

Case Report

Rabies Hysteria: Case series

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Abstract

Background: Rabies is an acute and fatal zoonotic viral disease that affects warm-blooded mammals. This disease is usually transmitted between humans and other animals through bites, scratches, or saliva from infected animals. Depending on the mortality rate of rabies, people sometimes experience mental stress after biting or contact. This condition is called mental stress toward rabies (Rabies Hysteria).

Cases Report: In this study, we referred to seven cases of rabies hysteria, which were referred to the WHO Collaborating Center for Reference and Research on Rabies of Pasteur Institute of Iran.

Conclusion: Studies have shown that the level of low awareness and the wrong attitude toward the disease aggravates medical hysteria. The health system should evaluate social knowledge and attitude.

Keywords: Rabies, Hysteria, Fear, Awareness

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Introduction

Rabies is an acute and fatal zoonotic viral disease that affects warm-blooded mammals (bats, carnivores, ruminants) and humans. It is usually transmitted between humans and other animals through bites, scratches, or saliva from infected animals. The major carriers of the disease are dogs, wolves, jackals, and foxes¹⁵. Rabies threatens millions of people worldwide. Although this disease can be prevented by vaccination, we have many victims every year. There is no treatment for rabies after the onset of clinical symptoms. In humans, symptoms often include dehydration, excessive salivation, and abnormal neurological manifestations. However, considerable variability in disease manifestations may occur⁸.

Rabies has a high prevalence in Iran and is still considered one of the significant health challenges worldwide¹¹.

Recent studies have shown that mental disorders are common in people who experience traumatic injuries such as animal bites. People with underlying mental problems are at a high risk of death. They have more complications, such as extended hospitalization, which costs more. However, few studies have investigated the importance of mental disorders in commonly encountered other injuries, such as dog bites⁶. Animal bites, especially dog bites, and rabies in humans, are major health problems that are neglected. Dog bites can cause severe physio-pathological complications, such as cellulitis at the bite site, neurovascular and musculoskeletal injuries, post-traumatic stress, and

even death²⁰.

"Hysteria" is a term used to describe an emotionally charged and uncontrollable behavior. A person suffering from hysteria shows a disproportionate behavioral response to the situation and is called hysterical. In cases of hysteria, a person experiences physical symptoms caused by nervous pressure². Symptoms considered characteristic of "hysteria" include blindness, emotional outbursts, hallucinations, overly dramatic or excitable behavior, loss of sensation¹⁴ as well as occasional trance, forgetfulness, paralysis, fainting, epileptic seizures, increased pain, and muscle spasms⁵.

Hysteria was considered a mental disorder caused by the involuntary wandering uterus in ancient Egypt in 1900 BC¹⁸. The word hysteria is derived from the Greek word hysteria, which means womb¹⁶. Today, we know that the cause of hysteria is generally the experience of some trauma. However, sometimes, it is caused by severe anxiety about the challenge between a person's health and disease¹⁷. Awareness is one of the hysteria treatment methods proposed in psychology¹⁰.

Attempts to treat hysteria helped improve the field of psychoanalysis. In the 1800s, French neurologist Jean-Martin Charcot used hypnosis to treat hysterical women¹⁶. The famous Austrian psychoanalyst Sigmund Freud also studied in this field. With Joseph Breuer, Freud treated hysteria in a person named Anna. In this way, Anna finds that talking about her problems with a therapist significantly affects her anxiety. This treatment method was talking therapy, and it is still mentioned today¹⁹.

Freud's colleague Carl Jung treated a young woman named Sabina Spielrein, who was also thought to be suffering from hysteria. Jung and Freud often discussed the Spielrein case, which influenced their developed theories. Spielrein trained as a psychoanalyst and helped introduce the psychoanalytic approach to Russia before being murdered by the Nazis during World War I¹.

Rabies disease can be controlled entirely and treated if correct and appropriate measures and vaccinations are carried out immediately after being bitten by a rabid animal. Otherwise, a person bitten by a rabid animal will die. Due to the deadly nature of rabies, sometimes people experience fear, stress, and mental

complications after biting, even if they receive proper and timely vaccination. Sometimes, this happens without being bitten, and they experience direct contact with an animal. Moreover, they feel rabid. This condition is called mental stress toward rabies or rabies hysteria.

Rabies hysteria sometimes causes rabies-like symptoms⁴. Therefore, it is necessary to treat mental disorders caused by animal bites and rabies. However, few studies have been done on this matter²⁰. In this study, we have referred to several cases of rabies hysteria referred to the WHO Collaborating Center for Reference & Research on Rabies, Pasteur Institute of Iran.

Cases Report

Case 1: About 20 years ago, a 50-year-old man from Qazvin city (north-west of Iran) became hysterical after having sexual contact with a dog without rabies symptoms. This person is an undergraduate. He thought he was infected seven years after this incident. Therefore, he expressed concern through frequent referrals to the rabies department (Department of Virology, Pasteur Institute of Iran). This person was treated by conducting psychological counseling with a psychoanalyst and receiving information about rabies from the head of the rabies department.

Case 2: A lady from Tehran (the capital city of Iran), 31-32 years old, was bitten about a year ago, and a complete vaccination was done for her. However, this person suffered from rabies hysteria. For this reason, with consecutive visits to health centers in three months, she injected 15 doses of the rabies vaccine. She had frequent calls to the rabies department. This person was treated by conducting psychological counseling with a psychoanalyst and receiving information about rabies from the head of the rabies department.

Case 3: A 31-year-old man, a flight engineer, was leg bitten by a stray dog in Tehran. He prevented contracting rabies by performing the correct and on-time vaccination. However, during the vaccination program, he became hysterical. He even showed disease symptoms such as fear of light and difficulty swallowing food. By visiting health centers repeatedly, he injected more than the required amount of rabies vaccine. However, his hysteria was not cured. This

person was treated for hysteria and recovered with the advice of the head of the rabies department.

Case 4: A 45-year-old person in North Khorasan province (northeast of Iran) with a history of being bitten and timely vaccination had severe hysteria about rabies a year ago and was treated for brain shock in a psychiatric hospital. He has not yet recovered and is now under treatment. He is graduated with (a Ph.D. in biotechnology) and undergoing psychological counseling.

Case 5: A 35-year-old veterinarian in Tehran was bitten a year ago and vaccinated on time. However, he became rabies hysteric, although his antibody titer was about 60 times the protective level. This person was treated by conducting psychological counseling with a psychoanalyst and receiving information about rabies from the head of the rabies department.

Case 6: A 25-year-old female medical student in Tehran was bitten about two years ago and was vaccinated on time. However, despite injecting several doses of vaccine, he was still hysterical. This person was treated by conducting psychological counseling with a psychoanalyst and receiving information about rabies from the head of the rabies department.

Case 7: About a year ago, a soldier in Tehran was referred to one of the health centers to get his military vaccination. Due to the proximity of the rabies vaccination site to the military vaccination, this person became hysterical about rabies and stated that he had a burning sensation in his legs without any exposure. He was treated by conducting psychological counseling with a psychoanalyst and multiple follow-ups and consultations with the head of the rabies department.

Treatment: To treat these patients, psychotherapy and counseling along with the prescription of Benzodiazepines (Clonazepam 1,2 mg and Alprazolam 0.5,1 mg), SSRIs (Fluoxetine 10,20 mg and Paroxetine 10,20,30,40 mg) are performed for at least eight weeks then we slowly taper and cut off. In more severe cases, in hysteric attack (conversion disorder), we have to use Benzodiazepines such as Lorazepam 2-4 mg IV or Diazepam 5-10 mg IV slow (in 2 minutes), and we should be careful of respiratory arrest. In refractory cases, ECT (Electroconvulsive therapy)⁹.

Discussion

In animal bite cases, in addition to being injured, people may suffer from other problems, including fears and mental disorders, such as rabies hysteria. Hysteria is tension and increased sensitivity to particular issues. People with rabies hysteria may show the symptoms of the disease unconsciously. In some cases, failure to refer to neurological and mental disorders specialists lowers the quality of life of these people. A 19-year-old African-American girl was bitten by a stray dog and developed mental disorders after receiving complete vaccinations as directed. This person was treated for neurological symptoms in the hospital and recovered after some time⁴.

Of 22 children victims of a dog bite, 12 had symptoms of post-traumatic stress disorder 2 to 9 months after the biting. Violent dog attacks with multiple, deep wounds were associated with an increased risk of post-traumatic stress disorder¹³.

In addition, there have also been cases where it was initially assumed that the person had hysteria, but it was proven that they had rabies by taking the patient's history. For example, a 40-year-old man in Cape Town (the capital city of South Africa) with no history of being bitten but alcoholism came to the hospital with symptoms of body pain and headache. Some days after admission, the patient did not drink water and had hydrophobia. After a few days, he noticed that his pet dog had bitten him, but they were not sure that the dog had rabies. Finally, this person died from rabies⁷.

A 55-year-old alcoholic man developed neurological and psychological symptoms after giving up alcohol for several days. After being hospitalized, physicians thought the symptoms were due to alcohol withdrawal. However, after receiving the history of the patient and being bitten by a stray dog, they diagnosed him with rabies. The man died after a few days in the hospital¹⁰.

Conclusion

In many developing countries, rabies is still unknown to their populations. This means that they do not know much about the disease. Lack of knowledge and attitude about the methods of prevention and treatment, as well as differences in cultural, economic, and social structures, create psychological tensions in society after animal bites or contact with animals¹². Until now, there

have been limited studies about rabies hysteria in Iran and other countries. It is necessary to conduct studies in this field.

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