Structure of the Airway Mucosa with Particular Emphasis on
Secretory Cells

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INTRODUCTION

The epithelium lining the airways of the normal mammalian lung consist of many morphologically distinct cell types often with different but sometimes overlapping functions. In disease the integrity of the epithelium may be compromised such as in symptomatic asthma[1]. In bronchitis there are increased numbers of surface mucus-secreting cells and enlargement of submucosal glands[2]. Malignant transformation of specific epithelial cells may give rise to tumours of differing histologic phenotype[3] and in cystic fibrosis altered movement of ions and macromolecules through and between cells can lead to defective transepithelial water flux and drying of airway secretions[4]. Figure 1 shows that the airway wall comprises epithelial, lymphoid, muscular, vascular and nervous elements interspersed in a pliable connective tissue support arranged as: (i) a lining mucosa of surface epithelium supported by a reticular basement membrane and an ill-defined elastic lamina propria, in which there are bronchial blood vessels, nerve bundles and free cells (including fibroblasts and mononuclear cells), (ii) a submucosa in which lie the bulk of the mucus-secreting glands, muscle and cartilage plates and (iii) a relatively thin adventitial coat.