1.20 Evidence of “Neutrophil Swarms” in Endobronchial Biopsies of Severe Asthmatics

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Background Endobronchial biopsies are now rarely used as a tool to assess asthma patients who may have difficulty controlling symptoms. However, endobronchial biopsies can potentially offer key information which may aid management. **Methods** 26 patients with severe asthma had endobronchial biopsies to assess for evidence of remodelling. Patients also had BAL fluid and serum markers analysed along with spirometry and an ACQ-7 questionnaire. **Results** Endobronchial biopsies were scored for reticular basement membrane (RBM) thickness and eosinophil and neutrophil counts. There was no difference in RBM thickness when groups were split as per asthma severity, treatment with biologics and sex. We found that neutrophil and eosinophil counts correlated to serum neutrophil and eosinophils respectively. 75% of patients on biological treatment had no eosinophils visible on analysis of the biopsies. We also observed clusters of neutrophils in some samples. We further explored this with immunofluorescence staining to establish if NETosis was occurring in these samples and found colocalisation of histone H3 and neutrophil elastase in some incidences. **Conclusion** Although, neutrophil swarms and even NETosis are not classically associated with asthma we have observed evidence of this in endobronchial biopsies from severe asthma patients. **Disclosures: Conflict of Interest:** The Authors declare that they have no conflict of interest.