Title: A CASE STUDY OF CLINICAL RABIES EXPOSED UNKNOWINGLY

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Keywords

Abstract

Rabies, a disease of antiquity and continues to be a major public health problem in India. Multiple factors contribute to high mortality and morbidity die to animal bites. An effective strategy for control of rabies takes into account the epidemiology of animal bites, rabies and factors influencing post exposure treatment.

Case Study

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Introduction

Rabies, a disease of antiquity and continues to be a major public health problem in India. Multiple factors contribute to high mortality and morbidity due to animal bites. An effective strategy for control of rabies takes into account the epidemiology of animal bites, rabies and factors influencing post exposure treatment.

Rabies is endemic in India, it has been estimated that more than 30,000 people die of rabies in India every year. However, the severity of dog bite incidents is striking in developing countries: a vast majority of victims die from rabies infection. There are an estimated 55,000 human deaths annually, particularly in Asia and Africa, due to endemic canine rabies[1].

Rabies is not of major economic importance in farm animals and bovine rabies receives less attention. However rabies outbreaks in farm animals cause a substantial loss to farmers from the deaths of these animals as a result of spill over infection from dogs[2].

The number of deaths officially reported in most developing countries like India underestimates the true incidence of the disease. Disparities in the affordability and accessibility of post exposure prophylaxis, levels of rabies awareness and risks of exposure to rabies and other domestic animals results in a skewed distribution of the disease burden across society[3].

Case profile

A 23-year-old unmarried male from a farmer family of a village 8km far from Gwalior district with no preceding medical illnesses, was presented to antirabies clinic of JA Group hospital of GR Medical College Gwalior, Madhya Pradesh. For a few days prior to reporting he experienced pain and numbness in both forearms and a flushed sensation throughout his body. He also reported increased perspiration and increased irritation. At presentation, the patient was lucid but markedly agitated, and was unable to swallow due to involuntary inspiratory muscle spasms when he was presented with a glass of water or when he felt a breeze. On examination he was afebrile, and had a dry mouth, normal heart rate and blood pressure, and a Glasgow Coma Score of 15. He had no focal neurological signs and no neck stiffness, and Kernig's sign was negative. Neither the patient nor his attendant recalled that he had been bitten by a dog, cat or other mammal in the preceding months, and his skin showed no evidence of recent bite injuries or cuts.

There were no signs of recent bites or other skin injuries, but the attendants reported after recalling that he had been scratched in right hand by the buffalo teeth while he was putting medicine mixed feed in mouth of ill buffalo one and half month prior to presentation. The patient and his attendants did not notice the exposure and also did not consult any physician and did not receive any post-exposure rabies prophylaxis because they were not aware

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about the history of rabid animal exposure of that ill buffalo. The buffalo was suffering from anorexia and docility and had died 3 days after that.

What was the outcome of the described Case ?

Patient received supportive treatment with diazepam and intravenous rehydration, as is standard practice in infectious ward. Several hours after admission, the patient developed a fever of 39°C and became progressively more agitated and restless. For this reason, coma was induced by thiopental and mechanical ventilation started. His fever persisted, and he became hypotensive and developed acute renal failure. 2 days after admission, the patient was taken home by his family to die.

Discussion

Here we presented a patient with clinically-confirmed rabies who became symptomatic unknowingly. The point of entry of the rabies virus in this case is clear, during feed handling the ill buffalo that is the traditional way to treat the ill domestic animal in rural areas. But major chance of transmission of rabies virus through rabies infected secretions of animals via abrasions of their hands or contamination of unrecognized cuts with infected saliva, exists.

Low level of awareness, undue faith on traditional unsafe measures and unwillingness to come to antirabies clinic allows these patients to get exposed to Rabies unfortunately. In the described case in spite of potential exposure to a suspect rabid animal the patient and his relatives did not make any effort to consult any physician.

In last 10 years (from 1st Jan 2003 to 31st Dec 2013) a total of 38,679 new cases of animal bite have reported to ARC of JA Group of Hospital in GR Medical College Gwalior with an average of 3867 cases yearly. A total of 46 cases of clinical rabies have been registered among them 4 rabies cases were due to exposure with other than dog, domestic animals. In last 10 years, on an average 12 new cases of patients victimized by animals and seeking post exposure prophylaxis (PEP) against rabies, are registered in ARC.

Conclusion

The case presented reveals the importance of creating awareness among people especially of rural areas about recognition of a potential fatal exposure and judicious administration of rabies biologicals. In developing countries the prevention of rabies is hindered not only by economic conditions but also because of inadequate access to health facilities, recent knowledge and the availability of modern biological. Eradication of rabies from a country like India with abundant lack of knowledge in rural areas may not be successful. But prevention and control of rabies is feasible through improved educational awareness generation of public and health care personnel and mass vaccination of dogs. It may be integrated for both medical and veterinary actions under one umbrella for rabies prevention[4].

There is a need to strengthen Information, Education and Communication (IEC) programme regarding merits of local wound management including "do's and don'ts" to focus on palliation. Rabies is a neurotropic viral illness, most commonly transmitted to humans from the exposure of an infected animal. Although rabies is preventable with PEP, no proven cure exists after the onset of symptoms. Even with advanced supportive care, the case-fatality rate approaches 100%, so ARCs should be strengthened in terms of facilities and availability of safe and effective anti rabies immunobiologicals. There is a need to create awareness regarding epidemiology and at-home and hospital management of animal bites among the service providers and general community.

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