

Comorbidities in Lupus, Cardiovascular Disease and Increased Infection Susceptibility

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DESCRIPTION

Lupus, a chronic autoimmune disease, presents a complex landscape of health challenges. Although its distinguishing feature is the immune system attacking healthy tissue, lupus often comes with a host of comorbidities that significantly impact patients' health outcomes. Among these, Cardiovascular Disease (CVD) and increased susceptibility to infections stand out as major concerns. Understanding the exchange between lupus, comorbidities, and these health risks is crucial for effective management and improved patient care.

Lupus doesn't just affect the joints and skin; it can involve multiple organ systems, leading to various comorbidities. Cardiovascular Disease (CVD) one of the most pressing concerns for lupus patients is the increased risk of developing cardiovascular complications. Research indicates that individuals with lupus are at a higher risk of heart attacks, strokes, and other cardiovascular events compared to the general population. This heightened risk is attributed to factors such as inflammation, dyslipidemia, hypertension, and the use of corticosteroids in managing lupus symptoms.

Lupus patients also face an elevated risk of infections, both opportunistic and common. The dysregulated immune system in lupus compromises the body's ability to fight off pathogens, making patients more susceptible to bacterial, viral, and fungal infections. Additionally, immunosuppressive medications used to manage lupus can further weaken the immune response, exacerbating the risk of infections. The link between lupus and cardiovascular disease is multifaceted, involving complex interactions between immune dysregulation, traditional cardiovascular risk factors, and lupus-specific factors.

In lupus, chronic inflammation plays a central role not only in the disease process itself but also in promoting atherosclerosis and endothelial dysfunction, key contributors to cardiovascular disease. The persistent activation of immune cells and the release of pro-inflammatory cytokines contribute to vascular damage and plaque formation, increasing the risk of cardiovascular events. Beyond immune dysregulation, lupus patients often have a higher

prevalence of traditional cardiovascular risk factors such as hypertension, dyslipidemia, obesity, and smoking. These factors, combined with lupus-specific mechanisms, further exacerbate the cardiovascular burden in this population. Tight control of traditional cardiovascular risk factors, including blood pressure, cholesterol levels, and smoking cessation, is most important. Lifestyle modifications such as a healthy diet, regular exercise, and weight management play a crucial role in reducing cardiovascular risk.

Balancing disease control with minimizing cardiovascular risk is a delicate task. Rheumatologists must tailor treatment regimens to address lupus activity while minimizing the use of potentially cardio toxic medications such as corticosteroids. Emerging biologic agents targeting specific pathways in lupus management hold promise in reducing cardiovascular risk without compromising disease control. Many medications used to manage lupus, such as corticosteroids, immunosuppressants and biologic agents, suppress the immune system to varying degrees. While these drugs are essential for controlling disease activity, they also increase the risk of infections. Rheumatologists must weigh the benefits of immunosuppressive therapy against the potential infectious complications, opting for the lowest effective dose whenever possible. Vaccination plays a crucial role in preventing infections in lupus patients.

However, there are considerations regarding vaccine efficacy and safety, particularly in individuals on immunosuppressive therapies. Rheumatologists should work closely with primary care providers to develop personalized vaccination strategies, ensuring optimal protection while minimizing potential adverse effects.

Lupus presents a complex clinical landscape characterized by autoimmune dysregulation, comorbidities, and increased risks of cardiovascular disease and infections. Effective management requires a multidisciplinary approach, involving rheumatologists, cardiologists, infectious disease specialists, and primary care providers. By understanding the interplay between lupus, comorbidities, and associated health risks, healthcare professionals can optimize treatment strategies and improve outcomes for patients living with this challenging condition.

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