

ANALYSIS OF HB-EGF AND CD9 GENES OF CARRIERS AND DIPHTHERIA PATIENTS PRELIMINARY STUDY

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Background:

Diphtheria is a very dangerous disease causing numerous problems in many parts of the world. There are a limited number of publications regarding host genetic studies on diphtheria. The objective of this study was to analyse the DNA sequences of HB-EGF and CD9 genes of diphtheria carriers and cases.

Material :

This study covered all carriers and patients recorded in the data of East Java Provincial Health Office and

Balai Besar Lab Kesehatan (BBLK), Surabaya. All carriers and patients were visited in their own homes.

Interviews, anthropometrical measurement, and blood collections were performed.

Blood was analysed for

DNA sequence in Surabaya and Malaysia. HB-EGF gene controls pro-HB-EGF, the receptor for diphtheria

toxin. CD9 gene controls the co-receptor, CD9.

Results :

There were 27 carriers and 97 patients in the study. Silent mutations on codon 91 exon 3 gene HB-EGF were

found in 25 subjects and silent mutations on codon 171 and 173 exon 6 gene CD9 in three subjects. We also

found silent mutations on intron 5, point 35719 in 55 subjects. Statistical analysis showed no difference on

exon 3 gene HB-EGF and exon 5 and 6 gene CD9.

Conclusions:

There were no differences between diphtheria carriers and patients related to DNA sequences of exon 3 gene

HB-EGF and exon 5 and 6 gene CD9.

Keywords: diphtheria carriers and patients, DNA sequence, HB-EGF and CD9 genes,