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ADIPONECTIN CONCENTRATIONS AMONG PATIENTS WITH DIABETES IN A MULTIETHNIC POPULATION OF MALAYSIA

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Objectives: To determine whether adiponectin concentrations differ between Malays, Chinese and Indians with type 2 diabetes and to investigate if adiponectin is associated with dietary intake and physical activity in these ethnics.

Methods: A total of 210 newly diagnosed type 2 diabetes patients (Malays, Chinese and Indians) were recruited from Sg Bakap Hospital in Penang, Malaysia. Data on demographic background, clinical, anthropometric, dietary intake, and physical activity were obtained. Serum adiponectin and standard laboratory test were performed according to standard procedure.

	Malays (n=70)	Chinese (n=70)	Indians (n=70)	P
Adiponectin (ug/ml), Mean(SD)	6.9 (4.7)	6.2 (3.6)	5.2 (2.3)	0.04
Total Calorie intake (Kcal), Mean (SD)	1583 (477)	1714 (542)	1643 (629)	0.38
Physical activity (MET), Median	2226	2152	2373	0.21
Body Mass Index (kg/m ²), Mean (SD)	28.2 (5.5)	26.5 (4.0)	27.8 (5.3)	0.13
Triglycerides (mmol/l), Mean (SD)	2.1 (1.3)	1.8 (1.1)	1.8 (1.2)	0.33
HDL (mmol/l), Mean (SD)	1.1 (0.5)	1.0 (0.3)	0.9 (0.2)	0.02
Glucose (mmol/l), Mean (SD)	10.5 (4.0)	9.3 (3.5)	11.1 (8.5)	0.15
HbA1c (%), Mean (SD)	8.5 (1.7)	8.1 (1.6)	8.9 (1.8)	0.02

[Table 1. Characteristics of study subjects]

Results: As shown in Table 1, the Indians had the lowest adiponectin concentrations as compared to the Malays and Chinese ($P < 0.05$). Low concentration of adiponectin in Indians was independent of dietary intake and physical activity level. Indians also had significantly higher percentage of HbA1C ($P < 0.05$) and significantly lower HDL concentrations ($P < 0.05$) but both variables did not show any association with adiponectin concentrations.

Conclusions: Low concentrations of adiponectin in the Indians compared to the Malays and Chinese may be