Human protection from Domestic and Wildlife Rabies in the Middle East
{ EGYPT }

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History

- *Rabies virus was recognized in Egypt before 2300 B.C. and was described by Aristotle in ancient Greece.*
- *It has been characterized by many as one of the oldest and most feared diseases of both animals and humans.*
Rabies:

- **Rabies**: ("madness, rage, fury" also "hydrophobia") is a viral Zoonotic neuroinvasive disease that causes acute encephalitis (inflammation of the brain) in mammals. In non-vaccinated humans, rabies is almost invariably fatal after neurological symptoms have developed, but prompt post-exposure vaccination may prevent the virus from progressing. There are only six known cases of a person surviving symptomatic rabies, and only one known case of survival in which the patient received no rabies-specific treatment either before or after illness onset.
Rabies and dogs:

- Rabies has a long history of association with dogs. The first written record of rabies is in Iraq (ca. 1930 BC), which dictates that the owner of a dog showing symptoms of rabies should take preventative measure against bites. If a person is bitten by a rabid dog and later died, the owner was fined heavily.

- On April 25 2008 three people were bitten by a rabid puppy which was in quarantine after arriving into the UK on 18 April 2008 from Sri Lanka. The incident happened in the Chingford area of Essex at a licensed quarantine centre and the people involved received vaccinations.
Clinical signs:

i. Furious form { as shown in picture }.

ii. Dumpy form.
Main problems of stray dogs

- Transmission of Zoonotic diseases
  { i.e. rabies }
- Road accident .
- Noise and panic to peoples
Etiology:

- The disease caused by **Neurotropic RNA Lyssa virus** of family **Rhabdoviridae**.
- Slight antigenic variation among viruses isolated from various sources has been recorded using monoclonal antibodies where three strains had been detected.
  - Strains isolated from the natural cases { street viruses.
  - Strains adapted to secondary hosts {fixed v. }
  - Strains isolated from the brain of human patients are referred as Flury strain { the name of the infected girl}.
Epidemiological situation:

- it is a disease of a worldwide distribution, and endemic in Africa including Egypt.
- Few countries are free from rabies as Australia, New Zealand, Britain, Hawaii, and Japan.
Global situation:

- Canine rabies is still widespread all over 80 countries, mainly in the developing world. Once clinical signs of rabies develop, it is invariably fatal and there is no known cure. In almost all human cases in the developing world, rabies is transmitted from dogs. Almost half the global population lives in dog rabies endemic areas.

- The WHO has established international guidelines on animal import controls to take account of this disease. Rabies also exists in wildlife and some types of carnivore and Vampire Bat are recognized as wildlife reservoirs. European Lyssa viruses (EBLVs) 1 and 2 commonly referred to as bat rabies are two strains of virus found in bats in Northern Europe.
Current data in Egypt:

- Date of last occurrence as reported to OIE is 1990.
- No much available literature about rabies in Egypt.
- Only one research article on 1988 by NAMRU3 clarified that Nineteen street rabies virus strains, isolated in Egypt from:
  - Humans { 2 }  Dogs { 9 }
  - Cats { 2 }  Farm animals { 2 }
  - Gerbils { 3 }  Jackal { 1 }
There is annual occurrence of stray dogs or wild canines bites for human.

No laboratory confirmation for the suspected cases.

All the bitten individuals are subjected to prophylactic treatment against Rabies including Vaccination.
The **Alliance for Rabies Control** (ARC) is a UK registered charity. It was created in 2006 to alleviate the burden of rabies across the world by promoting and implementing rabies control, prevention and education programs while accounting for animal welfare and conservation issues.

One of its main projects is the official World Rabies Day taking place every year on September 28th.
Control of rabies

i. Control of stray dogs.

ii. Reduction of excess number of wild life vectors.

iii. Vaccination of owned dogs.
These steps can be achieved through:

1. Destruction of all rabid animals.
2. Reduced numbers of stray dogs.
3. Muzzling, licensing and vaccination of all owned dogs.
4. Control of vampire bats in areas where it is prevalent.
Control of stray dogs population

- The trap, neuter and release (TNR) method was used in Egypt in a pilot phase with finance from WASPA.
- The current system for control of stray dog population by old methods
CONCLUSION.

- The limitation in the national budget hindered the expansion of trap, neuter and release method.
- Control of stray dogs population by old method create many problems with animal welfare organizations.
Rabies vaccine for animals

- The vaccine is used for protection of dogs, cats and farm animals against rabies.
- Attenuated tissue culture vaccine used in Egypt.
Vaccination programs:

- **For dogs and cats**: Attenuated living vaccine that giving 2 ml. by s/c rout at six months of age and then annually.
- **For farm animals**: for prevention and control for bitten animals:
  - cattle and buffalos: 5 ml
  - Horses and donkeys: 4 ml
  - Sheep and goat: 2 ml
Thank you