

DETECTION OF HYPOGLYCEMIA IN TYPE2 DIABETIC PATIENTS

Authors: Sofia Tsirona, Christos Pappas, Eleni Kandaraki, Georgia Kassi, Genovefa Chronopoulou and Evanthia Diamanti-Kandarakis

Hospitals: Endocrine Unit , Diabetes Center and Biochemistry Laboratory Athens Euroclinic, Athens Greece.
Endocrine Unit 3rd Department of Medicine University of Athens Medical School

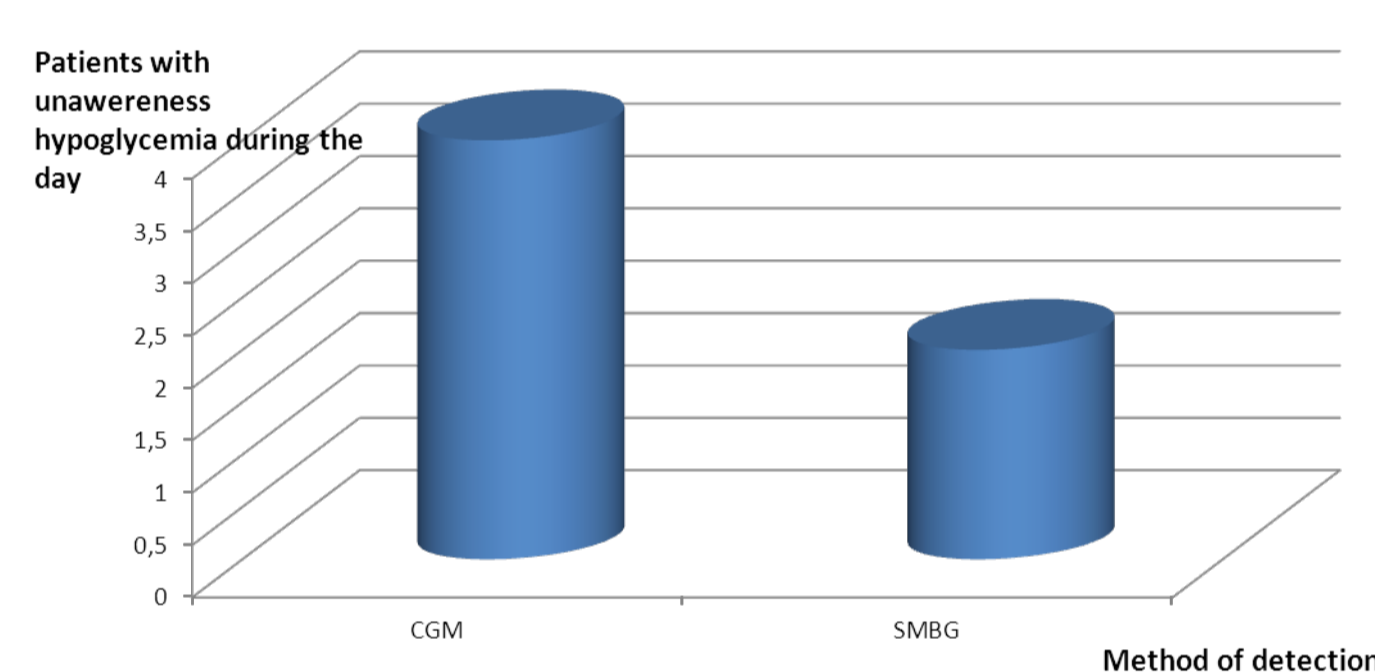
OBJECTIVES

- Hypoglycemia may be a life – threatening condition and has been also associated with increased mortality and cognitive decline. In addition, cost for hypoglycemic episodes hospitalization and management may be high.
- Aim of the study:** To compare different methods of detection of hypoglycemic episodes in type 2 diabetic patients. [continuous glucose monitoring (CGM) vs self monitoring of blood glucose (SMBG)].

METHODS

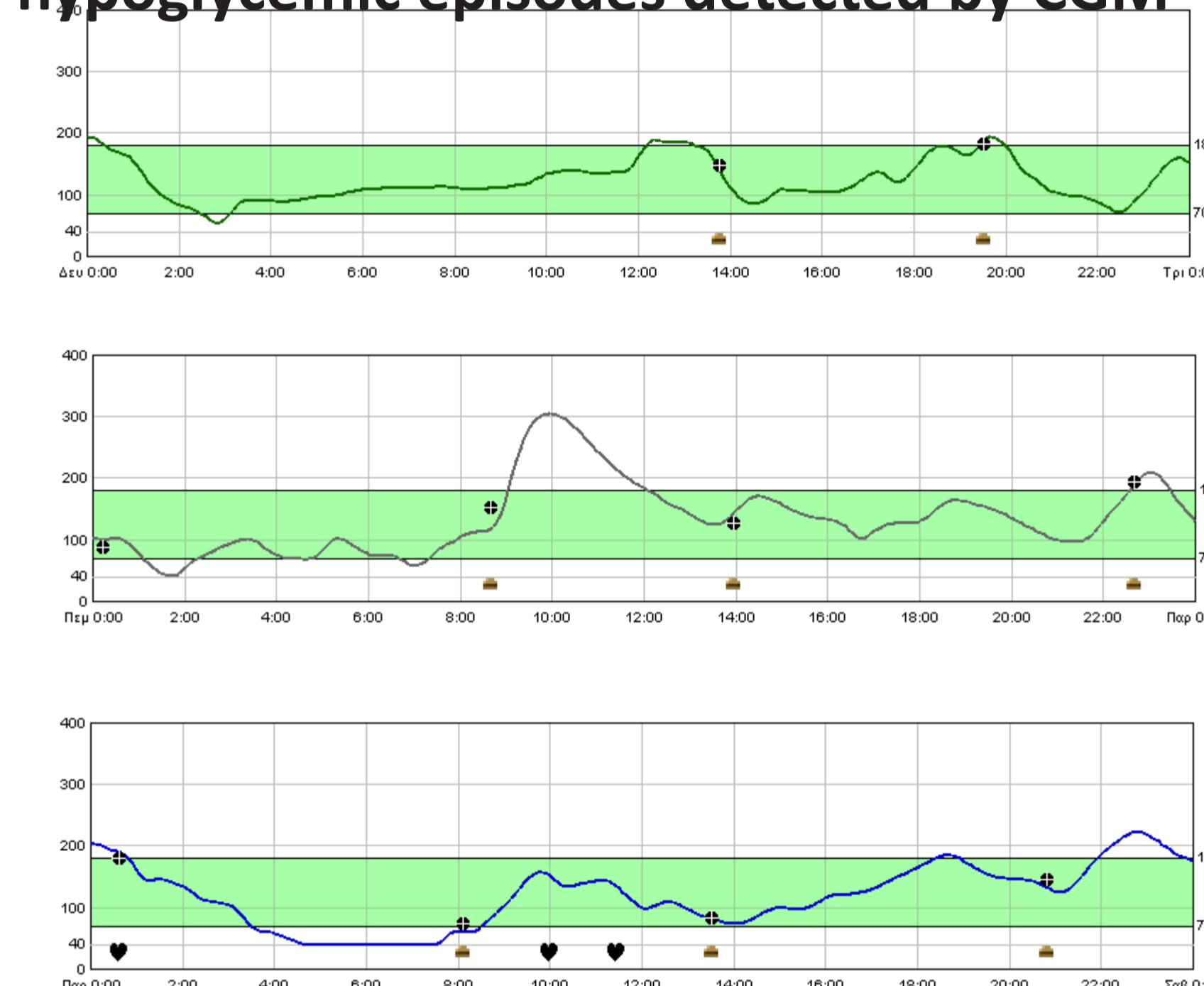
- 17 patients with type2 diabetes
- For 3-5 consecutive days they underwent a 24h CGM, and they also recorded their glucose values using SMBG from 4 daily measurements at the same period.
- End points: . -Differences in detection of hypoglycemic episodes depending on the recording method (CGM vs SMBG)
 - Assessment of the recorded hypoglycemic episodes pattern (nocturnal vs no nocturnal hypoglycemia, awareness vs non awareness hypoglycemia).

Graphs and tables



	Patients in treatment with a regimen including insulin (n=9)	Patients in treatment with a regimen with oral hypoglycemic agents(n=8)
Patients with hypoglycemia recorded by CGM(n=10)	n=5 (29.4%)	n=5 (29.4%)
Patients with no recorded hypoglycemia by CGM (n=7)	n=4 (23.5%)	n=3 (17.7%)

Examples of type2 diabetic patients with nocturnal hypoglycemic episodes detected by CGM



RESULTS

- 10 type 2 diabetics recorded at least one hypoglycemic episode by CGM vs 4 patients who recorded at least one hypoglycemic episode as illustrated by SMBG (58.8% vs 23.5%, p=0.07).
- From those 10 patients who recorded hypoglycemia from CGM only 2 (11.8% of type 2 diabetics) mentioned symptoms
- 23 hypoglycemic episodes were recorded by CGM vs 8 episodes recorded by SMBG (mean 1.35 vs 0.48, p=0.008)
- 23.5% of diabetic subjects were detected by CGM suffering from nocturnal hypoglycemia. None nocturnal hypoglycemic episodes was detected by SMBG, since none self monitoring measurement was performed during sleep
- 23.5% of diabetic patients were detected with unawareness hypoglycemia during the day by CGM vs 12.5% who were detected with unawareness hypoglycemia during the day by SMBG
- The recorded hypoglycemic episodes did not seem to be associated with a regimen including insulin

CONCLUSIONS

In type2 diabetic patients more hypoglycemic episodes (mainly nocturnal and unawareness hypoglycemias) are detected using CGM than SMBG.

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- bservational prospective study.