

## **First report of the presence of Haemoglobin D variant from the indigenous Badagas of the Nilgiris, Tamil Nadu, India**

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Haemoglobin D (Hb D) is a haemoglobin variant mainly seen in the Punjab area of India and Pakistan and Xinjiang Uygur Autonomous region of China. Badagas are the indigenous peoples of the Nilgiri Hill in Tamilnadu, India. Though sickle cell was first observed in India from the Nilgiris, other haemoglobin variants were not yet reported. Present study reports the presence and co-existence of Hb D among the indigenous Badagas of the Nilgiris. The existence of Hb D was observed while assessing prevalence of sickle cell disease among various sub sects of the indigenous Badagas in the Nilgiris. Among 1800 samples analyzed, the disease was identified from a 50 year old sickle cell patient. The presence of the disease was confirmed by micro capillary analysis and the Restriction Fragment Length Polymorphism (RFLP) techniques. The normal case was confirmed by restriction digestion of 469bp amplified products to 201 and 268bp fragments, while mutant remains non-fragmented. The nature of the mutation was further confirmed by sequencing of the amplified product. The prevalence of this disease in India was estimated to 0.06% percentage only and the coexistence was reported is a rare clinical condition. Moreover, this is the first report of the existence of Hb D Punjab (also known as Los Angeles) and its co-existence with sickle disease in a southern Indian indigenous population raising many doubts in their origin.

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