EPIDEMIOLOGY OF INTESTINAL PROTOZOA IN AMOUI VILLAGE, KAZERUN AREA - IRAN

by

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TABLE OF CONTENTS

List of Tables

List of Illustrations

List of Appendices

Chapter One

Introduction

Manwell as quoted by Craige and Faust's (1974)(1) stated that "The protozoa rival anything in the animal kingdom for uniqueness and novetly, some protozoa manage to capture and swallow animals larger than themselves, others are cannibals. Many are unconsciously greedy gorging themselves twenty four hours a day." This shows the importance of protozoa including intestinal protozoa whose importance lies not only because of its pathogenicity and harm caused to man but also because it spreads directly concerned with man himself, his way of living, habits, custom and diet.

The impact of any disease lies on the host, agent and environment. Thanks to the new techniques and enlightenment as regards various disciplines in medical science, the agent is now well known, what remains is the knowledge about the host and environment,

Negham 1961 as quoted by Faust's (1) stated that "The parasitic disease is an indication of environmental conditions. A high index of intestinal parasitoses reveals deficiencies in sanitation in the standard of living and habits of cleanliness" from both host and environment distribution.

I was encouraged by the fact that no similar studies have been done in my country, so that I can follow these steps in implementing it upon my return to Jordan. Especially now that recent reports show that the impact of intestinal protozoa is very high rate, and plans to control are under study. As Buck et al (2) said "in any planning it becomes more and more important to distinguish between historical assumption as to the epidemiology of the disease and the realities of their occurance and transmission."

Amoui Village - Humeh district - Kazerun Area - Iran was selected as the site of this study because the protozoal infection is expected to be high and no previous study had been done on it, and this village is representative of all the villages in that area.

The aims and objectives of this study are:

A. Immediate objectives:

1- To detect the prevalence of intestinal protozoa in the area and compare it with the prevalence of other areas.

2. To determine if the environmental factors effect the prevalence of the disease and to find if there is any relation between them.

3. To describe the epidemiological characteristics of intestinal protozoa infection in given area.

B Ultimate Objectives: Is to find out effective control measures to be implemented in control program.

Definitions

Poor Sanitation: The house is built of mud or a hut, the rooms are not ventilated, animals live in courtyard and the general personal hygiene is not satisfactory, with unclean general appearance of the house and flies are in abundant

Fair Sanitation:

The house is built of bricks or cement, the animals separated in stables, but the personal hygiene and general cleanliness of the house is not satisfactory flies are in abundant

Good sanitation:

Brick or cement houses, personal hygiene and the general uncleanliness of the houses is good, animals are separated in stables, flies are present but not too much.

Workers: Any person working in any job except farming.

Household: Includes housewives, small children in the preschool age and very old persons.

Positive cases:

Those persons whose stools were examined microscopicaly by direct and Merthiolate-Iodin-Formaldehyde (MIF)- concentration methods, show at least one cyst or one trophozoite of any intestinal protozoa.

Negative cases: Those persons whose stools were examined microscopicaly by the direct and concentration methcd, did not shcw any cyst or tropozite of any intestinal protozoa.

Chapter Two

Review of literature:

The awareness of protozoa can be traced as early as 1681 when Leenwenhoek, who used a simple microscope, discovered in his own stool the flagellate. It was first recognisably described by Lamble 1859 who gave it the name Giardia intestinalis, which was later named by Stiles 1915 Giardia lamblia. Craige & Faus'ts 1974"1".

Since then and due to the new techniques and disciplines in medical science, we are able to discover much about these organism. The protozoal diseases are studied and are well known in various parts of the world. Thus it is known that protozoal diseases are a public health problem of international importance.

A. The prevelance rate of infection: Amoebiasis is known to occur in every part of the world and is estimated to effect 10% of the world's population (W.H.O. 1969) "3". The prevalence and severity differ from area to area, in special circumstances, for example in Alaska and Canada, the rate of Entamoeba histolytica was 1% and in U.S.A. population the rate was less than 5% as compared with previous rates of 10 - 20% in U.S.A. The big difference between the two rates was due to the fact that the previous estimates were only done in a group expected to show high prevalence (R.B.Burrow. 1961) "4".