

CULTURE INFLUENCE ON GENETIC VARIATION OF TENGGER

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Abstract :

Background : Tengger ethnic group that lives in Bromo Highland has a unique history, culture and religion. Their culture made them to be married among member of their ethnic (endogamy). Endogamy mating role model could increase the frequency of homozygote genotype.

Objective : To explore the genetic variation on Tengger ethnic which their married were influence by culture

Material and Methods : 35 blood sample of Tengger people were analyzed. Sample was placed on FTA card. DNA was extracted using FTA purification reagent, and PCR amplification using TPOX, D7S820, D8S1179, FGA and D21S11 primer, subsequently STR typing using PAGE and silver staining method.

Results : The results showed 1 dominant allele for TPOX and D8S1179 loci and 2 dominant alleles for D7S820 and D21S11 loci. FGA locus showed almost equal allele frequency of 3 alleles. From 5 STR loci described high level of homozygote genotype on each loci. It happened because the culture influence of their marital aspect.

Conclusion : culture could influence in people living environment and could trigger the genetic variation of the population

Keywords : culture; genetic variation; STR loci; Tengger

1. Introduction

Every society has its own culture. Culture in every society is different, but has similar characteristics. Culture has several aspects such as ideas, attitude, belief, values and norms ⁽¹⁾.

Tengger ethnic group that lives in Mount Bromo has a unique history, culture and religion. They believe that they were the ancestral from Majapahit refugees and were claimed with the story of Rara Anteng and Jaka Seger. They are Hinduism but still do some ritual of their belief to the Mount Bromo like Kasada, heritage from their ancestral. Dukun is the leader of every culture ceremonial like married, death and other culture aspects ^(2,3).

They were married among member of their ethnic group. There were no rule of them to married with their ethnic, but the young generation were following their parent culture to be married with the member of their ethnic. The married ceremonial were done in Tengger culture and Hinduism, especially for the Tengger woman ⁽³⁾.

The genetic variation is the genetic differences among individual heritage from one generation to the next generation. It is different in every individual but in the population it