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Hypoglycaemia in diabetes: do we think enough of the cause? An observational study on prevalence and causes of hypoglycaemia among patients with type 2 diabetes in an out-patient setting in Sri Lanka

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Abstract

Background: Hypoglycaemia is a feared experience for people with diabetes. We aimed to study the prevalence and causes of hypoglycaemia among Sri Lankans with diabetes.

Methods: One thousand patients with diabetes attending a private sector diabetic clinic were interviewed using a structured questionnaire. Hypoglycaemic episodes within the preceding month were inquired and severity was graded according to clinical features and/or capillary blood glucose levels.

Results: Mean age 55.0 years (\pm 12.5), 58.6% were males, mean diabetes duration 10.6 years (\pm 8.1), mean FPG 7.48 mmol/l (\pm 2.79) and mean HbA1c 7.82% (\pm 1.71) (62 mmol/mol). Of them, 26.1% (mild 20.7%, moderate 3.9%, and severe 1.5%) experienced symptomatic hypoglycaemia. Sudden change diet (46.7%), unaccustomed exercise (15.7%) and increase in antihyperglycaemic therapy dosage (14.9%) were the recognized causes. Cause was not recognized by 16.3%. Non-prescribed native food items accounted for hypoglycaemia in 16.9% of patients (*Momordica charantia* 54.5%, *Costus speciosus* 52.3%, *Salacia prinoidea* 11.4%, *Coccinia grandis* 6.8%, *Adenanthera pavonina* 4.5%). Severity of hypoglycaemia was positively correlated to age and duration of diabetes but not to HbA_{1c}.

Conclusion: Hypoglycaemia is common among patients with diabetes. Patients need advice on regular diet and exercise. Consumption of non-prescribed native foods should be considered as a possible cause.

Keywords: Hypoglycaemia, Diabetes, HbA_{1c}, Native food

Background

Diabetes mellitus has reached epidemic levels in many countries, especially in Asia [1]. Disabling and life threatening micro and macrovascular complications of diabetes highlights the need for optimum management

[2]. Benefits of intensive glycaemic control in prevention of these complications are well recognized [3, 4]. However it has been observed that most patients do not reach the optimum level of glycaemic control despite well defined management protocols [4]. This, at least partly, is attributable to the fear of hypoglycaemia, both among patients and treating medical professionals [5]. In fact, in the ACCORD study, the higher mortality rate in the intervention arm is largely attributable to higher incidence of hypoglycaemic events due to rapid reduction of blood glucose [6]. Unpleasant symptoms of

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