

ABSTRACT

Title: Incidence of *Clostridium difficile* infection among paediatric diarrheal patients in Lady Ridgeway Hospital (LRH) Colombo

Background: Recent studies have revealed that the incidence of *Clostridium difficile* infection is increasing in children including those without traditional risk factors, and it is emerging as an important enteric pathogen in children worldwide. Proportion of 3.6% of *Clostridium difficile* associated diarrhoea (CDAD) was found in adult population in Sri Lanka. No studies have been done in the paediatric population in Sri Lanka and limited studies in other Asian countries. Knowledge on incidence, associated risk factors, identifying optimal therapeutic options and preventive strategies of CDAD is becoming important in Sri Lanka.

Objectives: To determine the incidence, describe socio-demographic profile and associated risk factors of *Clostridium difficile* infection among paediatric diarrheal patients in Lady Ridgeway hospital (LRH) Colombo.

Methodology: A descriptive cross-sectional study was carried out for four months from 1st December 2016 to 30th March 2017 at Lady Ridgeway Hospital (LRH) Colombo among 200 paediatric patients above one year with diarrhoea. Detection of *Clostridium difficile* in faeces was performed using a Glutamate Dehydrogenase Enzyme Linked Immunosorbent assay, and stool culture and positive stools were tested for toxin A and B using the Immunochromatography assay. Patient sociodemographic and clinical data were collected using an interviewer administered questionnaire. Data were analysed using SPSS (version 22) software.

Results: Eleven out of two hundred specimen were positive for the toxin A, B, A and B. Incidence of *C. difficile* associated diarrhoea was 18.7/1000 diarrheal cases at LRH while, incidence of community acquired CDAD was 3.4 /1000. There was a significant relationship between with hospitalization ($p= 0.00$) and antibiotic treatment within three months ($p=0.03$) and CDAD.

Conclusion: This study shows that the *Clostridium difficile* associated diarrhoea is seen in the paediatric population of Sri Lanka. Community acquired *Clostridium difficile* associated diarrhoea among paediatric population is also seen in Sri Lanka even though the incidence is low compared to Asian and Western countries.