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## *Cryptosporidium parvum* among Cancer and Hemodialysis Patients in Ibb City, Yemen: Prevalence and Risk Factors

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### Abstract:

**Background:** *Cryptosporidium parvum* is an opportunistic gastrointestinal parasite that cause serious problems for immunocompromised patients. **Aims:** This study aimed to report on the prevalence of *C. parvum* among cancer and hemodialysis patients attending cancer and dialysis centers at Al-Thawra hospital in Ibb city, Yemen. **Methods:** This study is a cross-sectional study conducted among 60 patients with cancer and hemodialysis patients during the period from March to September 2020. The stool specimen was from each patient and *C. parvum* was screened by using formalin-ether sedimentation and modified Ziehl-Neelsen staining. The required data were surveyed by a structured questionnaire. **Results:** Out of 60 stool specimens, only 49(81.7%) were positive for *C. parvum* infection. The cancer patients had more rate of *C. parvum* (90%) than hemodialysis patients (73.3%). Also, the highest rate of *C. parvum* was observed among male participants with cancer (95%) and hemodialysis (76.9%) diseases. The higher frequency of infection was among hemodialysis patients in the age group of 31-40 years. The cancer patients coming from rural areas and hemodialysis patients coming from urban areas had a higher rate of *C. parvum* infection, the majority of patients drinking from well water were positive for *C. parvum* infection. Both cancer and hemodialysis patients with poor personal behavior were more exposed to *C. parvum* infection. Diarrhea, abdominal pain, malaise, poor appetite, nausea, and fever were the most frequent clinical features presented among cancer and hemodialysis patients. Similarly, all cases were completely (100%) found to be suffering from recurrent diarrhea. **Conclusion:** It can be concluded that health education and awareness programs should be implemented directing immunocompromised individuals for preventing and controlling the transmission of opportunistic parasites.

**Keywords:** *Cryptosporidium parvum*, Ibb City, Cancer, Hemodialysis Patients, Yemen.

### Article Info:

Received: 07 Sept 2022; Revised: 15 Oct 2022; Accepted: 3 Nov 2022; Available online: 5 Nov 2022

### Cite this article:

Al-Shehari WA, Gasem EA, Edrees WH, Al-Awar MS, Reem A. *Cryptosporidium parvum* among Cancer and Hemodialysis Patients in Ibb City, Yemen: Prevalence and Risk Factors. Al-Razi Univ J Med Sci. 2023; 7(1):15-22.

DOI: <https://doi.org/10.51680/rjms.7.1.2023.144>

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