



AUTOIMMUNE DISORDERS: A PUBLIC HEALTH PROBLEM IN SOUTH-BRAZILIAN MENNONITE COMMUNITIES

Luana Caroline Oliveira (UFPR, Curitiba, PR, Brasil), Wilian Aparecido Vieira (UFPR, Curitiba, PR, Brasil), Caroline Grisbach Meissner (UFPR, Curitiba, PR, Brasil), Gabriela Canalli Kretzschmar (UFPR, Curitiba, PR, Brasil), Nathan Marostica Catolino (UFPR, Curitiba, PR, Brasil), Bruna Burko Rocha Chu (UFPR, Curitiba, PR, Brasil), Angelica Beate Winter Boldt (UFPR, Curitiba, PR, Brasil)

BACKGROUND

The chronic nature of autoimmune diseases places a significant burden on the utilization of medical care, increases direct and indirect economic costs, and diminishes quality of life. We investigated familial aggregation and prevalence of RA in the South Brazilian Mennonites, a Christian European Anabaptist group isolated for more than 20 generations, which passed through three populational bottlenecks.

MATERIALS AND METHODS

Using a modified version of the questionnaire of the National Health Survey of 2013, we interviewed 598 Mennonites from Colônia Nova (RS), Witmarsum (PR) and Curitiba (PR). Each interview included questions about eating and health habits, family atmosphere, exposure to mutagens, chronic diseases and familial disease aggregation. Data was evaluated with multivariate logistic regression.

RESULTS

Twenty-five percent of individuals reported having at least one autoimmune disease (type 1 diabetes, arthritis, autoimmune thyroiditis and/or celiac disease). Among 347 Mennonites, 69 (16.6%) reported having chronic joint pain, 144 (41.5%) reported family history of RA, 92 being (26.5%) first-degree relatives. Rheumatoid arthritis (RA) prevalence was 7.97% (compared to 1% worldwide and maximal 6% in some Native American groups), being women almost three times more susceptible ($OR=2.83$, $p=0.017$). Individuals with RA were twice more susceptible to develop depression ($OR=2.15$, $p=0.05$). Approximately 13% (52/369) of individuals reported having some thyroid dysfunction (hypothyroidism or hyperthyroidism), 2.23% fibromyalgia and 1% psoriasis. The prevalence of diabetes mellitus was 6.03% (1% type 1).

CONCLUSION

Epidemiological results favor a founder effect to explain autoimmune and chronic diseases prevalence among Mennonites. Further identification of susceptibility alleles shall help to define the risk of this population to develop autoimmune disorders, encouraging future strategies of Preventive Medicine.