Introduction

Giardia lamblia is a flagellated protozoon parasite that inhibits the upper gastrointestinal tract of humans and other mammals causing a spectrum of diseases which varies from asymptomatic to severe diarrhea and weight loss (***Doput and Sullivan,*** 1986). This flagellate was first discovered by ***Leeuwenhoek*** in 1681 in his own stool specimens, but was not described until (1859) by ***Laml - Stiles*** (1915) created a new binomial. Giardia lamblia in honour of professor A Giard of Paris (***Faust et al.,*** 1976). Despite the antiquity of Giardia, intensive research on different aspects of the host - parasite relationship has been done only within the last decade (Molecular Approaches to Parasitology textbook, 1995).

Infection was reported more frequently in infants and children than in adults, although the majority of infections with Giardia lamblia are asymptomatic, as documented in child day- care centre and in areas where the organism is endemic, it also cause acute and chronic diarrheal illness (***Pickering et al.,*** 1984). It has worldwide distribution with up to 30% prevalence rate in some areas (***Petersen,*** 1972).

There is a high prevalence of giardiasis in interactive group such as children in day - care centre (***Pickering et al.,*** 1984). Infections is particularly common where faecal contamination

occurs as it is endemic in parts of the developing world. Also, epidemics have been noted in cities with presumably contaminated water supplies(***Brodsky et al.,*** 1974). In fact, giardiasis is the most frequently documented cause of water born epidemic diarrhea in the United States (***Craun,*** 1979). Person to person spread is another mode of transmission, particularly among homosexually active men (***Schmerin et al.,*** 1978 and ***Philips et al.,*** 1981) and in institutions such as day - care centre (***Black et al.,*** 1977 and ***Keustone et al.,*** 1978). patient with immunologic abnormalities represent as additional population that is more susceptible to clinical infection (***Hoskins et al.,*** 1967).

Fecal examination can diagnose most of cases with giardia infection (***Wolfe,*** 1979), but diagnosis of Giardia lamblia is often difficult as it depends on sequential stool examination by experienced personnel for trophozoite and cyst forms, or less commonly, on small bowel - aspirate or biopsy examination for trophozoites (***Sawitz and Faust,*** 1992). In as many as 50% of infected patients, parasites are not demonstrated by single stool examination and additional examinations are required for diagnosis (***Burke,*** 1975 and ***Healy,*** 1979). examination of duodenal aspirate was reported by ***Kamath and Murugasu*** (1974) and ***Nair et al.*** (1977) to give more positive results than stool examination and needs no special facilities.

The organism can be detected by microscopic examination of direct smears or stained films by iodine, using concentration technique as form ether concentration (***Faust et al.,*** 1974).

Commercial kits are new available that directly detect giardia antigens in fecal material (***Rosoff et al.,*** 1989). Antigen detection in stool, duodenal fluids and serum has been reported using (ELISA, IFA) and immunoblotting methodologies (***Taylor and Wenman,*** 1987). These tests appear to be sensitive and reliable and offer an alternative method for diagnosis of an infection that is sometimes difficult to confirm by using the direct methods of stool examination.

A fluorescent method using monoclonal antibodies has also proven to be extremely sensitive and specific in detecting giardia in fecal specimens (***Sterling et al.,*** 1987).. ***Stibbs*** (1989) used monoclonal antibody - based enzyme immunoassay for Giardia lamblia antigen in human stool. ***Hopkins et al.*** (1993) used a commercial ELISA for the detection of giardia copro- antigens in human and dogs. ***Vinayak et al.*** (1993) used the monoclonal antibodies to Giardia lamblia specific 66-Kda copro-antigen for copro immunoglobulins of giardiasis. Giardia also undergoes surface antigenic variation (***Nash et al.,*** 1990a & 1990b).