Detection Of *Blastocystis hominis* In Stools Of Patients Attending Beni Suief University Hospital

Thesis
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By
Doaa Ahmed Hamdy Mohamed
M.B.,B.Ch.

Supervisors

Prof. Dr. Hoda Abd El Megid El Bolaky
Professor Of Parasitology
Faculty Of Medicine
Cairo University

Prof. Dr. Olfat Mohamed El Matrawy
Professor Of Parasitology
Faculty Of Medicine
Cairo University

Dr. Hanaa Mohamed Ezzat Moussa
Lecturer Of Parasitology
Faculty Of Medicine
Cairo University

Faculty Of Medicine
Cairo University
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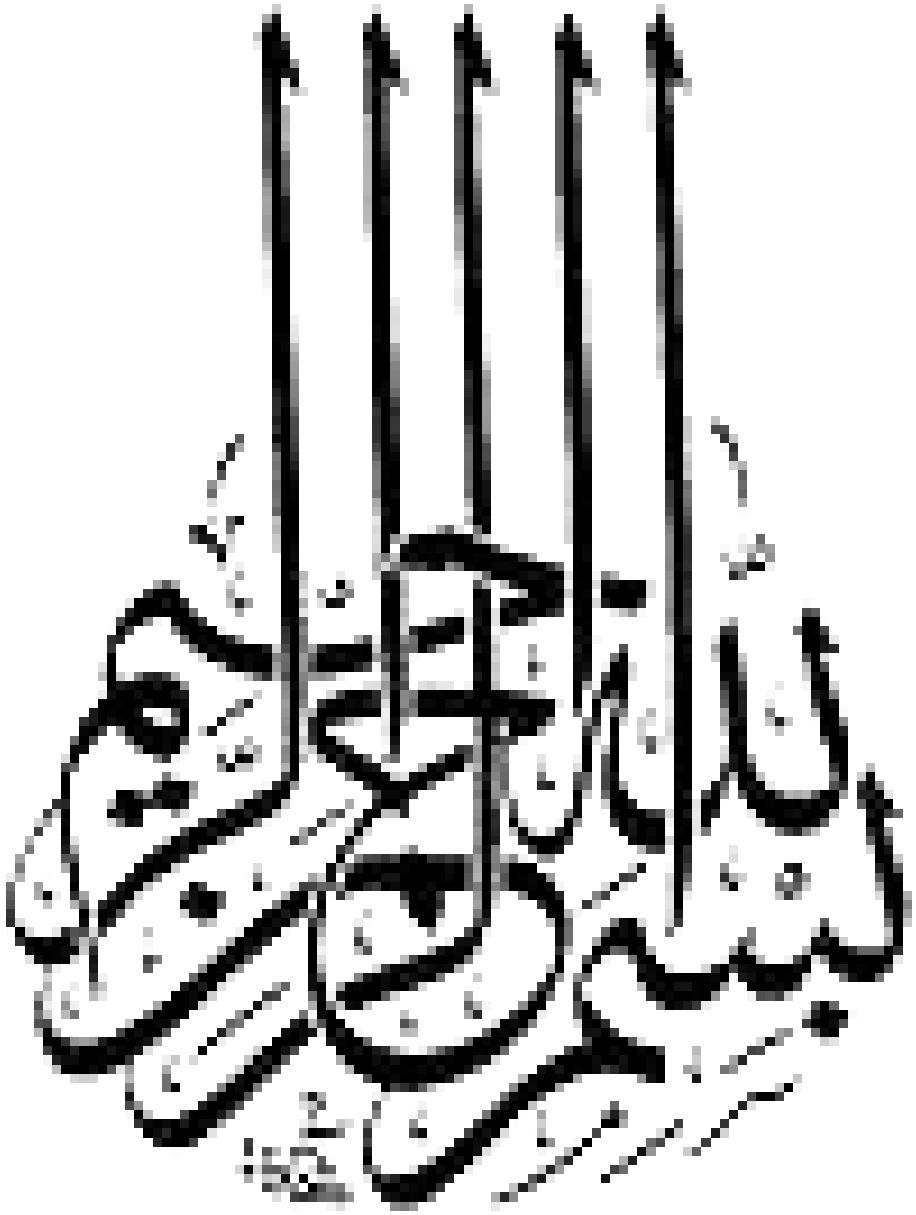

Dedication

To the soul of my parents, to my husband, my daughter, my sisters and my brother who gave me all love and support……

Acknwledgement

First and foremost thanks are due to ALLAH the most beneficent and merciful.

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List of Abbreviations

AIDS	Acquired immunodeficiency syndrome
B.hominis	Blastocystis hominis
HPF	High power field
P	Probability value
ROC	Receiver operating characteristic

List of Figures

List of Tables

List of Graphs

Abstract

Blastocystis hominis is a unicellular organism found commonly in the intestinal tract of humans and many other animals. Very little is known about the basic biology of this organism. The common morphological forms are vacuolar, granular, and amoeboid. Other additional forms were recently detected. Infections with the organism are worldwide and appear in both immunocompetent and immunodeficient individuals. Gastrointestinal symptoms generally attributed to blastocystosis infection. In the present study detection of this organism was done in Beni Suief University Hospital by using different diagnostic techniques which gave different variations in the obtained results.

(Key words: *Blastocystis hominis*, Intestinal parasites, Prevalence**,** Diagnosis**)**.

Introduction

Introduction

Blastocystis hominis (B.hominis) is a single celled parasitic protozoan with a worldwide distribution. Its geographic distribution appears to be global, with infections common in tropical, subtropical and developing countries **(Minvielle et al., 2004)**.

This protozoan can be transmitted as a cyst by the faecal-oral route, especially in areas with poor hygiene and sanitation **(Logar et al., 1994** and **Stenzel and Boreham, 1996)**.

Despite its prevalence throughout the world, its taxonomy remains unresolved till confirmed by analysis of some genes **(Arisue et al., 2002)**.

The signs and symptoms commonly associated with ***B.hominis*** infection appear with other organisms. Experts were not sure whether it causes disease or merely serves as an indicator of other agents that might cause diarrhoeal symptoms **(Barret et al., 1999)**.

B.hominis had been previously considered as a normal inhabitant of the intestinal tract, but recently it has been accepted as a controversial pathogenic parasite causing gastrointestinal symptoms **(Tan et al., 2006)**.

Morphological heterogeneity is observed in ***B.hominis*** parasite. There are the amoeboid form which is commonly detected in stools of diarrhoeic patients and the vacuolated form which has been considered to be the typical cell form and is generally used for its diagnosis. There is also the granular form which has an ultrastructure similar to that of the vacuolar form **(Tan and Suresh, 2006)**.

Different diagnostic methods are used for detection of ***B.hominis*** infections, such as serologic testing which has been used with very limited success **(Chen et al., 1987)**. However **Garavelli et al., (1992)** reported the success of the immunofluorescence assay and enzyme-linked immunosorbent assay in detecting serum antibodies to ***B.hominis*** infection.

In addition, staining and culturing of the parasite from faecal samples have been used in an attempt to identify it **(Nascimento and Moitinho, 2005)**.

Recently various genetic analyses showed that there is no single species of ***Blastocystis*** that infects humans. **Stensvold et al., (2007b)** proposed discontinuing the use of the term ***B.hominis*** and referred to ***Blastocystis*** from humans and animals as ***Blastocystis*** species**.**

Aim of The Work

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The aim of the present work is to compare between different diagnostic techniques in detecting ***Blastocystis hominis*** in stools of gastrointestinal symptomatic patients attending Beni Suief University Hospital.

Review of Literature