

ABSTRACT

GENETIC VARIATION OF STR CODIS LOCI ON TENGGER ETHNIC GROUP FROM MATING ROLE MODEL

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Background : Human genetic variation shows individual differences, and in population will change the gene pool. Tengger ethnic group has a unique history, culture, religion and mating role model. These aspects would made the genetic variation on Tengger ethnic group different from other ethnic in Indonesia.

Objective : To explore and analyze the STR CODIS loci, mating role model, and describe the influence of mating role model to the genetic variation of STR CODIS loci on Tengger ethnic group.

Material and method : Blood sample taken from 35 unrelated subject lived in Tengger highland. Indepth interview was done following that procedure to get the information about the marital aspect from the subject until the third generation up from him/her. DNA extraction was done for all the blood sample, followed by amplification with PCR using 13 STR CODIS primers and then typing with PAGE and silver staining. The band then compared with K562 marker to identify the allele of each loci. Mean Matrimonial Radius (MMR) was done from the questioner to show their mobility.

Results : Study showed the majority of Tengger ethnic group were local endogamy mating. The MMR showed that their mating mobility only within their neighbor village in Tengger highland for the subject grandparents. MMR become wider since the subject parents mating. The majority genotype of the STR CODIS loci are homozygote because of the biological isolated of them, and this trigger genetic drift of Tengger ethnic group.

Conclusion : The rate of endogamy mating is 62,86% and exogamy mating is 25,71% in Tengger ethnic group. D7S820, D16S539, D18S51, D21S11 and FGA loci are the specific loci for Tengger ethnic group. D21S11 and FGA loci show genetic variation between endogamy and exogamy mating.

Keywords : genetic variation, Tengger ethnic group; STR CODIS, endogamy, genetic drift