AIMS: The hyperglycemic hyperosmolar syndrome (HHS) is a life-threatening diabetic complication. We aimed to portrait the short and long term outcome after a HHS episode and to describe features associated with increased early mortality.

METHODS: We collected data from consecutive HHS cases, defined based on rigorous glucose and osmolality criteria. We retrieved anthropometric measures, history of diabetes, other cardiovascular risk factors and chronic co-morbidity. Clinical and biochemical parameters were recorded at admission, after 24h and at discharge. We assessed incidence of complications, as well as short (≤ 30 days) and long term mortality.

RESULTS: Patients were about 80-year old. Fifty-one cases were included, characterized by severe hyperglycemia (55.5 mosm/L) and hyperosmolality (385 mosm/L). Thirty-three percent developed at least one complication. Short term mortality was 16%; lower Glasgow Coma Scale, higher plasma glucose and mild acidosis were predictive of short term mortality. The long term mortality (median follow-up 1.27 years) was not significantly different from historical mortality data after hypoglycemic coma.

CONCLUSION: In this study, early mortality of HHS was 16% and some clinical features at presentation were predictive of an adverse short term outcome. Long term survival after a HHS episode did not appear to be severely impaired.