FAMILIAL CLUSTERING OF SYNOCOPE IN FIRST-DEGREE RELATIVES: A DANISH NATIONWIDE STUDY

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Background: Syncope is a common event but uncertainty remains about family history as a risk factor for syncope. We investigated risk of syncope in first-degree relatives of individuals with a history of prior hospitalization for syncope.

Methods: This nationwide register-based study included all patients discharged with syncope in Denmark from 1996-2011 along with their first-degree relatives. Risk of syncope among the cohort of relatives was evaluated by Poisson regression models with the total Danish population as reference.

Results: A total of 168,719 (2.48%) patients with a first-time diagnosis of syncope in a total population of 6,813,467 consecutive Danish citizens were identified. A positive family history of syncope was associated with a 3-fold risk of syncope compared to the general population, rate ratio (RR) 3.10 (95% confidence interval 3.05-3.16). The RR for children of mothers or fathers with syncope was 2.89 (2.78-3.01) and 3.15 (3.03-3.27), respectively. Children of parents with syncope before the age of 40 years had the highest risk; RR 4.68 (4.22-5.20) for paternal cases and RR 4.27 (3.93-4.63) for maternal cases. The RR for siblings of syncope-patients was 1.84 (1.73-1.95).

Conclusion: First-degree relatives of patients with syncope have a significantly increased risk of syncope with the highest risk among children of parents with a syncope-event before the age of 40 years. Careful evaluation of family history in syncope patients is an essential part of the clinical work-up of syncope.