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Artificially low hemoglobin A1C in diabetic patients with hemoglobin E homozygote

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A decreased life-span of erythrocytes is associated with lower concentration of hemoglobin A1C (HbA1c). This research aims to study effect of hemoglobin E homozygote on HbA1c level of diabetic patients in Surin Hospital. A cross-sectional study was conducted from 2009 to 2016. Patient's profile, fasting plasma glucose and HbA1c level were collected and divided in hemoglobin E homozygous group and control group. Each sample arm was classified into eight strata according to blood glucose level to compare HbA1c level in each subgroup. During 2009-2016, 81 diabetic patients with hemoglobin E homozygote were found from overall 353 negative Dichlorophenol-Indolephenol (DCIP) diabetic patients. There is no difference of sex, average age, duration of disease and fasting plasma glucose between hemoglobin E homozygote and control group. Patients with hemoglobin E homozygous group had lower HbA1c level than those of control group ($P < 0.05$). Since HbA1c levels is presently the best indicator of long-term glycemic control. With similar fasting plasma glucose, hemoglobin E homozygote is associated with lower HbA1c level.

Biography

Passorn Sueyanyongsiri has pursued her MD from Chulalongkorn University and Post-Doctoral studies from Mahidol University School of Medicine. She is a Medical Teacher in Surin Hospital, affiliated institutes of Suranaree University of Technology, Thailand.

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