Screening for diabetes in medical inpatients with hyperglycaemia

The article by Deepak et al on inpatient management of diabetes highlights serious deficiencies in the care provided to diabetic patients. We feel that hyperglycaemia in general is often ignored in both non-diabetic and diabetic patients admitted to hospital when their primary problem is not related to blood glucose control. This is unfortunate as there is clear evidence, at least in diabetic patients with myocardial infarction, that careful management of blood glucose has a significant effect on mortality. In non-diabetic patients, failure to further investigate hyperglycaemia is an opportunity missed in diagnosing a condition that has many important microvascular and macrovascular complications, which could be potentially preventable if identified and treated early.

We recently conducted an audit on management of hyperglycaemia in patients admitted with acute medical illnesses over a period of one month. There were 516 patients admitted to the hospital with various medical illnesses, a blood glucose was requested in 327 patients, and in 81 of these patients the blood glucose was raised (>7.8 mmol/l).

We studied the inpatient case notes of the 81 patients with raised blood glucose values and identified 31 patients with no history of previously diagnosed diabetes mellitus. Further investigations to diagnose diabetes mellitus were made in only seven of the 31 patients with newly identified hyperglycaemia. Of these seven patients, three had newly diagnosed diabetes mellitus (fasting glucose of >7 mmol/l), one had impaired fasting glucose (fasting glucose >6 mmol/l), and three had two fasting glucose values <6 mmol/l. Neither the age nor sex of the patient had any influence on screening them for diabetes.

The level of blood glucose was higher in patients where further investigations were done (mean 10.5, range 8.5–16.8 mmol/l) than in those patients where the hyperglycaemia was ignored (mean 8.8, range 7.9–10.3 mmol/l). The level of blood glucose elevation did not influence the outcome of further testing and was between 8.5 mmol/l and 16.8 mmol/l in patients where further tests confirmed diabetes mellitus. The screening tests for diabetes were positive in 57% (four out of seven patients) in our audit but a significant number of patients with hyperglycaemia were not investigated further.

We feel that inpatients with newly identified hyperglycaemia offer an important opportunity to diagnose diabetes mellitus, which unfortunately is currently underused.

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Postgrad Med J 2004 80: 302

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