Rabies

A recurrent risk to the EU from dogs introduced from endemic countries (case studies)

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Hélène KLEIN – Legislative Veterinary Officer - DG SANCO Unit G2 (Animal Health)
RABIES - key facts

- Although vaccine-preventable, worldwide-occurring disease of major public health concern
- Once symptoms develop rabies is fatal.
- WHO reports 55,000 human deaths each year, mostly in Asia and Africa
- 30-50% of cases are children of less than 15 years old.
- Dogs are the source of around 99% of human rabies cases.
- Around 10 million people receive treatment after exposure to animals in which rabies is suspected.
RABIES in Europe (1)

- Fox-mediated
- About €20 million is spent annually on oral vaccination programmes in wildlife in MSs
- About €10 million is spent annually from 2008 in the Balkan countries
- Incidence in humans is very low
RABIES in Europe (2)

Recent human cases following dog bites in travellers returning from countries with urban rabies:

• 2003: a three-year-old infected when playing with dogs in Gabon died in France
• 2004: young Austrian tourist died after being bitten by a dog in Morocco
• 2004: a young German woman died after being bitten by a dog in India
• 2005: a British man died after being bitten by a dog in India
• 2007: a German man died after being bitten by a dog in Morocco which had been fighting the man's own dog
Overview of recent imported rabies cases

<table>
<thead>
<tr>
<th>Year</th>
<th>Animal</th>
<th>Origin</th>
<th>Destination</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>Dog</td>
<td>Nepal</td>
<td>Germany</td>
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<tr>
<td>2001</td>
<td>Puppy</td>
<td>Morocco</td>
<td>France</td>
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<tr>
<td>2002</td>
<td>Puppy</td>
<td>Azerbaijan</td>
<td>Germany</td>
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<tr>
<td>2002</td>
<td>Dog</td>
<td>Morocco</td>
<td>France</td>
</tr>
<tr>
<td>2003</td>
<td>Puppy</td>
<td>North Africa</td>
<td>Switzerland</td>
</tr>
<tr>
<td>2004</td>
<td>Puppy</td>
<td>Morocco</td>
<td>France</td>
</tr>
<tr>
<td>2004</td>
<td>Dog</td>
<td>Morocco</td>
<td>France</td>
</tr>
<tr>
<td>2004</td>
<td>Dog</td>
<td>Morocco</td>
<td>France</td>
</tr>
<tr>
<td>2004</td>
<td>Dog</td>
<td>Morocco</td>
<td>Germany</td>
</tr>
<tr>
<td>2007</td>
<td>Puppy</td>
<td>India</td>
<td>Finland</td>
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<tr>
<td>2007</td>
<td>Puppy</td>
<td>Morocco</td>
<td>Belgium</td>
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<tr>
<td>2008</td>
<td>Dog (secondary cases in 2 dogs)</td>
<td>Morocco</td>
<td>France</td>
</tr>
<tr>
<td>2008</td>
<td>Dog</td>
<td>Gambia</td>
<td>Belgium/France</td>
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<tr>
<td>2008</td>
<td>Puppy</td>
<td>Sri Lanka</td>
<td>UK</td>
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<tr>
<td>2008</td>
<td>Puppy</td>
<td>Morocco</td>
<td>France</td>
</tr>
<tr>
<td>2008</td>
<td>Puppy</td>
<td>Croatia</td>
<td>Germany</td>
</tr>
<tr>
<td>2010</td>
<td>Puppy</td>
<td>Bosnia-Herzegovina</td>
<td>Germany</td>
</tr>
<tr>
<td>2011</td>
<td>Puppy</td>
<td>Morocco</td>
<td>France</td>
</tr>
<tr>
<td>2012</td>
<td>Puppy</td>
<td>Morocco</td>
<td>Spain/The Netherlands</td>
</tr>
<tr>
<td>2013</td>
<td>Dog</td>
<td>Morocco</td>
<td>Spain</td>
</tr>
<tr>
<td>2013</td>
<td>Kitten</td>
<td>Morocco</td>
<td>France</td>
</tr>
</tbody>
</table>
Three case studies - Introduction of infected pets from countries with urban rabies

- N°1: unvaccinated cat case of a kitten introduced from Morocco to France (2013)

- N°2: immunised dog - pre-vaccination exposure case of a dog introduced from Gambia to France via Belgium (2008)

- N°3: immunised dog - post-vaccination exposure case of a Spanish dog returning from Morocco (2013)

Case study N°1 - sequence of events

25/10: a kitten (about 2 months old) found in a street in Argenteuil (France)
28/10: death of the kitten following abnormal behaviour and neurologic symptoms
→ a vet is contacted
29/10: cat sent for analyse to Pasteur Institute (Paris) and tracing of in-contact people (post-exposure treatment)
30/10: FAT positive
31/10: confirmation (genotype 1, Moroccan strain)
Case study N°1 - investigations (1)

- **12/10**: a kitten collected on Aïn Diab's beach in Casablanca (Morocco)
  « International health certificate » issued by a local vet who vaccinated the kitten (except against rabies) and certified absence of clinical signs of contagious diseases, including rabies.
- **13/10**: return to France by plane
  No control by Moroccan authorities and airline company - No presentation to the French custom authorities in Orly airport
- **From 13/10 to 21/10**: put in a street in Argenteuil. Several people, a dog and a cat in contact.
Case study N°1 - investigations (2)

From 24/10 to 25/10: kept in a second family in the same street, kitten seen with a stray cat, several people in contact

From 25/10 to 28/10: kept in a third family in the same street and then in Cormeil-en-Parisis (France) Several people, one and two cats in contact

28/10: Death of the kitten

01/11: another kitten is found dead in the same zone with negative result for rabies
Case study N°1 – control measures (3)

- Communication to the public.
- Definition of a surveillance and restriction area of 1 km in width around the street where the kitten was found.
- Definition of an intervention area that has permitted to discover the kitten’s origin, trace it up to its death, determine people and animals in contact (20 persons - 15 treated, 5 domestic animals and 2 stray animals → euthanasia or surveillance depending on their vaccinal status and the risk of contamination).
- Collection of stray animals in the area.
- Analysis of all carnivores with neurologic signs or found dead in the area.
Case study N°2-sequence of events (1)

- **3/2008**: a six-month-old stray puppy found injured by a Belgian tourist in Gambia is brought to a local veterinary clinic to be operated.
- **15/3/2008**: anti-rabies vaccination, microchipping.
- **5/4/2008**: certificate of good health issued by a vet.
- **6/4/2008**: the dog, sedated before departure, travelled back to Belgium in the cabin inside a travel box carried on the tourist’s lap, with however two possible human contacts during the flight.
- **8/4/2008**: the dog was taken to a veterinary clinic in Brussels to be treated for a necrotic wound (possibly a bite).
Case study N°2-sequence of events (2)

- **13/4/2008**: the owner went by car to the South of France and let the dog in her garden.
- **16/4/2008**: first symptoms of rabies and examination in several veterinary clinics
- **21/4/2008**: death of the dog.
- **24/4/2008**: rabies is confirmed by Pasteur Institute in Paris (strain similar to those circulating in Guinea and Sierra Leone).
Case study N°2 – control measures

- Active tracing of possible in-contact individuals and animals in France, Belgium and Gambia (post-exposure treatment for 19 persons in France and 25 in Belgium, including two passengers and the staff in the aeroplane).
- In Belgium: information and warning posters were displayed by the administrative authorities and districts concerned, a press release was issued reminding the public of the EU Regulation on pet movements.
Case study N°3 - sequence of events

- **1/6/2013**: a dog attacked 4 children, the father of one child and a dog in a park in Toledo (Spain). The police killed the dog.

- **5/6/2013**: rabies is confirmed (North African strain similar to the one circulating in Morocco)
Case study N°3 – investigations (1)

- The aggressive dog lived with 2 other dogs and their owners (a couple) in Cataluña
- **29/11/2012**: vaccination of two dogs against rabies for the first time
- **1/12/2012**: vaccination of the aggressive dog (4 years old)
- **12/12/2012**: the aggressive dog leaves Spain for a trip to different places in Morocco with its owners and the 2 other dogs.
- **5/2/2013**: dogs rejected by vet officials at Algeciras's BIP (no evidence of antibody titration test reports).
- **12/4/2013**: dogs introduced illegally in Ceuta during night and then Algeciras (dogs were checked as compliant).
Case study Nº3 – investigations (2)

- From 7/5/2013 to 11/5/2013: Monzón (Aragón).
- 21/5/2013: they arrived in Argés (Toledo).
- 27/5/2013: suspicious aggressive behaviour.
- 31/5/2013: the aggressive dog escaped from home.
Case study N°3 – control measures

- Estimated infectious period: 1/5/2013 to 1/6/2013
- Tracing of in-contact animals: 19 under surveillance and 2 sacrificed
- **7/6/2013**: establishment of restriction zones for 6 months
  - 20 km from Argés (Toledo)
  - in Cataluña (Banyoles, Porqueres, Montcadai Reixac y Piera)
- Mandatory vaccination of dogs, cats and other susceptible species in the restriction zones.
- Restricted movements of pets from this area (prior authorisation by Competent Authority)
Consequences of illegal introduction of potentially infected pets

• Complicated investigations by public and animal health authorities (tracing possibly covering several countries)
• Post-exposure vaccination for humans
• Surveillance or euthanasia of in-contact pet animals
• Subsequent substantial expenditure
Importance of awareness campaign targeting travellers

- Danger of contracting rabies
- Avoid contacts with stray animals
- Pre-exposure prophylaxis and post-exposure treatment options
- Don't bring home a 'living souvenir' or ensure that it complies with EU rules before entering the EU (4 to 7 months are necessary).
Reminder on the EU rules on pet movements from third countries

- Vaccination against rabies
- For certain third countries: rabies antibody titration test in an EU-approved laboratory - also for re-entry - and three month-waiting period
- EU health certificate issued by an official veterinarian (EU pet passport on re-entry)
- EU travellers' points of entry

http://ec.europa.eu/food/animal/liveanimals/pets/index_en.htm
RABIES

Spread the message