The Critical Role of Multidisciplinary Teams in the Management of Rare Systemic Rheumatic Diseases with Renal Involvement

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Abstract

Rare systemic rheumatic diseases (RISD) with renal involvement, such as anti-neutrophil cytoplasmic antibody (ANCA)-associated vasculitis and systemic lupus erythematosus, require complex, coordinated care. These conditions often involve renal complications requiring specialized and timely intervention. Traditional care models, typically fragmented across specialties, are insufficient to meet the nuanced needs of these patients. This article highlights the essential role of structured multidisciplinary teams (MDT)—including nephrologists, rheumatologists, pulmonologists, internal medicine specialists, and other specialists—in improving diagnosis, treatment, and outcomes. Evidence shows that MDT reduces hospitalizations, infections, and mortality while enhancing patient satisfaction and access to innovative therapies. In Portugal, broader implementation of MDT clinics is needed to ensure timely, integrated care. MDT should become the standard for managing these rare, high-risk conditions.

Keywords: Anti-Neutrophil Cytoplasmic Antibody-Associated Vasculitis; Kidney Diseases/etiology; Lupus Nephritis; Rare Diseases; Rheumatic Diseases

ARTICLE

Rare diseases (RD) impose a significant burden on healthcare systems, which are typically structured to address more prevalent and less complex conditions.[1] Efforts to adapt services to the specific needs of individuals with RD have mostly focused on genetic disorders. However, rare immune-mediated systemic rheumatic diseases (RISD) demand high expertise not only because of their infrequency, but also due to their heterogeneous manifestations, varying severity and a chronic relapsing-remitting course that is associated with increased disease and treatment-related complications. Vasculitis and systemic

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lupus erythematosus (SLE) represent a key subgroup of non-purely genetic RISD that are managed by nephrologists in adulthood.[2]

A one-size-fits-all approach is unlikely to adequately address the needs of patients with vasculitis and SLE, given the diverse healthcare settings in which care is provided. Despite their clinical heterogeneity, both conditions share common challenges in service delivery.[3] These include insufficient awareness among healthcare professionals, unequal access to timely specialist care, fragmented management across multiple specialties, and limited access to comprehensive multidisciplinary support.[4]

Anti-neutrophil cytoplasmic antibody (ANCA)-associated vasculitis (AAV) and SLE are rare, heterogeneous autoimmune diseases, with potentially life and organ-threatening manifestations. Their effective management requires prompt coordinated specialized care to address their systemic nature, multi-organ involvement, complex diagnostics, and ever-evolving immunosuppressive therapies that carry significant risks and require close monitoring.

Structured multidisciplinary clinics are therefore critical for the successful management of these conditions. The core multidisciplinary team (MDT) should include nephrologists, rheumatologists, pulmonologists, internal medicine, and nurse specialists, with further involvement of other specialties as required by organ involvement and disease severity. These teams improve diagnostic accuracy, optimize treatment strategies and mitigate their complications, enhance patient education and support, and facilitate access to emerging therapies, ultimately improving patient outcomes.[5-10]

Recent evidence suggests that MDT result in average waiting times of less than one week for new patients, which are associated with fewer serious infections, reduced emergency hospital admissions, and lower mortality.[11]

Another study, from a multidisciplinary outpatient clinic in northern Spain, reported that AAV patients managed within an MDT model had improved renal survival and overall remission rates, compared to those managed in traditional single-specialty settings.[12] A retrospective cohort study including 164 adult patients with AAV, conducted at a single center in Australia between January 1, 2000, and February 28, 2018, reported that the implementation of a multidisciplinary vasculitis clinic was associated with a substantial reduction in overall hospitalization rates. Additionally, there was a trend toward fewer infection-related admissions.[13]

A clinician involved in multidisciplinary care highlights the value of focused collaboration in the management of RISD, noting that "that little bit of focus" within an MDT setting can "allow dialogue" between specialties, "improve all our knowledge about what's current," and foster interprofessional relationships to the extent that "it becomes much easier to then just lift the phone or ping an email to somebody who you have already made a link with". This perspective underscores how interdisciplinary engagement not only enhances clinical coordination but also cultivates informal professional networks, which are essential for timely and effective decision-making in complex, multisystem diseases.[11]

In Portugal, only a few centers currently have a structured MDT clinic that includes nephrology to treat systemic rheumatic disease. Given the evidence discussed in this letter, we urge medical centers across the country to consider progressing to a MDT care model to ensure swift access, integrated care, and specialist expertise. Timely care access, nurse-led support, specialized clinics, and coordinated MDTs contribute to improved outcomes, reduced infection and complication rates, reduced emergency admissions and hospitalizations, and lower workplace absenteeism.

When work is carried out as a team, and especially in a multidisciplinary way, involvement in European referral networks also becomes possible. Participating in a European network such as ERN-RITA, brings the possibility of connecting physicians, researchers, patients and patient representatives, ensuring equal access to early diagnosis, to foster best practice management and to advance standards of clinical care for all patients with rare immunological disorders.

Furthermore, MDT has the potential to enhance patient care by providing a single, coordinated treatment plan. This approach can increase patient satisfaction, improve patient-reported outcomes, and enhance quality of life by more effectively addressing the daily challenges of living with a chronic illness. MDT can also reduce healthcare costs by avoiding unnecessary duplication of diagnostic procedures—such as repeated laboratory tests—and minimize the need for patient travel. In doing so, they support both the financial and environmental sustainability of healthcare systems.

Additionally, MDT improve patient education, support participation in clinical trials, and enable access to innovative therapies, contributing to better health outcomes.

Nephrology units should hold a central and active role within MDT clinics, as early recognition and treatment of renal involvement and flares will enable the prevention of chronic kidney disease and the costly progression to end-stage kidney disease.

These findings provide an evidence-based foundation to reshape healthcare models for non-genetic rare diseases in adults.

In conclusion, structured MDT care is no longer optional—it is essential in delivering optimal, holistic and personalized care for patients with systemic rheumatic disease, namely AAV and SLE and must become the standard of care. Greater dissemination of outcome data and standardized report will promote widespread adoption.

Ethical Disclosures

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