

Rabies

Annual Epidemiological Report for 2018

Key facts

- For 2018, one case of travel-related rabies with exposure in Morocco was reported by the United Kingdom.

Methods

This report is based on data for 2018 retrieved from The European Surveillance System (TESSy) on 10 September 2019. TESSy is a system for the collection, analysis and dissemination of data on communicable diseases. For a detailed description of methods used to produce this report, refer to the *Methods* chapter [1].

An overview of the national surveillance systems is available online [2].

A subset of the data used for this report is available through ECDC's online *Surveillance atlas of infectious diseases* [3].

For 2018, 30 EU/EEA countries reported case-based data (Liechtenstein did not report). Twenty-five countries used the EU case definition, three countries used an alternative case definition (Denmark, Germany and Italy), and two countries did not specify the case definition they used (Finland and France). Reporting is compulsory in 29 countries and reported as 'other' in the United Kingdom. Surveillance is comprehensive in all reporting countries and mostly passive.

Epidemiology

For 2018, one case of travel-related rabies was reported by the United Kingdom. The case was bitten by a cat in Morocco [4,5]. For 2014, three cases of rabies were reported by Spain, France and the Netherlands following exposure in Morocco, Mali and India, respectively. For 2015, none were reported. For 2016 and 2017, France reported one travel-related case each year, with exposure in Pakistan and Sri Lanka, respectively.

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Discussion

In Europe, human rabies is a very rare vaccine-preventable zoonosis. It is fatal once the first clinical symptoms have appeared. Very few cases of rabies in humans are reported annually in the EU/EEA, and most Member States have not had autochthonous cases for decades.

In Europe, rabies-exposure bites are typically from foxes and stray dogs, but also occasionally from raccoons. Bats are also carriers of lyssaviruses such as EBLV-1 or EBLV-2 (European bat lyssavirus) and can transmit rabies to other mammals, including humans. In many places throughout Asia and Africa, stray dogs are a main source of infections for humans. Illegal importation of pet animals poses a risk for rabies importation, as reported in France in 2015 [6]. Another source of infection may be through organ transplantation [7]. The re-emergence of animal rabies in northern Italy in 2008–2011 and Greece in 2012–2013 underlines the importance of maintaining high awareness levels [8].

Rabies surveillance data on animals in Europe are available from the ECDC/EFSA summary report on trends and sources of zoonoses, zoonotic agents and food-borne outbreaks [9] and the WHO Collaborating Centre for Rabies Surveillance and Research [10].

Public health implications

It remains important to inform the public, especially those travelling to endemic areas, about the risk of contracting rabies if bitten by certain types of mammalian animal hosts, including unvaccinated dogs, foxes, bats and cats [11,12]. Preventive measures include vaccination of domestic carnivores and oral vaccination of wildlife.

Timely prophylaxis in case of exposure to a potentially infected animal is of utmost importance and knowledge of the epidemiological situation is vital to decide on appropriate post-exposure measures. Treatment consists of local wound care, vaccination and passive immunisation with immunoglobulin, if indicated. To be effective, treatment has to be administered as soon as possible after exposure. Specific safety measures for organ transplantation should be followed [13]. People with increased risk of rabies virus infection should consider pre-exposure vaccination.

References

1. European Centre for Disease Prevention and Control. Introduction to the Annual Epidemiological Report Stockholm: ECDC; 2019. Available from: <https://ecdc.europa.eu/en/annual-epidemiological-reports/methods>
2. European Centre for Disease Prevention and Control. Surveillance systems overview [internet, downloadable spreadsheet]. Stockholm: ECDC; 2019. Available from: <https://www.ecdc.europa.eu/en/publications-data/surveillance-systems-overview-2018>
3. European Centre for Disease Prevention and Control. Surveillance atlas of infectious diseases [Internet]. Stockholm: ECDC; 2019 [10 Sept 2019]. Available from: <http://atlas.ecdc.europa.eu/public/index.aspx?Dataset=27&HealthTopic=43>
4. Public Health England. Rabies: epidemiology, transmission and prevention [Internet]. London: PHE; 2018 [updated 2 July 2019]. Available from: <https://www.gov.uk/guidance/rabies-epidemiology-transmission-and-prevention>
5. Public Health England. Public Health England warns travellers of rabies risk [Internet]. London: PHE; 2018 [updated 12 November 2018]. Available from: <https://www.gov.uk/government/news/public-health-england-warns-travellers-of-rabies-risk>
6. [No author]. Rabies confirmed in an illegally imported dog in France. The Veterinary Record. 2015 May 30;176(22):558.
7. Maier T, Schwarting A, Mauer D, Ross RS, Martens A, Kliem V, et al. Management and outcomes after multiple corneal and solid organ transplantations from a donor infected with rabies virus. Clinical infectious diseases. 2010 Apr 15;50(8):1112-9.
8. Tsiodras S, Dougas G, Baka A, Billinis C, Doudounakis S, Balaska A, et al. Re-emergence of animal rabies in northern Greece and subsequent human exposure, October 2012 – March 2013. Eurosurv. 2013 May 2;18(18):20474.
9. EFSA (European Food Safety Authority) and ECDC (European Centre for Disease Prevention and Control). The European Union summary report on trends and sources of zoonoses, zoonotic agents and food-borne outbreaks in 2016. EFSA Journal. 2017 12 Dec 2017;15(12):5077:228 pp.
10. World Health Organization. Rabies - Bulletin - Europe 2018. Geneva: WHO; 2018 [cited 2018 12 June 2018]. Available from: <https://www.who-rabies-bulletin.org/>
11. Cliquet F, Picard-Meyer E, Robardet E. Rabies in Europe: what are the risks? Expert review of anti-infective therapy. 2014 Aug;12(8):905-8.
12. Public Health England. Rabies risks in terrestrial animals by country [Internet]. London: PHE; 2019 [updated 1 May 2019; cited 2019 Oct 18]. Available from: <https://www.gov.uk/government/publications/rabies-risks-by-country/rabies-risks-in-terrestrial-animals-by-country>
13. World Health Organization. Rabies – Prevention. Geneva: WHO; 2018 [cited 12 June 2018 2018]. Available from: http://www.who.int/rabies/about/home_prevention/en/