

ENTEROAGGREGATIVE *ESCHERICHIA COLI* INFECTIONS AMONG CHILDREN IN A TERTIARY HOSPITAL IN THE PHILIPPINES

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Abstract. Enteroaggregative *Escherichia coli* (EAEC) is recognized both in developed and developing countries as an enteric pathogen. In the Philippines, reports on epidemiology and detailed characterization of EAEC are lacking. Moreover, there is no standard method for the diagnosis of EAEC despite its significant impact on public health. This study determined prevalence of EAEC infection among children, aged 4 months to 12 years, in a tertiary hospital, Ospital ng Makati, Makati City, Philippines using phenotypic, ultrastructural and real-time PCR (targeting EAEC *aap*) methods. From 100 stool samples, 36 EAEC strains were isolated from 26 inpatients and 10 outpatients. Characteristic stacked brick-like aggregative adhesion of bacteria to HEp-2 cells and human cecal and ileal mucosa were evident in semi-thin and ultrastructural examinations. Clinical characteristics commonly associated with EAEC infection were mild to moderate dehydration, watery stool and persistent diarrhea. All EAEC strains were susceptible to amikacin, imipenem and piperacillin-tazobactam. This study highlights the usefulness of real-time PCR as an alternative to other PCR-based and HEp-2 adherence assays for rapid and specific identification of EAEC in a clinical setting.

Keywords: enteroaggregative *Escherichia coli*, *aap*, adherence assay, antibiogram, diarrhea, HEp-2 cell line, malnutrition, Philippines

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