

**FIELD EPIDEMIOLOGICAL STUDY OF
THE CLAIMED ZINC PHOSPHIDE INTOXICATION
IN KOM OMBO DISTRICT
DURING APRIL-JUNE, 1996**

**Theses Submitted in Partial Fulfillment of
The Requirement of The Degree of
Master in Epidemiology**

By

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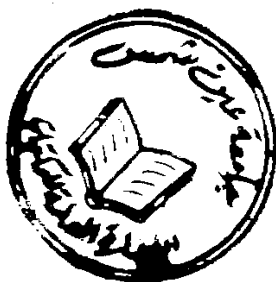
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Introduction

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During April and May 1996, local public health authorities reported an outbreak due to unknown illness in the population living in El-Manshya village in Aswan Governorate. (**Aswan Health Directorate: 1996**).

The outbreak illness involved 25 persons of different ages. Symptoms included acute onset of nausea and vomiting accompanied by abdominal colic and constipation.

The studies were conducted by local public health authorities to rule out the possibility of an infectious disease such as cholera or shigella (which can cause nausea, vomiting, abdominal pain and result in a fatal outcome for young children), some new emerging infection or a toxic exposure to a heavy metal, pesticide, insecticide, rodenticide or some other agent.

Local farmers explained that an unusually large number of rats were noted in households, apparently due to the local availability of stored grains (for example, wheat), new growth of sugar cane plants, or some unknown factor (for example, climatic factor).

Initial laboratory investigations by Ministry of Health and Population identified several possible sources for this outbreak. In 7 of 14 persons with the unknown illness hospitalized (including one person with a fatal outcome), the Central Public Health Laboratory staff suspected phosphine gas in samples of vomitus. (**Results from Central Directorate of Laboratories: 1996**).

Preliminary interviews with households affected during the outbreak showed

that many had used zinc phosphide as a rodenticide to control rats in households.

After two months from the stopping of the initial outbreak, a new cases in the same village started but there were no definite symptoms noticed except for headache and abdominal pain, and some of them complaining from diarrhoea. During the investigation of the initial outbreak, and the second group of cases started to appear the local officials were concerned. The second wave of cases some of them admitted in Aswan general Hospital and most of them went to Assiut governorate directly without asking for medical care in Aswan

Accordingly, a study of the dynamics distribution and determinant of such illness was need. Relation of the illness with zinc phosphide intoxication needs to be verified and explained.

Aim of The work

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1. **To reinvestigate the reported cases and to verify the relation with zinc phosphide intoxication.**
2. **To study the Epidemiology of this illness.**
3. **To plan a suitable recommendation to prevent the occurrence of such illness in the future.**

Review of Literature

I Investigation of An Outbreak:

An outbreak or an epidemic is the occurrence of more cases of disease than expected in a given area or among a specific group of people over a particular period of time. In an outbreak or epidemic, we usually presume that the cases are related to one another or that they have a common cause. (Last, 1995).

Definition of an Epidemic:

The occurrence in a community or region of cases of an illness, specific health-related behavior, or other health-related events clearly in excess of normal expectancy. (Last: 1995).

Definition of an Outbreak:

An epidemic limited to localized increase in the incidence of a disease, e.g., in a village, town, or closed institution. (Last: 1995).

Steps of an Outbreak Investigation:

The following steps summarize investigation of an outbreak:

1. Prepare for field work.
2. Establish the existence of an outbreak.
3. Verify the diagnosis.
4. Define and identify cases: