


Pulmonary nodules in a 29-year-old patient: a case report of pulmonary manifestations in rheumatoid arthritis

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Key words: pathology, joints, pulmonary, rheumatoid arthritis

Introduction: Rheumatoid arthritis (RA) is a systemic autoimmune disease that primarily affects connective tissue. Its development has been strongly associated with immunological factors, particularly certain major histocompatibility complex (MHC) class II molecules such as HLA-DRB1 alleles (including DRB101 and DRB104 variants). However, genetic susceptibility alone is not sufficient; most patients develop RA due to a combination of environmental exposures, infections, and underlying immune dysregulation. In many cases, RA has also been linked to abnormal protein citrullination, a biochemical process that alters protein structure and triggers autoimmune responses against immunologically significant molecules.

Case description: This case study describes a 29-year-old man whose disease course is followed over many years, starting with his first hospitalisation in 2013 due to further diagnosis regarding pulmonary lesions found in computed tomography. His medical history and physical

examination findings led to an initial diagnosis of RA with the presence of pulmonary lesions. After a long follow-up period, the patient is reassessed again in 2023 due to evolving symptoms, which prompts a pathomorphological (histopathological) examination to clarify the diagnosis. The final findings integrate the clinical evolution with tissue-based findings, highlighting how the diagnosis and understanding of the disease developed over time and emphasising the importance of long-term monitoring and reassessment of the complexity of these pulmonary lesions.

Conclusions: Rheumatoid arthritis requires a comprehensive, multidisciplinary approach to diagnosis and management. Pathological manifestations observed in patients with RA often necessitate a thorough histopathological assessment to clarify the underlying aetiology, differentiate between disease-related and comorbid processes, and complete the clinical interpretation of observed findings.