



THE KNOPS BLOOD GROUP PROFILES IN MALAYS

By

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AUTHOR'S DECLARATION

I hereby declare that this thesis is my original work and has not been submitted previously or currently for any other degree at UiTM or any other institutions.

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ABSTRACT

THE KNOPS BLOOD GROUP PROFILES IN MALAYS

The Knops blood group is an uncommon blood group system that consists of nine antigens. It is important to understand the types of blood antigens because different ethnicity results in different blood group antigens frequencies that may produce a transfusion reaction during blood transfusion due to incompatibility of antigen antibody reaction. However, the data about Knops blood group profiles in Malaysia at present remains unknown. A cross-sectional study was done in which blood samples were collected from 50 healthy Malays individuals in UiTM Puncak Alam. Genomic DNA was extracted from the whole blood and phenotypes of this blood group; Kn^a/Kn^b and McC^a/McC^b were determined using specific primers. The PCR products were analyzed by using agarose gel electrophoresis and the result was analyzed using UV transilluminator. Descriptive statistic was done using SPSS to determine the prevalence of the Knops antigens. High prevalence of Knops and McCoy antigens were found out in Malay population. The presence of bands on agarose gel from 50 samples demonstrated that 100% (50) were analyzed as positive for PCR products of Kn^a, McC^a and McC^b, respectively. Whereas the absence of the band on agarose gel indicated that 0% (50) were analyzed as negative of PCR products of Kn^b. Essentially, the results emphasized that Knops blood group profiles were significantly high among the Malay population.

Keywords: Knops, blood group, antigens, prevalence, Malay, Malaysia.