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Prevalence of Intestinal Parasitic Diseases in North Western Region of India.

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Abstract
Introduction: *Intestinal parasitic infections are among the major public health problems in developing countries like India. They are the important causes of morbidity and mortality and also reduced physical development.*
Objective: *The aim of this study is to assess the prevalence of intestinal parasitic infections in patients coming to tertiary care hospital in Jaipur and also to know the awareness among people, regarding practising hygienic practices.*
Material and Methods: *The 2875 stool samples, were examined over a period of 3 years (Jan 2013 – Dec 2015), by doing routine microscopy by observing wet mounts for identification of cyst and eggs and other stages of intestinal parasite.*
Result: *Out of 2875 samples, 148 (5.1%) samples came out positive showing 104 (70%) were protozoal infection and 44 (30%) were helminths infection.*
Conclusion: *In our study, low prevalence of intestinal infection indicates better awareness of personal hygiene and sanitation practise, population is mainly from urban areas that are educated, aware and use disinfected drinking water.*

I. Introduction

The intestinal parasitic infections are distributed throughout the world with high prevalence rate in developing countries. In India, the prevalence rate is high among the low socio-economic communities. (1)

Parasitic infections are governed by behavioural, biological, environmental, socioeconomic and health system factors.

The risk factor for high prevalence are humid climate , malnutrition , insanitary environment usage , unhygienic practices like open defecation , leading to improper and unsafe sewage and human waste disposal , consumption of polluted water and low standard of living (overcrowding, disease transmission , poverty) (2).

Intestinal parasitic infections due to protozoa and helminths are responsible for morbidity and mortality worldwide. (5)

Intestinal infections leads to complications like anaemia reduced physical growth, abdominal colic, cholecystitis, pancreatitis, malnutrition. (3, 4).

II. Material And Method

A retrospective data was analysed of 3 years (Jan 2013 – Dec 2015.). A total of 2875 stool samples which were collected from patient who came to OPD and IPD in Mahatma Gandhi Medical College and Hospital were examined in department of microbiology , where there routine microscopy was done , preparing the wet mounts with normal saline and iodine solution.(7) The wets mounts were examined both by low power magnification(10X) and high power magnification (40X) for presence of cyst , ova , eggs , of parasite and also presence of blood , mucus , RBC's and WBC's (7, 8).

III. Result

In our data , we observed that out of 2875 stool samples , 148 (5.1%) were positive for parasite and out of 148 samples 104(70%) samples were protozoa and 44(30%) were helminths. Among the protozoan's 53(51%) were positive for Giardia, among which Giardia cyst was observed in 33 (62.3%) cases and trophozoite of Giardia was seen in 20 (37.7%) cases. It was followed by presence of 48 (46%) cases of cyst Entameoba histolytica , Isospora belli in 1(1.5%) case , Cryptosporidium parvum in 2(1.5%) case and cyst Balantidium coli was observed in 1 case(0.5%). Among the helminths out of 44 cases, ova of Ascaris were 28(63%) cases, H.nana in 11(25%) cases, Taenia in 3 (7%) cases and Ancyclostomata duodenal in 2(5%) were observed.

IV. Discussion

In our data, the intestinal parasites were prevalent in varying magnitude. The prevalence was higher for protozoal infection (70%) compared to helminths infection (30%).

The similar results were observed by various other institutes (7, 9, 10, and 11). The prevalence rate in other studies also showed varying magnitudes depending on the geographical area and the socioeconomic conditions of the region.

Low prevalence, in our study is an indication of better awareness of personal hygiene and better sanitation practise also use of good quality of drinking water.

It is may also be due to use of antihelminths and antiprotozoals drugs by the patients.

V. Conclusion

Monitoring the prevalence of enteric parasites may be useful in assessing the effectiveness of public health interventions also helpful in reducing the morbidity and mortality worldwide.

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