Time trends in the prevalence of diagnosed autoimmune diseases in the period of 2012 to 2022

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Abstract

Background
It is unknown how many individuals suffer from autoimmune diseases in Germany and how this number develops over time. The aims of this study are i) to determine the prevalence for a wide spectrum of autoimmune diseases, to examine ii) its age- and sex-specific differences and iii) time trends.

Methods
We used the nationwide ambulatory claims data collected according to the § 295 of the German Social Code Book V in the years 2012 to 2022. Patients with autoimmune diseases were identified through diagnostic codes of the German Modification of 10th version of the International Classification of Diseases and Related Health Problems (ICD-10-GM). In total, 30 autoimmune diseases were examined. The study population - female and male insurants of any age - varied between 68,959,472 in 2012 and 73,241,305 in 2022.

Results
Of the 73,241,305 insurants in 2022, 6,304,340 had at least one (any) autoimmune disease, corresponding to a raw prevalence of diagnosed autoimmune diseases of 8.61%. Over the study period of eleven years the raw prevalence increased by 22% from 7.06% to 8.61%. The increase was observed in both sexes (however with a stronger increase among females [+28%] than males [+14%]) and in all ages (but stronger among adults than children and adolescents). Furthermore, there were regional differences; the lowest increase was recorded in Berlin (+9%), the highest in Saarland (+35%) and Baden-Württemberg (+30%). At district level, the increase was observed in 399 of the 401 districts with the exception of two districts, Kyffhäuserkreis in Thuringia and Rhein-Hunsrück-Kreis in Rhineland-Palatinate, where a decrease in prevalence was seen (–13% and –3.1%, respectively).

Of the 30 autoimmune diseases, the prevalence increased in 28 disease entities. The highest increase of +130% was recorded for celiac disease, followed by autoimmune hepatitis (+80%), Hashimoto's thyroiditis (+72%) and primary biliary cirrhosis (+68%). Only two diseases (type 1 diabetes and Sjögren's syndrome) showed a decrease in prevalence (–18% and –27%, respectively).

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Conclusion

The current study yields for the first-time prevalence figures for a wide range of autoimmune diseases. The prevalence turned out to be higher than previously assumed. Every 12. insurant in Germany suffers from an autoimmune disease. This figure has an increasing trend.

Keywords

Alopecia areata; ankylosing spondylitis; autoimmune diseases; autoimmune hemolytic anemia; autoimmune hepatitis; celiac disease; Crohn's disease; dermatopolymyositis; granulomatosis with polyangiitis; Guillain-Barré syndrome; Hashimoto's thyroiditis; juvenile idiopathic arthritis; idiopathic thrombocytopenic purpura; iridocyclitis; multiple sclerosis; myasthenia gravis; pemphigoid; pemphigus; pernicious anemia; polymyalgia rheumatica; primary adrenocortical insufficiency; primary biliary cirrhosis; psoriasis; regional variations; rheumatoid arthritis; Sjögren's syndrome; systemic lupus erythematosus; systemic sclerosis; thyrotoxicosis; time trends; type 1 diabetes; ulcerative colitis; vitiligo

Citation

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