PULMONARY FUNCTION CHANGES IN BILHARZIAL HEPATOSPLENOMEGALY

Thesis

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BY

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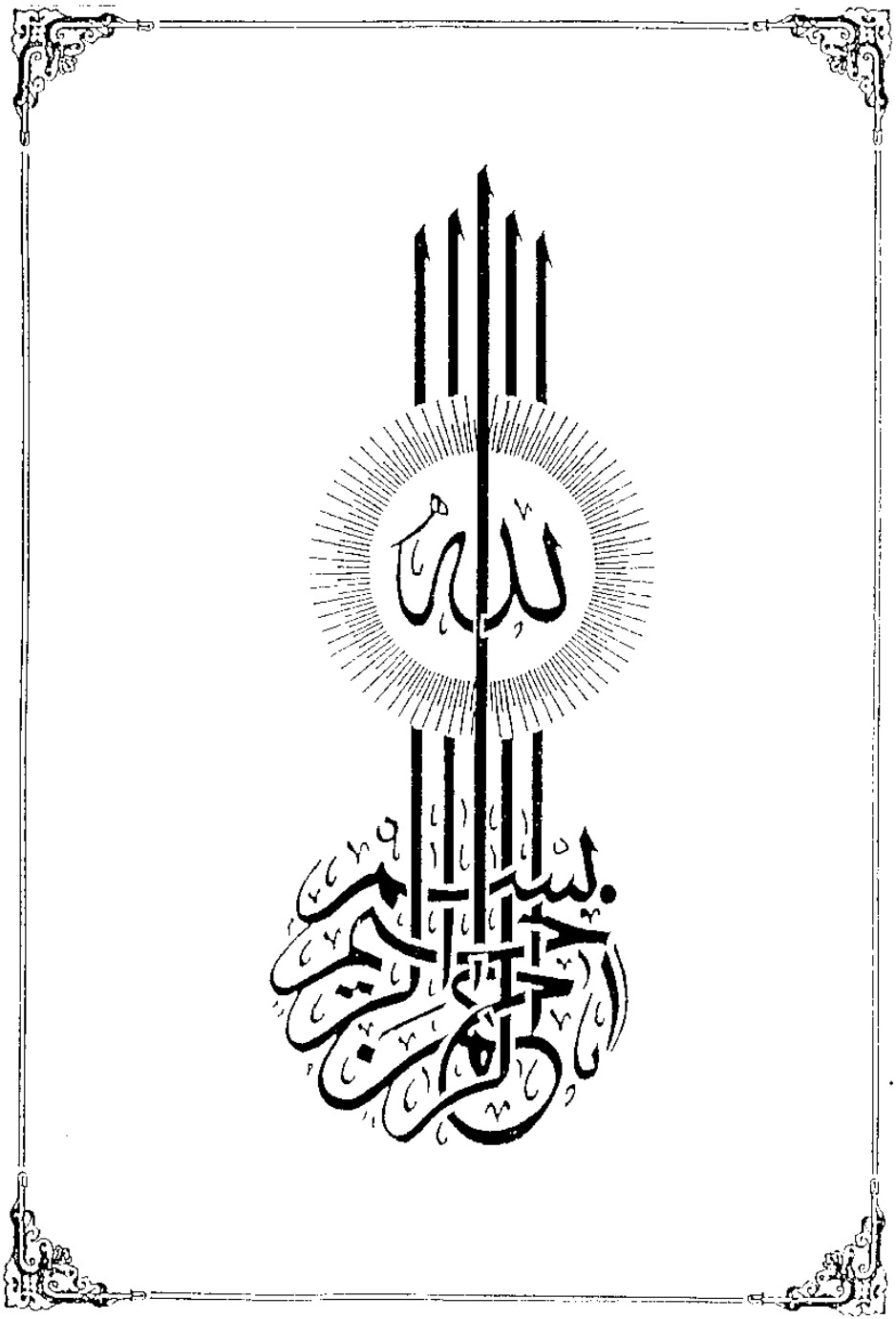

DEDICATION

I DEDICATE THIS WORK TO

MY FATHER &
MY MOTHER

for their love and support

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INTRODUCTION

Schistosomiasis is the most important worm infestation of man **(Marsden and Haskins, 1966).** Pulmonary lesions are always secondary to urinary or intestinal infections. They can be found at autopsy in one third of all cases of schistosomiasis **(Hinshow and Morray, 1980).**

Sorour (1928) described schistosomal tubercle, endobronchiolitis obliterans and pulmonary schistosomiasis with deposition of ova in the intima of the pulmonary artery was also described.

In **1938, Meinzer** described miliary infiltration in the lung tissue. He reported that not uncommonly bilharzial patients present themselves with asthmatic or bronchitic symptoms.

Show and Ghareeb (1938) described 2 forms of lesions:
1) A parenchymatous form following the passage of ova from the arteriolar wall to the lung parenchyma.

2) Obliterative endarteritis from deposition of ova in the pulmonary arterioles.

Schistosomal corpulmonal was diagnosed in 2.1% of their cases. **Andrade and Andrade (1970)** found that it is usually the hepatosplenic form of schistosomiasis that produce the pulmonary complication, apparently because collateral vessels produced by portal hypertension are

necessary to direct the worms or their ova from the portal to the pulmonary circulation.

Fox et al. (1956) described restrictive, obliterative and respiratory insufficiency in schistosomal cases.

Ashba (1959) found that the resting minute ventilation, ventilatory equivalent and the oxygen debt after exercise were increased. **Tarabieh (1964)** studied the breathing mechanics and showed reduction in the parameters of lung compliance.

Sami (1951) classified bronchopulmonary bilharziasis into:

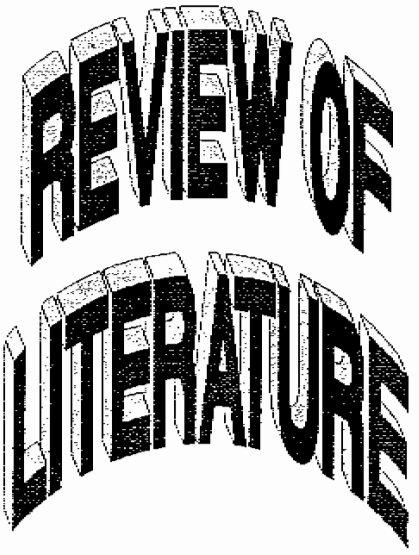
- Allergic forms: Asthma and Loeffler's syndroms.

- Nonallergic form: Chronic bronchitis, bronchiectasis, emphysema and fibrosis.

Meinzer (1939) stated that asthma is due to an allergic reaction probably to the eggs of the parasite. However, **Sami (1951)** stated that the two diseases are associated rather than causally related.

AIM OF THE WORK

To detect pulmonary function changes in bilharzial hepatosplenomegaly.


REVIEW OF
LITERATURE

SCHISTOSOMIASIS

Schistosomiasis is an ancient problem dating as far as 4000 years. **Sir Aromound Ruffer (1919)** found calcified Bilharzial ova in the kidneys from Ancient Egyptian mumies.

It is now a world-wide public heath problem **(Smithens and Doenhoff, 1982)** affecting as many as 200 million persons all over the world **(Marsden, 1976).**

The causative parasite was first discovered by Bilharz in Egypt in 1861 **(Croften and Douglas, 1981)**. Bilharzial liver cases were first described in Egypt by **Kartulis (1885)**. In **(1903) Manson** demonstrated that there are two species of Bilharzial, one with lateral ripened one deposits its eggs in the rectum only and the other with terminal spined ova hounting the rectum or bladder indifferently. The life cycle of Schistosomes were first discovered by **Leipor (1918).**

*** SCHISTOSOMIASIS:**

Types and prevalence:

There are many species but the most prevalence and important are:

- Schistosoma mansoni: Found in parts of south America (Brazil, Venezuela and Scninom). Some caribbean island, Africa and the middle East.

- Schistosoma Japanicum: Prevalent in Far East, mostly in china and the Philippines.

- Schistosome Haematobium: Found mostly in Africa & Middle East.

There are also a number of lesser important schistosomas:
Schistosoma Mekongi: found along the Mckong miner in Indochina.
Scihstosoma Intercalatum: found in certain areas of central West Afrifa.

Life cycle:

Schistosoma species infecting human all share the basic life cycle but deffine in:

(1) Prepatent period

(2) Location of adult worm

(3) Number of eggs produced

(4) Reponse of host to ova

(5) Fate of retained eggs.

(Rollinvan, 1987).

Also the morphology of the parasite and type of the intermediate host are also distinct **(Rollinson, 1987).**

Humans become infected after contact with water containing Cercaria which is the infective stage, it is a microscopic form of the schistosome possessing a forked tail used for running and a head. It pentrates the unbroken skin, with the help of secreated enzymes in the skin it transforms into schistosomedes after 2-3 days the