

## **Human Rabies in Kumasi: A Growing Public Health Concern**

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### **BACKGROUND**

Rabies is a viral illness with an almost 100% case fatality rate caused by the Rabies virus. The virus belongs to the class *Rhabdoviridae*. The disease is transmitted through the bite or scratches from infected animals usually dogs although wild animals as foxes are also known to transmit the disease. Ninety five percent of the estimated 55,000 Rabies cases occur in Africa and Asia. Rabies has been eliminated in most developed countries through multi-pronged strategies including the Oral Rabies Vaccination (ORV) of some wildlife. Ghana still reports cases of rabies.

Prevention remains the only viable Public Health tool and requires vaccination of persons at risk or passive immunisation and vaccination of persons exposed to the virus.

In the 1980s, Ghana embarked on an aggressive campaign to vaccinate dogs against Rabies. The same cannot be said of current Public Health actions to prevent the disease. These challenges coupled with the sporadic nature of supplies for post exposure prophylaxis (vaccines and immunoglobulins) mean an increased risk of outbreaks of Rabies.

### **METHODS**

All cases of Human Rabies seen at the Komfo Anokye Teaching Hospital (KATH), Kumasi, Ghana from January 2013 to January 2015 were reviewed. The review involved case notes of all suspected cases and the Case-based forms filled by Disease Control Officers which were submitted to the Disease Surveillance Unit of the Ghana Health Service. Data was analysed using Epi Info version 7.1.4. Microsoft Excel and Epi Info were used to generate chart and map respectively.

### **RESULTS**

#### **Basic Demographic Information**

A total of twenty-one (21) cases of Human Rabies were recorded during the 25-month period. There were 11 (52.4%) males and 10 (47.6%) females. The ages of the patients ranged from 3 to 55 years with a mean age of 19.8 years. The majority of cases (52.4%) were 18 years or

older. January 2015 recorded the most cases (3) in a month compared with a total of 8 and 10 cases recorded for years 2013 and 2014 respectively (Fig 1).

A total of 9 cases (42.9%) were resident in the city of Kumasi with the remaining cases distributed over a wide geographic area (Fig 2). Only one community recorded more than a case (Asuofua reported 2 cases). The two cases from Asuofua were not related.

### **Receipt of PEP**

About a third of cases presented in a health facility following the animal bite but did not receive the recommended PEP. Information on action taken following exposure could not be determined for approximately a third of cases with the remainder not reporting to a health facility following the exposure.

### **Clinical History, Presentation and Outcome**

All cases died (Case Fatality Rate of 100%) with about 60% of cases dying within 24 hours of admission. The longest duration of stay recorded was 5 days (3 cases).

The commonest symptoms were hydrophobia and agitation. No post-mortem examination was undertaken on any of the cases reported. All cases except one reported a history of a dog bite. The one exception was a cat bite. More than half (55%) of exposures due to dog bites resulted from stray dogs. The time between exposure and the onset of symptoms ranged between 3 weeks and 4 months with 52.4% of cases reporting the onset of symptoms approximately 2 months after exposure.

### **DISCUSSION AND CONCLUSION**

The numbers of cases of Rabies seen during the period present a source of concern for Public Health. Of particular concern is the high number of patients who accessed healthcare following the exposure to the virus but who did not receive the recommended PEP (due to unavailability or non-adherence to guidelines for PEP for Rabies). Such deaths could have been averted had the recommended PEP been given as the effectiveness of PEP for Rabies has been demonstrated in several countries. Surveillance has a key role to play in ensuring that cases of rabies are promptly detected and the necessary public health actions instituted.

Wild-life related rabies does not seem to be of Public Health importance as all cases were from domestic animals. The wide geographical distribution of cases (Fig 2) however has public health implications.

Rabies is still a disease of Public Health importance in Ghana. Aggressive efforts at reducing the incidence of the disease must be pursued. The Rabies vaccine as well as immunoglobulins for PEP must be made available in all health facilities to ensure eligible patients receive the recommended PEP promptly. The training of Healthcare staff on PEP for Rabies, Mass Vaccination of animals, enforcement of legislation on stray animals and Public Education on the disease is recommended.

## REFERENCES

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