Reframing Exacerbations: Inflammatory Pathways and Biologic Targets

Wisia Wedzicha

Organization Imperial College London, UK
Current Position Professor, Respiratory Medicine, Imperial College London

Educational background

1985	M.D., Imperial College, UK
1975-1978	M.B., B.A., University of London
1972-1975	B.A., University of Oxford

Professional experience

Present	Professor of Respiratory Medicine, Imperial College London

A key objective of the management of COPD is the reduction and prevention of COPD exacerbations. Current standard of care consists of initial therapy with dual bronchodilators and with persistent exacerbations moving to therapy with inhaled triple therapy consisting of a LAMA, LABA and inhaled corticosteroids.

However triple therapy only reduces exacerbation frequency by up to 25% and thus other approaches have been developed. As respiratory viral infection is the cause of most exacerbations, there has been considerable interest in antiviral therapies especially for human rhinovirus (cause of the common cold) and some therapies are in development.

As COPD is a progressive chronic inflammatory, inflammatory pathways have been an obvious target. Most subjects with COPD show type 1 inflammation but around 20% have type 2 inflammation with elevated blood eosinophils above 300. Type 2 inflammation involves increased levels of IL4/IL13 and IL5 and there are interventions such as dupilimab (for IL4/IL13) that have been shown to reduce exacerbations further in subjects already on triple therapy and recently the anti-IL5 therapy mepolizumab. IL33 and the receptor ST2 are the main targets for therapy and trials of biologic therapies targeting IL33and ST2 are currently being reported.