

Idiopathic Inflammatory Myopathies: Clinical Characteristics and Prognostic Determinants

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Abstract:

Background: Idiopathic inflammatory myopathies (IIM) are rare autoimmune disorders with diverse clinical phenotypes and outcomes. Ethical research practice, including informed consent, is fundamental to protecting patient autonomy and ensuring the reliable use of clinical data in retrospective analyses. This study aimed to assess demographic characteristics, comorbidities, clinical features, prognostic predictors, and outcomes across IIM subtypes.

Methods: A retrospective observational study was conducted in 528 patients with IIM across multiple tertiary care centres in India from January 2010 to July 2024. Patients were classified as polymyositis (PM), dermatomyositis (DM), clinically amyopathic dermatomyositis (CADM), inclusion body myositis (IBM), or necrotising autoimmune myopathy (NAM). Demographic data, disease timelines, clinical manifestations, laboratory and autoantibody profiles, malignancy, interstitial lung disease (ILD), and mortality were analysed.

Results: The cohort comprised PM (n = 203), DM (n = 191), CADM (n = 104), IBM (n = 21), and NAM (n = 9). Mean age was highest in CADM (55.6 ± 19.7 years) compared with PM (49.7 ± 16.9) and DM (45.3 ± 18.8; p < 0.001). Delay to treatment was longest in CADM (168.6 ± 39.8 days; p < 0.0001). Muscle weakness was present in 93.6% of PM and 95.8% of DM, while cutaneous manifestations occurred in 90.1% of DM and 58.7% of CADM. Diabetes mellitus was more frequent in CADM (27.9%) than PM (16.3%) and DM (13.6%; p = 0.0026). Malignancy was significantly higher in DM than PM (12.6% vs 6.4%; p = 0.035). ILD

prevalence was similar across PM (24.1%), DM (17.8%), and CADM (22.1%). Among 47 deaths, respiratory causes accounted for 51.1%.

Conclusion: IIM subtypes show distinct clinical profiles and outcomes, with respiratory complications being the predominant cause of mortality, emphasising early recognition and subtype-oriented management.

Keywords:

Autoimmune Diseases, Dermatomyositis, Lung Diseases, Interstitial, Myositis, Polymyositis.