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37TH MSPP ANNUAL SCIENTIFIC MEETING

in conjunction with

9TH MEDICAL RESEARCH SYMPOSIUM

ABSTRACT BOOK

INTEGRATING MISSION ORIENTED RESEARCH IN MEDICAL SCIENCES



WED & THU

11 & 12 SEPT 2024



TIME

8:00AM - 5:00PM



VENUE

AC HOTEL BY MARRIOTT
KUANTAN, PAHANG, MALAYSIA

S003

Prevalence and Hematological Impact of Southeast Asian Ovalocytosis in the Malay Population: A Comparative Study

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Introduction: Southeast Asian Ovalocytosis (SeAO) is a hereditary erythrocyte membrane disorder predominantly found in Southeast Asia. It is an autosomal dominant condition and can cause severe haemolysis during the neonatal period. This study aimed to determine the prevalence of SeAO among Malays in Malaysia and compare red blood cell (RBC) parameters between individuals with isolated SeAO and normal individuals. **Materials and method:** From October 2022 to October 2023, we screened 526 healthy, non-smoking Malays aged 18 to 40 for SeAO and other common hematological conditions affecting RBC parameters, such as thalassemia and anemia. Full blood picture (FBP) and hemoglobin analysis were performed to rule out thalassemia and anaemia. SeAO was diagnosed based on the presence of stomatocytes, macro-ovalocytes, and 25% ovalocytes in the FBP. **Results:** 21 (4.0%) individuals with isolated SeAO (case) and 371 (70.5%) healthy controls (control) were identified from the screening. Significant differences were found in hematocrit level, RBC count, mean corpuscular hemoglobin (MCH), red cell distribution width (RDW), white blood cell (WBC) count, platelet count, and nucleated RBC (NRBC) count ($p < 0.05$) between the case and control groups. **Conclusion:** This study identified several blood parameters that could potentially be used to screen for SeAO among the Malay population, thereby reducing the time and cost of diagnosis.

Keywords: Southeast Asian Ovalocytosis; Malay; blood parameters