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 SANSANEE TANJATHAM : PREVALENCE OF VIRULENCE FACTORS
 PRODUCING STRAINS OF *HELICOBACTER PYLORI* AND THEIR ASSO-
 CIATION TO PEPTIC ULCER IN PATIENTS AT RAJAVITHI HOSPITAL.
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The prevalence of virulence factors, cytotoxin-associated gene A (*cagA*) and vacuolating cytotoxin (VacA), producing strains of *Helicobacter pylori* and their association to peptic ulcer were studied in patients at Rajavithi Hospital. Of 77 *H. pylori* isolates, 63 were freshly isolated from dyspeptic patients between March to November 1998 and 14 strains were obtained from the stock culture of the hospital. Patients were classified at the time of endoscopy as having peptic ulcer diseases (PUD) in 53.2 % (41/77) of cases, and non-ulcer dyspepsia (NUD) in 46.8 % (36/77) of cases. All *H. pylori* strains tested positive for *cagA* by using the PCR technique. The prevalence of *H. pylori* harbouring *cagA* in PUD and NUD patients was not different. In addition, 57.7 % (41/71) of *H. pylori* isolates produced VacA by vacuolization assay in HeLa cell line. No difference in prevalence of VacA producing *H. pylori* strains was found in PUD and NUD patients ($p = 0.322$). Spearman's rank correlation test showed no statistical correlation between VacA activity titer and disease status ($p = 0.426$). The results of *cagA* and VacA in this study were categorized *H. pylori* into 2 types, Type I (TI; $cagA^+ VacA^+$) and Intermediate type (IT; $cagA^+ VacA^-$). Of 71 strains, 57.7 % and 42.3 % represented TI and IT, respectively. The prevalence of these two types in PUD were TI 63.2 %, IT 36.8 % and in NUD were TI 51.5 %, IT 48.5 %. The prevalence of TI was not significantly higher in PUD patients than in NUD patients ($p = 0.322$). The results of the analysis indicated that *cagA* and VacA are probably not suitable for use as markers for PUD in Rajavithi Hospital patients. However, *cagA* product, CagA, might be considered as an antigen for serodiagnosis and as a candidate vaccine against *H. pylori* infection.