

ABSTRACT

Upper aerodigestive tract (UADT) cancers are the seventh most frequent cancer type and the seventh most common cause of death from cancer worldwide. Some studies showed that Human Papillomavirus (HPV), Epstein-Barr virus (EBV) and Helicobacter Pylori (H. Pylori) infection are related to upper aerodigestive tract cancers. This study calculates the population attributable fraction using prevalence that got from previous studies of the HPV, EBV and, H. Pylori infection prevalence data of 10 ASEAN countries and RR of UADT cancers. Using data from GLOBOCAN 2020, the mortality and morbidity rates also premature mortality cost of upper aerodigestive tract cancers attributable to Human Papillomavirus (HPV), Epstein-Barr virus (EBV) and Helicobacter Pylori (H. Pylori) infection in 10 ASEAN countries are estimated.

From the study it showed that the three highest PAF is larynx cancer caused by EBV and H. Pylori infection in Malaysia, Lao and Myanmar which are 0.78, 0.73 and 0.72, respectively. Three highest morbidity rates are (female) 94.48% which are salivary glands cancer attributable to H. Pylori infection in Cambodia, 90% which are oropharynx cancer attributable to EBV infection in Malaysia and 72.8% represent larynx cancer attributable to EBV infection in Cambodia. Three highest mortality rates in are 74.55% which are hypopharynx cancer attributable to EBV infection in Cambodia (female), 54.47% represent salivary glands cancer attributable to H. Pylori infection in Myanmar (female) and 70.44% which are hypopharynx cancer attributable to EBV infection in Cambodia (male). The top three countries which have high PMC (male) of UADT cancer attributable to HPV, EBV and H. Pylori Infection are Indonesia with \$2906.8 million, Thailand with \$1755.98 million and Singapore with \$1291.95 million.

HPV, EBV and H. Pylori has been a risk factor of UADT cancer morbidity and mortality in 10 ASEAN countries. Therefore, lifestyle intervention, health care education, and policy can reduce the burden of UADT cancer in 10 ASEAN countries. The intervention such as large-scale anti-HPV routine vaccination programs. The programmed is designed with specific goal of preventing HPV, EBV and H. Pylori-associated cancers, which is an outstanding breakthrough in cancer prevention. Other than that, making massive health promotion about cancer related to infection also recommended.

Keywords: cancer, mortality, morbidity, PMC, UADT