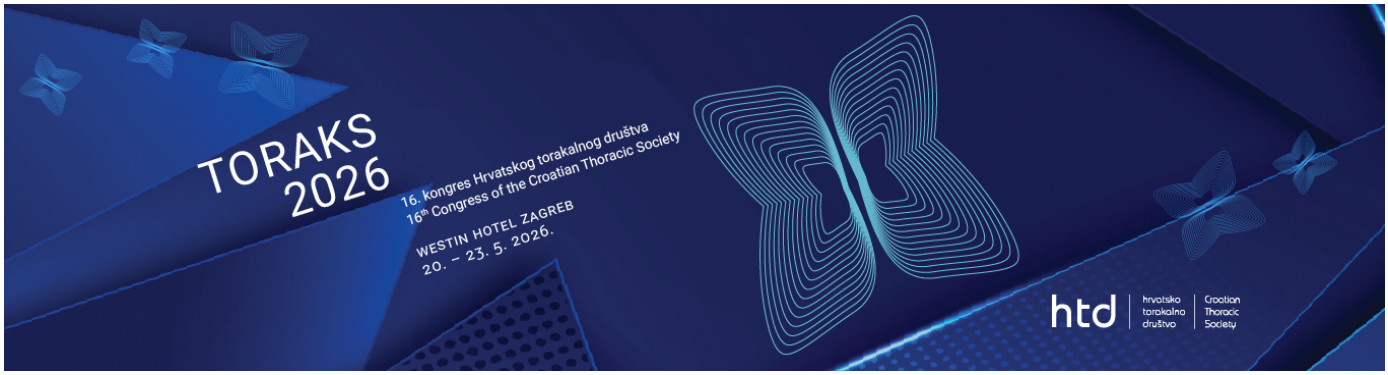


PULMONARY INVOLVEMENT IN SYSTEMIC DISEASES: CLINICAL PHENOTYPES, RADIOLOGIC PATTERNS, AND LONG-TERM FUNCTIONAL OUTCOMES IN A SINGLE-CENTER COHORT

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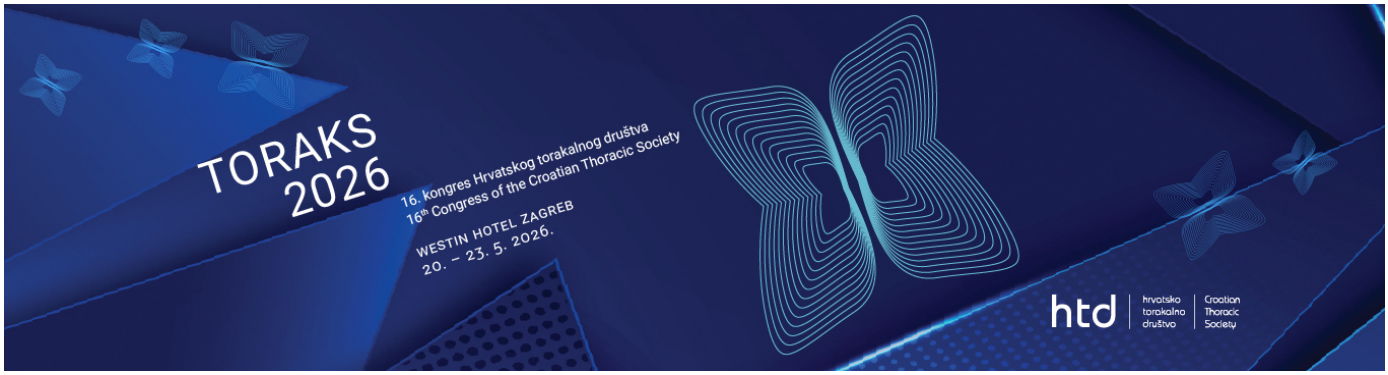
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Objective:

Introduction: Pulmonary manifestations of connective tissue diseases (CTD) represent a significant clinical challenge. Early recognition of pulmonary involvement is essential for prognosis, as respiratory complications impact patients’ quality of life and overall clinical outcomes.



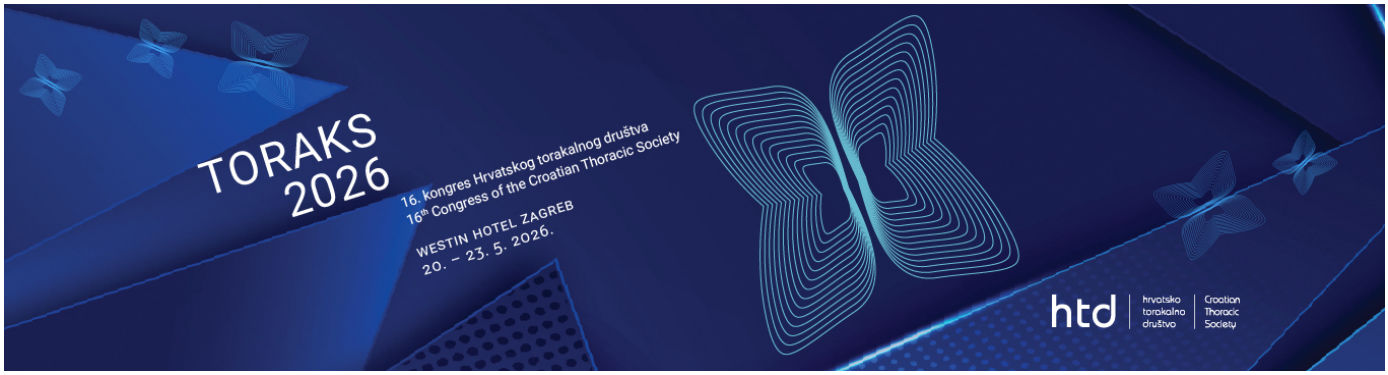
Objectives: To evaluate the clinical characteristics and course of pulmonary manifestations in patients with CTD.

Materials and Methods: This retrospective observational study included 107 patients with CTD and pulmonary involvement who were treated at the Clinic for Lung Diseases Jordanovac. Diagnoses included systemic sclerosis (SSc), rheumatoid arthritis (RA), myositis, UCTD, SLE, Sjögren's syndrome, and vasculitis. Demographics, time to lung involvement, radiologic patterns, pulmonary hypertension (PH), therapy regimen, clinical outcomes, and pulmonary function trends were assessed.

Results: The cohort included 76 females (71%) and 31 males (29%), with a mean age of 62.6 years. Mean time to pulmonary involvement was 4.9 years. PH was present in 17.8 % of patients.

The most frequent diagnoses were systemic sclerosis (31.8%), rheumatoid arthritis (26.2%), UCTD (11.2%), and myositis (10.3%). The predominant radiologic patterns were NSIP (32.7%), non-specific changes (18.7%), and UIP (17.8%), followed by nodules (8.4%).

Glucocorticoids were used in 80.4% of patients, methotrexate in 41.1%, antimalarials in 24.3%, mycophenolate mofetil in 20.6%, and other medications were used less commonly.



Mean 5-year changes in pulmonary function for FVC -0.9±10.7 (p 0.754), and for DLCO -2.6±11.5 (p 0.205). At the last follow-up, 60 patients (56.1%) were clinically stable, 23 (21.5%) had died, 21 (19.6%) had unknown status, and 3 (2.8%) experienced clinical worsening.

Conclusion: Pulmonary involvement in CTD is characterized by heterogeneous radiologic phenotypes, with NSIP predominance in this cohort. In our analysis, patients demonstrated a mild, non–statistically significant decline in pulmonary function over 5 years, while remaining relatively clinically stable. These findings emphasize the importance of early recognition and timely initiation of therapy.