

Diagnosis and Prevention Methods to Cure Rabies Virus Infection

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DESCRIPTION

Rabies is a viral disease that is almost invariably fatal once symptoms have appeared. It's a disease that has both intoxicated and afraid mankind for decades, and despite modern medical advances, it continues to pose significant challenges in certain parts of the world. Here's a comprehensive perspective on the Rabies virus. Rabies is caused by the Rabies virus, a member of the Lyssavirus genus. It's a disease that primarily affects mammals, including humans, and is transmitted through the saliva of an infected animal, usually *via* a bite or scratch. The most common carriers of the Rabies virus are wild animals like bats, raccoons, skunks, and foxes. Domestic animals, particularly dogs, can also be carriers if not vaccinated. The virus is transmitted through the saliva, and a bite from an infected animal is the most common way for the virus to spread.

Clinical manifestations

Once the virus enters the body, it travels along the peripheral nerves towards the central nervous system. This process can take weeks to months, and during this incubation period, there are no symptoms. Once the virus reaches the brain, it causes severe neurological symptoms, including:

Furious rabies: Characterized by hyperactivity, agitation, hallucinations, and hydrophobia (fear of water).

Paralytic rabies: This form is less common and leads to gradual paralysis and coma.

Diagnosis and treatment

Diagnosing Rabies before the onset of symptoms is challenging, and once symptoms appear, the disease is almost always fatal. Treatment for someone who has been bitten by a potentially rabid animal involves immediate cleansing of the wound and a series of rabies vaccinations known as Post-Exposure Prophylaxis (PEP). If initiated promptly, PEP is highly effective in preventing the disease.

Prevention is essential in the fight against Rabies that includes:

Vaccination of pets: Regular vaccination of domestic animals, especially dogs, is crucial.

Education: Public awareness about avoiding contact with wild animals and what to do if bitten is vital.

Wildlife control: In some areas, vaccination programs for wild animals have been implemented.

Antiviral drugs

Rabies is a viral infection that affects the central nervous system and is almost always fatal once symptoms appear. It's caused by the rabies virus, which is a member of the Lyssavirus genus. While there are no specific antiviral drugs that can cure rabies once symptoms have appeared, there are preventive measures and treatments that can be used after exposure to the virus:

Rabies Post-Exposure Prophylaxis (PEP): This is the primary treatment for individuals who have been exposed to rabies. It consists of a series of rabies vaccinations and, in some cases, Rabies Immune Globulin (RIG).

Rabies vaccine: The rabies vaccine is given in a series of injections. It stimulates the immune system to produce antibodies against the virus.

Rabies immune globulin (RIG): RIG provides immediate, temporary protection against rabies and is given to individuals who have been bitten by an animal suspected of having rabies, especially if they have not been previously vaccinated against rabies.

Supportive care: Once symptoms of rabies appear, there is no specific treatment that can cure the disease. Care at this stage is supportive and palliative, aiming to make the patient as comfortable as possible.

Experimental treatments: Some experimental treatments have been attempted, such as the Milwaukee protocol, which involves putting the patient into a medically induced coma and administering antiviral medications. However, the success rate has been very low, and this approach is not widely accepted or used.

Preventive vaccination: For those at higher risk of exposure to rabies (such as veterinarians, animal handlers, and travelers to areas where rabies is common), Pre-Exposure Prophylaxis (PrEP) with the rabies vaccine may be recommended.

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Received: 29-Jun-2023, Manuscript No. JADPR-23-26065; **Editor assigned:** 03-Jul-2023, Pre QC No. JADPR-23-26065 (PQ); **Reviewed:** 17-Jul-2023, QC No. JADPR-23-26065; **Revised:** 24-Jul-2023, Manuscript No. JADPR-23-26065 (R); **Published:** 31-Jul-2023, DOI: 10.35841/2329-8731.23.11.313

Citation: Zheng W (2023) Diagnosis and Prevention Methods to Cure Rabies Virus Infection. Infect Dis Preve Med. 11:313.

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The key to managing rabies is prevention and immediate treatment after exposure. Once symptoms appear, the disease is almost invariably fatal. Therefore, prompt medical attention and adherence to PEP protocols are vital if there is a suspicion of exposure to the rabies virus.

CONCLUSION

Rabies is a disease that symbolizes the complex interplay between humans, animals, and our shared environment. It's almost certain fatality once symptoms appear makes prevention and early

intervention paramount. The Rabies virus serves as a stark reminder of the importance of public health measures, veterinary care, and global cooperation. It's a disease that can be controlled and even eradicated with concerted efforts, but it requires a multifaceted approach that considers not just the medical aspects but also the social, cultural, and ethical dimensions. In a world where medical advancements have conquered many diseases, Rabies stands as a testament to the challenges that remain. It underscores the importance of education, empathy, and a holistic approach to health that recognizes the interconnectedness of all living beings.