The Expression of mRNA LMP1 Epstein-Barr Virus from FFPE Tumour Biopsy: a Potential Biomarker of Nasopharyngeal Carcinoma Diagnosis

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Abstract	Nasopharyngeal carcinoma (NPC) is a multifactorial disease that is endemic geographically in the world. Indonesian population has a highly incidence rate that is 6.2/100,000 people year. The pathogenesis of NPC is more directly reflected by carcinoma-specific viral transcriptional activity at the site of primary tumour. Epstein-Barr virus (EBV) infection in NPC is reflected by the expression of EBV latent and lytic gene. In fact, mRNA Latent Membrane Protein 1 (LMP1) EBV expression was an important latent infection biomarker. The aim of this study was to determine a potential use of relative expression of mRNA LMP1 EBV from formalin-fixed paraffin embedded (FFPE) tumour biopsy in NPC as a tumour biomarker. This reseach design was a cross sectional study. The samples were the archived specimens of FFPE tumour biopsy from NPC WHO-3 patient which were collected from untreated patients from 2014 in the Department of Pathology Anatomy, Prof. dr. Margono Soekarjo Hospital, Purwokerto. The expression of mRNA LMP1 EBV expression was determined by RT-PCR technique. The positivity of mRNA LMP1 EBV expression was 51.9%, indicating a moderate positivity. The result proved that the expression of mRNA LMP1 EBV from FFPE NPC WHO-3 tumour biopsy was a potential biomarker of NPC diagnosis. The molecular methods would improved the management of NPC, particularly in the histopathological diagnosis of NPC.
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