Moderate alcohol consumption may protect against overt autoimmune hypothyroidism: a population-based casecontrol study - DTU Orbit (06/03/2019)

**OBJECTIVE:**

Alcohol consumption is an important protective risk factor for many autoimmune diseases. We wished to study the association between alcohol consumption and autoimmune hypothyroidism.

**DESIGN:**


**METHODS:**

Patients with newly diagnosed autoimmune overt hypothyroidism (n=140) were prospectively identified in a population (2 027 208 person-years of observation), and their matched controls with normal thyroid function (n=560) were recruited simultaneously from the same population. Participants gave information on alcohol intake, smoking, previous diseases, education, and family history of hypothyroidism. The association between alcohol intake and development of hypothyroidism was analyzed in conditional regression models.

**RESULTS:**

Hypothyroid cases had reported a lower alcohol consumption than controls (median units of alcohol (12 g) per week: 3 vs 5, P=0.002). In a multivariate regression model, alcohol consumption was associated with a reduction in risk for development of overt autoimmune hypothyroidism. Odds ratios (95% confidence interval) compared with the reference group with a recent (last year) consumption of 1-10 units of alcohol per week were as follows: 0 units/week, 1.98 (1.21-3.33); 11-20 units/week, 0.41 (0.20-0.83); and ≥21 units/week, 0.90 (0.41-2.00). Similar results were found for maximum previous alcohol consumption during a calendar year. No interaction was found with type of alcohol consumed (wine vs beer), sex, or region of inhabitancy.

**CONCLUSIONS:**

Alcohol consumption seems to confer considerable protection against development of overt autoimmune hypothyroidism irrespective of sex and type of alcohol consumed.

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