Compound Heterozygous Hemoglobin E and Hemoglobin D-Punjab: A Case Report

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Abstract

Hemoglobin E (HbE) is prevalent in our country especially in the northern and east-coast region of Peninsular Malaysia, whereas Hemoglobin D (HbD) is rare. Both HbE and HbD can be inherited as heterozygous or homozygous, and it can also occur as compound heterozygous HbE and HbD. Very few published reports available on compound heterozygosity for HbE and HbD. Here we present a case of compound heterozygosity for HbE and HbD detected during our national thalassemia screening program. He was found to have normal hemoglobin with hypochromic microcytic red cells indices. Capillary electrophoresis showed presence of peaks in both HbE and HbD zones. These findings were later confirmed by molecular analysis. Asymptomatic patient with compound heterozygosity for HbE and HbD-Punjab as in this case can be easily passed unnoticed. This case highlights the possibilities for occurrence of rare compound heterozygous states in multi-ethnic countries like Malaysia. Further population studies with accurate genotyping are required to understand the diversity of its clinical phenotype.

Keywords: Hb E D-Punjab; Malaysia

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