NEWLY DISCOVERED CASES OF PULMONARY TUBERCULOSIS IN CAIRO DURING THE YEAR 1987

Thesis

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By

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A C K N O W L E D G E M E N T

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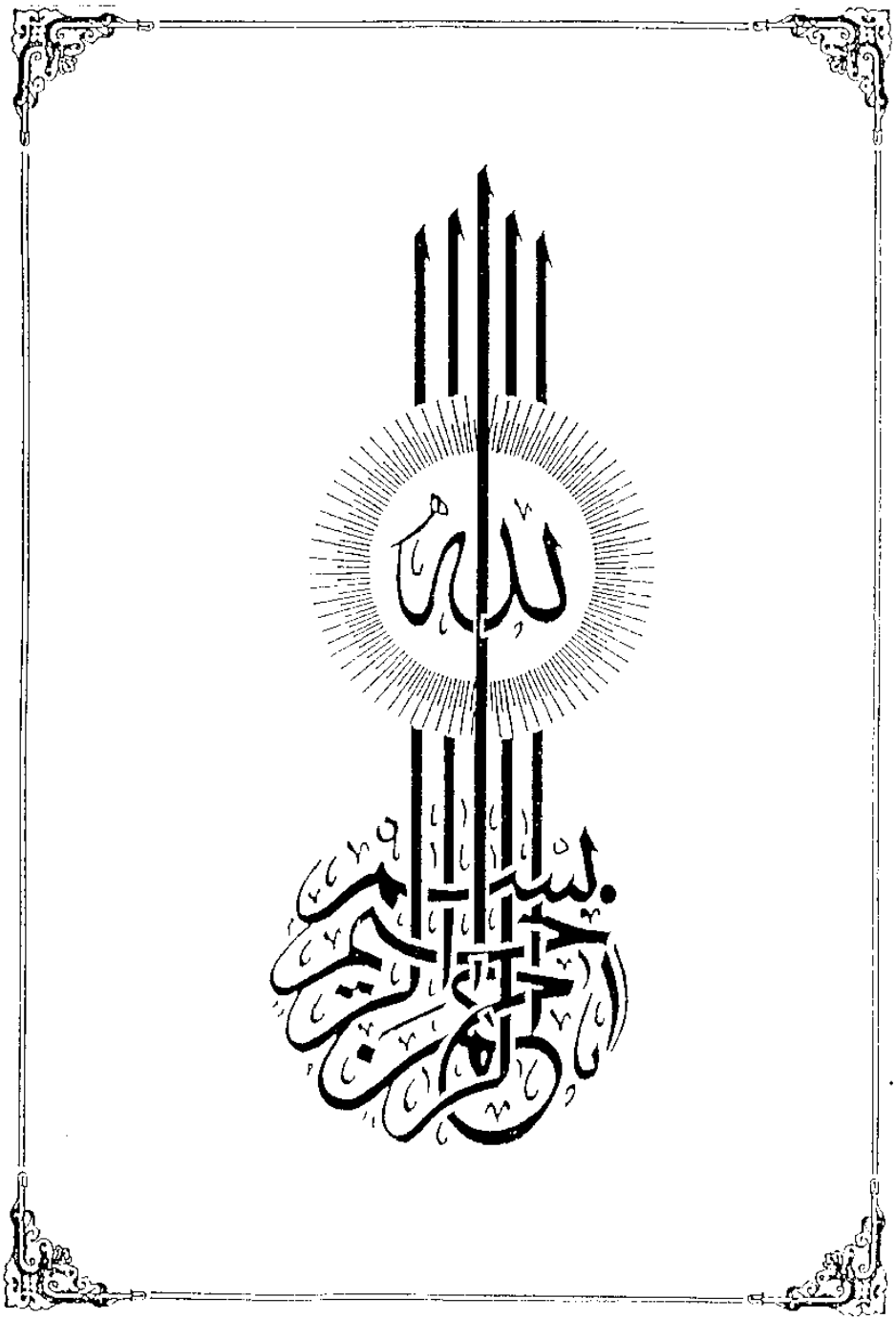

C O N T E N T S

INTRODUCTION

AND

AIM OF WORK

I N T R O D U C T I O N

Tuberculosis is one of the main health problems in the world especially the so called " economically underdeveloped areas ".

Tuberculosis is an infectious disease of man and other animals; in man it is caused by mycobacterium tuberculosis and infrequently by the closely related bovine strain (M.Bovis).

In early writings, it was called " Consumption " because of its tendency to cause great wasting of its victims.

Hippocrates 400 B.C the father of medicine called it " phthisis " which means to " dry up ", Also the disease was refered to as " captain of the Men of Death "and " The Great white plaque ".

In Egypt up to 1925, it was wrongly believed that tuberculosis was an inprobable occurance in such dry and cheerful climate but soon it has been recognized that the disease is more prevalent than expected.

In early ninteen century, the disease was termed as tuberculosis mainly from autopsy description by physicians as laennec and Bayls. When tuberculosis was very frequent, as a cause both of disability and death , the need for activities to reduce its effect was evident to all members of the community including those responsible for health care.

In 1882 Robert Koch discovered the tubercle bacillus which ranks one of the most important discoveries in bacteriology and in the history of medicine.

In 1895, Roentegon discovered x.ray which later proved invaluable for the diagnosis of tuberculosis.

Soon after the first world war, the B.C.G vaccine was evolved by the French Scientists, Calmette and Gverine and was tested. In 1921 the success of B.C.G. vaccine led to larger trials, the real break through in the battle against tuberculosis was the discovery of streptomycin (1944) Para-Amino salicylic Acid (P.A.S) 1946 and Isoniazid .

These drugs have revolutionized the methods of tuberculosis control and have given a hope that tuberculosis control would be attainable in a reasonable time.

Rifampicin and ethambutol (1968) are new drugs which have greatly improved the cure rate of tuberculosis among those who were resistant to 1st liner drugs. New short-term chemotherapy regimens were added recently which greatly improved the cure rate of the disease.

The picture of tuberculosis have changed in many countries and is changing in many others because of treatment and Natural Selection.

The mortality rate, the morbidity and infection have declined. Although with decreasing disability and complication in Egypt, tuberculosis is still a major public health problem, thus estimation of the extent of the tuberculosis problem yeilds valuable epidemiological data necessary for guiding the antituberculosis compaign.

Many indices such as (the prevalence rate, the incidence rate, the infection rate, the mortality rate) can be used for estimating the disease in the community, different regions and areas and also comparison of the same areas in different periods, such information will be of national significance.

AIM OF THE WORK

In Egypt tuberculosis is still a major public health problem, the collection of data from various chest services are needed for evaluation of the control program

So the aim of this work is to estimate the volume of newly discovered cases of pulmonary tuberculosis in Cairo during the year , 1987.

REVIEW OF LITERATURE

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TUBERCULOSIS (EPIDEMIOLOGICAL DATA)

Tuberculosis is defined as, the disease which is caused by infection with Mycobacterium tuberculosis bacilli, or rarely wih Mycobacterium bovis (Hinshow-Murray, 1980).

It is considered as one of the most important communicable diseases all over the world (Crofton and Douglas, 1981).

Tuberculosis is prevalent in all countries of the world, tropical, subtropical and the colder regions but it represents a special problem in the so called under-developed and developing countries (Rao et al., 1972).

It's estimated by the World Health Organization that there are about 15-20 million infectious cases of tuberclosis in the world at any one time with about 3 million deaths a year. More than three quarters of the cases are in the developing countries (Bates, 1977).

From the epidemiological point of view,definition of the term " case " of pulmonary tuberculosis is important not only in clinical medicine but also it's important for epidemiological data and official figures on the prevalence of tuberculosis in different areas of the world for comparison(Narian et al., 1968).

The WHO Expert committe on tuberculosis has stated: " the committee believed that it was essential first to agree on a definition of a " case of tuberculosis ". It was decided that from the epidemiological point of view, a " case " of pulmonary tuberculosis means a person suffering from bacteriologically confirmed disease. Acceptance of this definition would lead to the provision of statistical information would be internationally and intranationally comparable, and would establish the basis for notification to the public health authorities. Those in whom the disease has not been confirmed bacteriologically, would be classified as suspect cases and would remain so classified unless or until the presence of tubercle bacilli or some other etiology was established. The committe emphasized that the persons with chest symptoms and with positive direct smears are genuine cases "

The order of priority of the committee for the definition of a case is, first and foremost, awareness of symptoms; second, direct smears, third, culture, and last; x-ray and possibly tuberculin test(Weaver, 1974).

So in the absence of bacteriological confirmation a presumptive diagnosis of pulmonory tuberculosis is sometimes feasible.

But the wise clinician recognizes that and keeps the possibility of error in mind when deciding what action to take.

Actually the committe preference for direct smear microscopy is probably due to operational reasons, as this is the only method available in most of the developing countries (Toman, 1979).

The number of active pulmonary tuberculosis cases in a community at any time is very difficult to be estimated accurately. As the ideal mcthod would be to institute miniature radiography, tuberculin testing, and bacteriological investigation of the entire population. A less exacting technique is to carry out sample surveys on a random sample of the population (Roelsgaard et al., 1964).

As a member of the Eastern Mediterranean Region of the WHO, Egypt is considered as a member country with moderate prevalence of tuberculosis having an " annual infection rate " of the order 1.5% and a " sputum positive rate " ranging between 0.1 and 0.2% (Goman and Salem, 1976)

the incidence of cases between civilians in some districts of Cairo has been discussed by some authors.

Madkour et al. (1978) found that the prevalence of cases in Sayyeda Zeinab district ranged from 3.64% to 8.52%.

Diagnosis of pulmonary tuberculosis

More than forty years ago Laurason Brown postulated his five cardinal points for establishing the diagnosis of tuberculosis (Myers, 1959).

The 5 ponts were put as follows :-

(1) On stethoscopy of the chest, fine crepitations are heard on one or both apical lung zones.

(2) The presence of radiological shadows in one or both upper lung fields.

(3) Past history of pleurisy with effusion.

(4) Occurrence of frank haemoptysis of about a coffeecupful of bright red frothy blood in an apparently healthy individual.

(5) The demonstration of tubercle bacilli in the sputum .

Laurason Brown postulated that the association of any 2 of these 5 points would directly establish the diagnosis of tuberculosis.

Indeed, that was the concept held by almost all pneumophthiologists at that time.