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Prevalence of Giardiasis in children from rural areas of Aurangabad, Maharashtra

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ABSTRACT:

From last two years, water is a major problem in Maharashtra,particularly in Aurangabad.In the absence of fresh water supply,people residing in these areas are forced to use borewell water for their domestic and drinking purpose.Children in these areas,often complained of abdominal pain and diarrhoea.In order to find out the root cause, routine bacteriological analysis of these water samples was carried out which showed no prominent signs of contamination.

Stool samples of forty children from three villages were collected and examined,70% tested positive for giardiasis.As this parasite persists for several months in water, strict preventive measures should be undertaken.

Key Words:Routine bacteriological analysis,*Giardia cysts.*

INTRODUCTION

As per the guidelines given by WHO(1) safe and wholesome drinking water is a basic need for human development,health and wellbeing and is aninternationally accepted Human right.Water intented for human consumption must be free from harmful micro organisms and other contaminants,shortage of water due to less rainfall,overburden of population,dumping of polluted water, seepage of sewage often leads to contamination of surface water and ground water. Assesing of water quality is essential for safe consumption of water.Generally bacteriological examination reveals the degree of faecal contamination but it is not a good indicator of protozoan contamination of chlorinated water as these protozoa are more resistant to

chlorine than are coliform bacteria.*Entamoebahystolytica,Giardia spps and Balantidium coli* can contaminate drinking water.

Trophozoite of Giardia sp.
(iodine stain)

Cyst of Giardia sp.(iodine stain)

Giardia is a flagellate protozoan often responsible for contamination of drinking water. It inhibits digestive tract of humanbeings as well as animals. It is a cosmopolitan parasite frequently found in diarrheal diseases around the world. The prevalence of Giardiasis is 2 to 5% in developed countries and 20 to 30% in developing countries. Clinical aspects of human infection with Giardia range from asymptomatic carrier stage to severe malabsorption,abdominal pain, flatulence, malaise and fatigue.Children below five years of age are more at risk. Prevalence of Giardia in day care centres and primary school children has been reported by LF Nimri. People in rural areas who do not follow hygienic practices, have poor bowelcontrol are a great risk for drinking water supply. Preventive measures taken in time can avoid such contamination and spread of disease.