

SURVEILLANCE REPORT

Rabies

Annual Epidemiological Report for 2017

Key facts

- For 2017, one case of travel-related rabies was reported by France with exposure in Sri Lanka.

Methods

This report is based on data for 2017 retrieved from The European Surveillance System (TESSy) on 10 December 2018. 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 2017, 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 2017, one case of travel-related rabies was reported by France. The patient was a 10-year-old boy bitten by a dog in Sri Lanka [4].

For 2013, the Netherlands reported one travel-related case following exposure to an unknown source in Haiti. For 2014, three cases of rabies were reported: a 46-year-old woman from Spain bitten by a dog in Morocco, a 57-year-old man from France infected by a canine strain of rabies virus in Mali and a 35-year-old woman from the Netherlands bitten by a dog in India. Related to the case in France, 52 healthcare workers were considered to have been possibly exposed to the patient's body fluids and were offered rabies vaccination [5]. For 2015, no cases of rabies were reported. For 2016, France reported one travel-related case with exposure in Pakistan.

Suggested citation: European Centre for Disease Prevention and Control. Rabies. In: ECDC. Annual epidemiological report for 2017. Stockholm: ECDC; 2019.

Stockholm, February 2019

© European Centre for Disease Prevention and Control, 2019. Reproduction is authorised, provided the source is acknowledged.

Discussion

In Europe, human rabies is a rare vaccine-preventable zoonosis that 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, bites are typically from foxes and stray dogs, but also occasionally from raccoon dogs. 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 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 WHO Collaborating Centre for Rabies Surveillance and Research [10].

Public health implications

It remains important to inform the public about the risk of contracting rabies if bitten by certain types of mammalian animal hosts, including unvaccinated dogs, foxes and bats, in Member States [11]. 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 [12].

References

1. European Centre for Disease Prevention and Control. Introduction to the Annual Epidemiological Report. In: ECDC. Annual epidemiological report for 2017 [Internet]. Stockholm: ECDC; 2017 [cited 10 December 2018]. Available from: <http://ecdc.europa.eu/annual-epidemiological-reports/methods>
2. European Centre for Disease Prevention and Control. Surveillance systems overview [Internet, downloadable spreadsheet]. Stockholm: ECDC; 2019 [cited 10 December 2018]. Available from: <http://ecdc.europa.eu/publications-data/surveillance-systems-overview-2017>
3. European Centre for Disease Prevention and Control. Surveillance atlas of infectious diseases [Internet]. Stockholm: ECDC; 2019 [cited 30 January 2019]. Available from: <http://atlas.ecdc.europa.eu/public/index.aspx?Dataset=27&HealthTopic=43>
4. World Health Organization Collaborating Centre for Rabies Research and Surveillance. Suspect human rabies case in France [Internet, news article]. Riems: Friedrich-Loeffler-Institut; 2017 [cited 30 January 2019]. Available from: <http://www.who-rabies-bulletin.org/news/suspect-human-rabies-case-france>
5. Contou D, Dacheux L, Bendib I, Jolivet S, Rodriguez C, Tomberli F, et al. Severe Ketoalkalosis as Initial Presentation of Imported Human Rabies in France. J Clin Microbiol. 2015 Jun;53(6):1979-82.
6. Rabies confirmed in an illegally imported dog in France. Vet Rec. 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. Clin Infect Dis. 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. Euro Surveill. 2013 May 2;18(18):20474. Available from: <http://www.eurosurveillance.org/content/10.2807/ese.18.18.20474-en>.
9. European Food Safety Authority and 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 Dec 12;15(12):5077. Available from: <http://ecdc.europa.eu/en/publications-data/european-union-summary-report-trends-and-sources-zoonoses-zoonotic-agents-and-9>
10. World Health Organization Collaborating Centre for Rabies Research and Surveillance. Rabies - Bulletin - Europe – Rabies Information System of the WHO [Internet]. Riems: Friedrich-Loeffler-Institut; 2018 [cited 12 June 2018]. Available from: <http://www.who-rabies-bulletin.org>
11. Cliquet F, Picard-Meyer E, Robardet E. Rabies in Europe: what are the risks? Expert Rev Anti Infect Ther. 2014 Aug;12(8):905-8.
12. World Health Organization. Rabies – Prevention [Internet]. Geneva: WHO; 2018 [cited 12 June 2018]. Available from: http://www.who.int/rabies/about/home_prevention