

Incidence of Rabies Cases in Iligan City

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Abstract

The study was conducted to provide data on the incidence of rabies cases in Iligan City. Data collection was done for a period of two weeks from January 14-25, 2002. Only cases from the years 2000-2001 were considered. The data showed that for the period of two years, the incidence of human rabies and cases of animal bites had increased in number. It is recommended that the City government have a wide information dissemination campaign about rabies and enforce a strict periodic vaccination of warm-blooded animals to control, prevent and, if possible, eradicate the aforementioned dreaded disease.

I. Introduction

The rabies problem is as old as mankind, dating back in written records to the Romans, Greeks and Egyptians. The term "rabies," however, came from the Sanskrit word *rabhas*, which means "to do violence." (*Health & Home*, 1996).

In 1984, the World Health Organization reported that the Philippines had the fourth highest human death rate for rabies in the world after India, Sri Lanka and Thailand.

According to the Rabies Control Program of the Department Of Health (DOH), 10 percent of the reported rabies incidence can be traced to stray dogs. Cats caused another two percent. Children below 15 years account for 44 percent of rabies patients.

A World Health Organization (WHO) official said, "A person who is already rabid is likely to die. No specific anti-rabies treatment is effective once the symptoms of rabies have started." There is no known cure so far for rabies.

Estimates of the annual incidence of human rabies cases worldwide exceed 25,625 and the disease is thought to be under-reported. In the Philippines, 350 to 400 Filipinos die of rabies every year.

Clinical Findings

Rabies is a highly fatal viral disease affecting all warm-blooded animals. When rabies occurs in dogs and cats, these species are a dangerous source of human infection.

Etiology

The etiologic agent is classified as a rhabdovirus (Greek *rhabdo* means rod), scientifically known as *Formido enexorabilis*.

Symptoms

The course of the disease may be divided into three main stages:

1. Prodromal stage = the animal may be shy, dull and depressed, restless or apparently hallucinating; the signs may last up to three days.
2. Excitative stage = the animal is vicious and aggressive. Irritation or stimulation of the urogenital tract as evidenced by frequent urination; erection in the male and sexual desire. Facial expression is one of alertness and anxiety with pupils dilated. Noise invites attack. The animal frequently roams streets and highways, biting other animals, people and any moving object. It commonly swallows foreign objects, straw, sticks and stones; will chew the wire and frame of its cage, breaking its teeth. The animal will follow a hand moved in front of the cage, attempting to bite it.
3. Paralytic stage = characterized by paralysis of the throat and masseter muscles, usually with profuse salivation; inability to swallow and dropping of the lower jaw. Paralysis progresses rapidly to all parts of the body with coma and death in a few hours.

Forms of Rabies

1. Dumb or Paralytic Form (Fig.1). In this form of rabies, the Excitative phase or stage is short or absent and the disease progressively to paralytic stage which is characterized by early paralysis of the throat and masseter muscles; Animals are not vicious and rarely attempt or are able to bite.

2. Furious Form or Mad dog Syndrome (Fig.2) = Represents the classical "Mad Dog Syndrome"; the excitative stage is predominant.

Incubation Period

Variable. Generally, within 15 to 50 days.

Mode of Transmission

1. Transmitted from animal to animal by means of bite introducing the virus-bearing saliva.
2. Contamination of mucous membranes or wounds through the saliva of infected animals.
3. Other reported modes of transmission include inhalation of airborne virus in laboratory accidents or caves inhabited by infected bats

Pathogenesis

The virus initially replicates slowly in muscle cells at the inoculation site. Next, it attaches to acetylcholine receptors at peripheral nerve endings and travels slowly (3mm/hour) along these nerves, without causing significant functional derangement to the spinal cord and brain. After rapid multiplication, the virus migrates peripherally to the salivary glands and other organs.

II. Significance of the Study

This study is significant in view of the fact that many people lack the knowledge of this kind of disease. Moreover, rabies has been considered as one of the top dreadful diseases in the country. Knowledge derived from this undertaking is essential in paving the way for the prevention, control and eradication of the aforementioned disease.

III. Objectives of the Study

1. To determine the incidence of human rabies cases in Iligan City.
2. To determine the number of cases bitten by dogs, cats and other warm blooded animals as recorded in the Department of Health, Iligan City.

3. To draw out recommendations for the prevention, control and eradication of the disease.
4. Output of this study will be submitted to the city legislature as an aid for legislation on animal quarantine.
5. To provide baseline data for further studies.

IV. Scope & Limitation

The study is limited only to the diagnosed and recorded cases of human rabies in Iligan City and the number of cases of dogs, cats and other animal bites during the years, 2000-2001.

V. Methods

a. Pre-research Activity

In this stage, writing of research protocol and procurement of permit was done and delivered through proper channel requesting that the researcher be allowed to conduct the research at the appropriate agency (Fig. 4).

b. Research Proper

The hospital personnel of Iligan City had informed the researcher that all medical cases from all hospitals had been reported to the Department of Health which is responsible for keeping the records. Collection of data was taken mainly from the Department of Health, Iligan City. It was done for a period of two weeks from January 14-25, 2002. Each record book was carefully examined and proper recording was done to ensure accuracy. The data were tabulated per month for the period of two years.

VI. Results and Discussions

Table 1 presents the number of human rabies cases for the years, 2000 and 2001.

It shows that in the year 2000, two incidences of rabies casualties were recorded, i.e. one (1) for January and one (1) for February. For the year 2001, there were four human rabies casualties for the months of August, September, October and December.

Table I. Number of Human Rabies Cases in Iligan City, Year 2000 and 2001

Month	2000	2001	Total
January	1		1
February	1		1
March			
April			
May			
June			
July			
August		1	1
September		1	1
October		1	1
November			
December		1	1
Total	2	4	6

Table II shows the number of cases of dogs, cats and rat bites for year 2000. A total of 457 cases of animal bites had been reported and broken down as follows: by dogs, 426; by cats, 22; by rats, 7; and by a monkey, 2.

Table II. Number of Cases of Animal Bites, Year 2000

Months	Dog	Cat	Rat	Monkey	Bat	Total
January	19	2	1			22
February	22	1		1		24
March	15	1	1			17
April	20	2				22
May	17	3		1		21
June	24					24
July	49					49
August	39	1				40
September	46	8	2			56
October	63	3	2			68
November	69					69
December	43	1	1			45
Total	426	22	7	2		457

Table III reveals the number of cases of animal bites for the year 2001. A total of 1097 animal bites, i.e., 970 patients were bitten by dogs; 87 by cats; 39 by rats and 1 by a monkey.

Table III. Number of Cases of Animal Bites, Year 2001

Month	Dog	Cat	Rats	Monkey	Total
January	87	4	1		92
February	53	6	2	1	62
March	119	5	8		132
April	95	7	1		103
May	56	6	4		66
June	102	9	9		120
July	90	11	1		102
August	88	12	5		105
September	94	4	5		103
October	70	12	2		84
November	71	11	1		83
December	45				45
Total	970	87	39	1	1097

VII. Conclusion & Recommendations

It can be gleaned from the result of the study that there was an increase of incidence of human rabies and the number of cases of animal bites in the City. In view of this increase, the researcher would like to recommend the following:

For the Prevention and Control:

- A. The City government must conduct a massive information and dissemination campaign regarding this incurable disease.
- B. The City government must require animal owners to register their animals in the City Veterinary Office for monitoring purposes.
- C. Vaccination of all pets (dogs, cats etc.).
- D. Elimination of stray animals.
- E. Reduction of excess number of wildlife vectors.
- F. Management of dogs, cats bitten by rabid animals:

1. Unvaccinated dogs, cats and other pets bitten by a known rabid animal should be destroyed immediately.
2. Animals which has been vaccinated previously within one year but recently exposed to rabies should be restrained for 30 days.

G. Management of persons bitten by dogs, cats and other warm-blooded animals:

1. Wash the wound immediately and thoroughly with soap and water.
2. Consult the physician in the nearest Health Center/ Hospital.
3. Have a dose of TETANUS ANTI-TOXIN.
4. Restrain and observe the animal for 14-50 days and consult a veterinarian.
5. If the animal dies, its head should be brought to the laboratory for diagnostic examination to determine the presence of negri bodies.
6. Person bitten by a stray dog, in which case observation is impossible, should immediately consult a doctor for anti-rabies injection.



Figure 1. A Dumb Rabid Dog (Picture taken by A.V.J.)



Figure 2. A Furious Rabid Dog (Courtesy of Henry Wilde and Supawat Chutivongse)

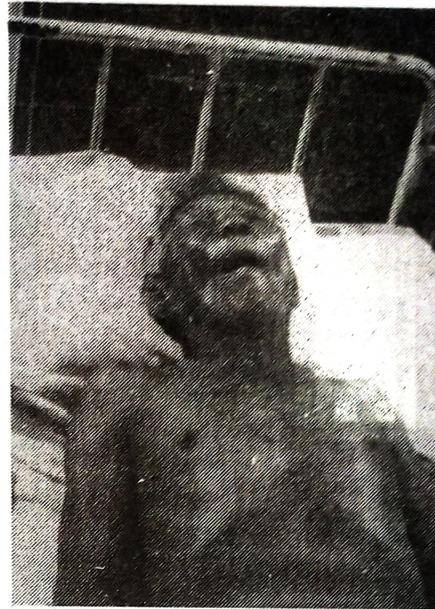


Figure 3. An Elderly Patient with Rabies (Courtesy of Dr. Thiravat Hemachudha)

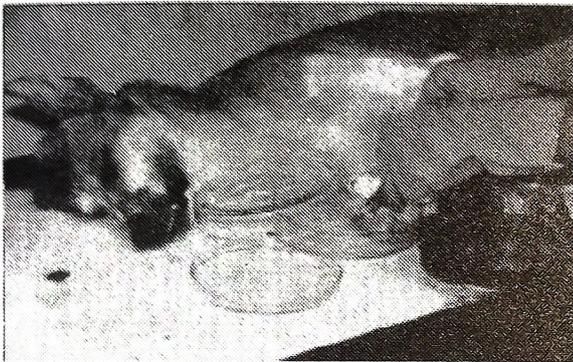


Figure 4. A Rabid Dog at Necropsy (Courtesy of Henry Wilde and Supawat Chutivongse)

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