4.05 The role of Immunoglobulin A in the pathogenesis of Idiopathic pulmonary fibrosis, A literature review.

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Background: Idiopathic pulmonary fibrosis (IPF), is characterised by progressive parenchymal fibrosis. The pathogenesis of IPF is driven by prolonged pulmonary fibroblasts and myofibroblasts activity. Recent research has sparked interest in the potential role of chronic activation of fibroblasts and myofibroblasts through immunoglobulin-based mechanisms, such as immunoglobulin A (IgA). As such, the researchers aim to review current literature exploring the potential role IgA has in the pathogenesis of IPF.

Methods: A comprehensive literature search was conducted using two largely used search engines, with inclusion of literature over a 20-year period between 2003 and 2023 inclusive published in the English language using the following search terms (("Idiopathic Pulmonary Fibrosis" OR "Interstitial Lung Disease") AND "Immunoglobulin" AND "Immunoglobulin A" AND "biomarkers").

Results and Conclusion: 9 articles were selected for review. The role of IgA in IPF appears to stem from direct activation of fibroblast, upregulated further with indirect activation via TGF beta. Additionally, IgA creates a chronic proinflammatory state, to which fibroblast and myofibroblasts are attracted to, due to IgA's proinflammatory interaction with pulmonary endothelial cells. With this pathogenic knowledge, advances have stemmed around the evolving use of IgA as a biomarker, particularly around the area of prognostication.

Keywords: Idiopathic pulmonary Fibrosis, Immunoglobulin A, Inflammation, Pathogenesis

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