



The need of change in the treatment options for diabetes in acute ischemic stroke



Baburhan Guldiken*, Burak Celik*, Merve Namli*, Buket Yilmaz Bulbul**, Mehmet Celik**, Sibel Guldiken**

*Trakya University Medical Faculty, Department of Neurology, Edirne, Turkey

**Trakya University Medical Faculty, Department of Internal Medicine, Division of Endocrinology, Edirne, Turkey

OBJECTIVES

Diabetes is a clear risk factor for ischemic stroke and found in 15-33% of patients in stroke units (1-3). Although the effect of blood glucose regulation on the recurrence of stroke is not clearly defined, it is well known that it at least decrease the frequency of microvascular complications of diabetes (4). After the acute phase of ischemic stroke, most patients need a rearrangement of the anti-diabetic drugs for the long term therapy. In the present study, we investigated the rate of the treatment changes in diabetic acute ischemic stroke patients during their stay at hospital.

METHODS

One hundred twelve acute diabetic ischemic stroke patients that were hospitalized in the university neurology clinic were retrospectively evaluated. The antidiabetic medications that were used at admission and at discharge from hospital were recorded. HbA1c levels on the first day of admission was measured. The number of the patients whose antidiabetic medications have been modulated was estimated. The dose change in each antidiabetic drug was noted.

RESULTS

Mean HbA1c levels were $8.2 \pm 2.2\%$. In order to better regulate the blood glucose levels, a change in the antidiabetic drugs had been made in 26.8% of patients. Change of dosage was found necessary in 33.9% of patients. Use of insulin that was seen 29% of patients increased to 37% at the time of discharge from hospital.

CONCLUSIONS

Diabetes was found undertreated before acute ischemic stroke. The need of change in the diabetes treatment was observed in a significant ratio of the patients. The neurologists who manage the treatment of the primary disease should also be alert for the need of changes in the treatment of diabetes.

Table: The antidiabetic medications used by the stroke patients at admission and at discharge from hospital

	At hospitalisation n(%)	At discharge n(%)
Sulphonylurea	15	18
Metformin	29 (44)	42 (38)
Insulin	19 (29)	41 (37)
Pioglitazone	2	2
Acarbose	2	8
Total	65	111

References

1. Karapanayiotides T, Piechowski-Jozwiak B, van Melle G et al. Stroke patterns, etiology, and prognosis in patients with diabetes mellitus. *Neurology* 2004;62:1558–1562.
2. Megherbi SE, Milan C, Minier D et al. Association between diabetes and stroke subtype on survival and functional outcome 3 months after stroke: data from the European BIOMED Stroke Project. *Stroke* 2003;34:688–694.
- 3- Woo D, Gebel J, Miller R et al. Incidence rates of first-ever ischemic stroke subtypes among blacks: a population-based study. *Stroke* 1999;30:2517–2522.
- 4-Sacco RL, Adams R, Albers G et al. Guidelines for prevention of stroke in patients with ischemic stroke or transient ischemic attack: a statement for healthcare professionals from the AHA/ASA Council on Stroke: co-sponsored by the Council on Cardiovascular Radiology and Intervention: the AAN affirms the value of this guideline. *Stroke* 2006;37:577-617.