Analysis of Hospitalization Trends in Patients with Rheumatoid Arthritis and Sjögren's Disease

Streszczenie w języku angielskim

Autoimmune connective tissue diseases, such as rheumatoid arthritis (RA) and Sjögren's Disease (SjD), pose significant challenges to modern medicine due to their chronic nature, multi-organ complications, and the need for long-term treatment. Advances in the therapy of these conditions over the decades have led to substantial improvements in prognosis; however, they have not eliminated the severe consequences associated with disease progression and comorbidities. The objective of this dissertation is to provide a comprehensive analysis of these issues through three thematically related studies, covering the history of RA treatment, hospitalizations of RA patients in intensive care units, and hospitalization trends among SjD patients in Poland.

The first study, "Evolving Strategies in the Treatment of Rheumatoid Arthritis: A Historical Perspective," presents the evolution of rheumatoid arthritis therapy from ancient treatments to modern targeted therapies. Over the centuries, RA treatment approaches have undergone significant transformations—from unverified medical practices to strategies aimed at suppressing inflammation and modulating the immune system. The 20th century saw the introduction of conventional synthetic disease-modifying antirheumatic drugs (csDMARDs), including methotrexate, which became the gold standard of treatment. Further breakthroughs occurred in the 21st century with the development of biological DMARDs (bDMARDs) and targeted synthetic DMARDs (tsDMARDs). Contemporary research focuses on precision medicine, utilizing biomarkers and novel immunomodulatory strategies, offering hope for further improvements in RA therapy effectiveness.

The second study, "Hospitalizations of Patients with Rheumatoid Arthritis in Polish Intensive Care Units or Cardiac Intensive Care Units in 2011-2021 – Population Study," examines hospitalizations of RA patients requiring treatment in Intensive Care Units (ICUs) and Cardiac Intensive Care Units (CICUs). The analysis of 3,066 hospitalizations revealed an increasing number of admissions, with a marked rise in 2021, potentially linked to the COVID-19 pandemic. A significant observation was the high mortality rate in ICU/CICU settings

(39.1%), particularly among patients with gastrointestinal diseases (58.5%) and endocrine/metabolic disorders (61.5%). Key risk factors for mortality included older age and emergency admissions, highlighting the importance of early intervention and optimal management of RA patients. The findings underscore the necessity for improved monitoring of RA patients to prevent severe complications requiring intensive care.

The third study, "Trends in Initial Hospitalizations of Patients with Newly Diagnosed Sjögren's Disease in Poland Between 2012 and 2023: A Retrospective Data Analysis," expands the hospitalization analysis to patients with Sjögren's disease. Similar to RA, SjD has an autoimmune basis, but its dominant manifestation is chronic inflammation of exocrine glands, leading to mucosal dryness. The study, encompassing 13,999 hospitalizations, revealed that women accounted for 90.3% of hospital admissions, with an average age of 57 years. Variability in hospitalization rates was noted over the years, with a decline in 2020 (likely due to the COVID-19 pandemic) followed by a resurgence in 2021-2023. The most common comorbid conditions included musculoskeletal diseases (17.8%), cardiovascular diseases (16.6%), and endocrine disorders (13.6%). As with RA, emergency hospitalizations and older age were associated with significantly longer hospital stays. This study highlights the need for improved outpatient diagnosis and management of SjD to reduce hospitalizations and enhance patients' quality of life.

By integrating these three studies, conclusions can be drawn regarding autoimmune diseases with varying degrees of systemic manifestation. The history of RA treatment demonstrates the dynamic development of therapeutic strategies, impacting not only disease control but also reducing the risk of complications leading to hospitalization and intensive care. Simultaneously, the analysis of RA and SjD hospitalizations reveals that despite medical advancements, patients with autoimmune diseases remain particularly vulnerable to severe complications and multimorbidity. These findings emphasize the need for preventive strategies, early diagnosis, close patient monitoring, and an interdisciplinary approach to rheumatic disease management.

A comprehensive approach to the treatment and monitoring of patients with autoimmune diseases is crucial for further improving treatment outcomes and reducing hospitalization needs. Future research should focus on evaluating the effectiveness of new

therapeutic strategies, their impact on hospitalization rates, and the development of predictive tools for early identification of high-risk patients.