptible animals (fluid from blisters, blood, saliva, milk or manure); contaminated objects – including surfaces in trucks, loading ramps, footwear, clothing or other equipment – and feed containing products derived from infected animals. Airborne transmission has also been reported. The virus can survive regular pasteurisation, since inactivation of the virus requires animal products to be heated to a minimum temperature of 70°C for at least 30 minutes. The virus can survive drying and may persist for days or weeks in organic matter under moist and cool conditions.

The disease results in reduced livestock productivity and restrictions on international trade in live animals and animal products [1]. FMD is a disease listed in the World Organisation for Animal Health (OIE) Terrestrial Animal Health Code 2011 [2]. According to OIE statistics the disease is currently present in animals in many areas of the

world: Africa, Asia and South America. The following countries and regions are considered FMD free: European Union*, Canada, the United States, North and Central America, Australia, New Zealand and Chile.

Disease in humans

FMD is essentially an animal disease and is not related to the disease in humans caused by a Coxsackie virus and known as Hand, Foot and Mouth disease.

Foot and Mouth disease in humans is considered very rare [3]. During the large outbreak of FMD affecting animals in the United Kingdom in 2001, no human cases were reported, despite enhanced surveillance for human cases [4]. Disease in humans has been reported mainly in connection with consumption of unpasteurised milk, dairy or unprocessed meat products from infected animals or as a result of direct contact with infected animals (e.g. farmers and veterinarians) [5]. No person-to-person transmission in humans has been reported.

The incubation period in humans is two to six days. Symptoms are mostly mild and self-limiting, including tingling blisters on the hands, feet and the mouth, sore throat, and fever. Recovery commonly occurs within a week of the last blisters forming.

Event background information

In the past two months, thirteen FMD outbreaks have been reported to the OIE National Centre of Animal Health and Breeding Improvement in Tripoli, Libya. The first outbreak occurred on the 18 December 2011 and was confirmed on 31 January 2012. The outbreaks have affected cattle, sheep and goats across 13 geographical areas in northern Libya.

So far 170 cases have been recorded in cattle and 3 500 in sheep. The outbreaks, which are caused by serotype O and A viruses, have led to 51 deaths in cattle and around 1 000 in sheep. The main mode of transmission is thought to be airborne spread of virus. Animal quarantine, vaccination and movement control measures have been implemented.

Figure 1: Location of Foot and Mouth disease outbreaks in Libya

Source: WAHID OIE 2012

* Note: Bulgaria reported their last outbreaks between January and April 2011 and therefore, according to established OIE recommendations, their free status is still suspended to date.

ECDC threat assessment for the EU

Risk of transmission to humans while visiting Libya

From the evidence available, the risk for transmission of FMD disease to humans is considered very low and is mainly related to consumption of unpasteurised milk, dairy or unprocessed meat products from infected animals and direct contact with such animals. As a general precautionary measure, it is advisable to avoid visiting farms in FMD-affected areas and consuming unpasteurised milk, dairy or meat products from infected animals.

Precautionary measures upon return/migration from affected regions or areas, including measures to be taken at customs

Specific EU requirements stipulate precautionary measures to mitigate the risk of animal disease, as defined in the Commission Regulation (EC) No 206/2009 of 5 March 2009 on the introduction into the Community of personal consignments of products of animal origin and amending Regulation (EC) No 136/2004 [6].

Conclusions

The risk of Foot and Mouth disease being transmitted to humans is extremely limited in individuals visiting FMD-affected countries, such as Libya, if consumption of unpasteurised milk, dairy or meat products from infected animals and direct contact with such animals is avoided.

EU regulations should be enforced to mitigate risk the of disease transmission in animals.

Contact

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References

1. Department for Environmental Food and Rural Affairs (DEFRA), Cost-Benefit Analysis of Foot –and-Mouth Disease Control Strategies, Accessed 20 February 2012, Available from: http://archive.defra.gov.uk/foodfarm/farmanimal/diseases/atoz/fmd/documents/economic-costs_report.pdf
2. European Food Safety Authority (EFSA), Risk Assessment on Foot and Mouth Diseases, The EFSA Journal. 2006; 313: 1-34. Available from: http://www.efsa.europa.eu/en/efsajournal/doc/313.pdfhttp://www.oie.int/en/international-standard-setting/terrestrial-code/access-online/
3. Capella GL, Foot and mouth disease in human beings. Lancet 2001:358;1374 Available at URL: http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(01)06444-3/fulltext
4. Prempeh H, Smith R, Müller B. Foot and mouth disease: the human consequences. The health consequences are slight, the economic ones huge. BMJ. 2001 Mar 10;322(7286):565-6.
5. Health Protection Agency (HPA), Foot and Mouth disease: General information. Accessed on 20 February, 2012. Available from: http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/FootAndMouthDisease/GeneralInformation
6. Commission Regulation (EC) No 206/2009 of 5 March 2009 on the introduction into the Community of personal consignments of products of animal origin and amending Regulation (EC) No 136/2004. Accessed on 20 February, 2012. Available from: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:077:0001:0019:EN:PDF