DOI: 10.1530/EJE-07-0013
European Journal of Endocrinology, Vol 157, Issue 1, 9-18

CLINICAL STUDY

Mortality and GH deficiency: a nationwide study

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Objective: To estimate the mortality in Denmark in patients suffering from GH deficiency (GHD).

Design: Mortality was analyzed in 1794 GHD patients and 8014 controls matched on age and gender. All records in GHD patients were studied and additional morbidity noted. Patients were divided into childhood onset (CO) and adult onset (AO), discriminated by an age cutoff below or above 18 years at onset of GHD.

Method: Data on death were identified in national registries. Sex- and cause-specific mortalities were identified in CO and AO GHD when compared with controls.

Results: Mortality was increased in CO and AO GHD in both genders, when compared with controls. The

hazard ratio (HR) for CO males was 8.3 (95% confidence interval (CI) 4.5–15.1) and for females 9.4 (CI 4.6–19.4). For AO males, HR was 1.9 (CI 1.7–2.2) and for females 3.4 (CI 2.9–4.0). We found a significantly higher HR in AO females versus AO males, both compared with controls ($P < 0.001$). In AO, mortality was increased due to cancer in all subgroups, due to circulatory diseases in all age groups for females and for males in the oldest age group. For CO, the increased mortality was due to cancer.

Conclusions: We found a significantly increased mortality in GHD patients when compared with controls, possibly due to their hypopituitary status. Mortality was increased in AO female patients when compared with males. For CO and AO GHD, different causes of significantly increased mortality were identified.