Risk Factors and Associated Disorders of Celiac Disease

av

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Akademisk avhandling

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Abstract


Background: Celiac disease (CD) is an immune-mediated enteropathy induced by dietary gluten. CD is prevalent in some 1% of the general population. In recent decades there has been a marked increase in CD prevalence that may be influenced by environmental risk factors.

Aims: The aim of this thesis was to examine possible risk factors for CD and to gain information on associated disorders of CD.

Methods: In study I we used regional cohort-data from ~11,000 children to examine the association between psychological stress in early life and subsequent CD. In studies II-IV we used nationwide histopathology data to identify individuals with CD (i.e. villous atrophy). In study II we linked data on ~29,000 CD patients to the National patient register to examine the risk of hospital admission for influenza. In studies III-IV we linked data on ~11,000 CD patients to several Swedish registries, including the Medical birth register, to examine neonatal risk factors in CD (study III) and the risk of CD in patients with Down syndrome (study IV).

Results: Psychological stress in the first years of life was not associated with subsequent CD. We found a two-fold increased risk of hospital admission for influenza in patients with CD (95% confidence interval [CI] = 1.6-2.7). While elective cesarean delivery was associated with an increased risk of later CD (adjusted Odds Ratio [OR] = 1.15; 95% CI = 1.04-1.26), emergency cesarean delivery was not (adjusted OR = 1.02; 95% CI = 0.92-1.13). Finally, in study IV we found a six-fold increased risk of CD in children with Down syndrome (95% CI = 5.09-7.43).

Conclusion: This thesis supports the hypothesis that certain environmental risk factors, such as mode of delivery, but possibly not early psychological stress, influence the risk of CD. The increased risk of hospital admission for influenza indicate that individuals with CD may benefit from influenza immunization. The highly increased risk of CD in Down syndrome supports CD screening in Down syndrome patients.

Keywords: Celiac disease; cohort study; Down syndrome; influenza; pediatrics; population-based; pregnancy outcome; psychological stress; registry.

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