

Chairman's introduction

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OBSTRUCTION to air flow, which is the subject of this seminar, may come about from a variety of factors. Both qualitative and quantitative changes in the sputum may obstruct the bronchial lumen, and the efficiency of the ciliary escalator, together with alterations in the composition of the periciliary fluid, may profoundly alter gas flow. Professor Reid will be discussing this aspect in some detail.

Bronchial tone, and its response to various drugs and substances, is another important factor in determining how much bronchial obstruction to air flow is present. What is the function of the bronchial muscle? Does it stabilize the small airways and ensure more even ventilation within these airways? Does true bronchospasm exist? Some of these questions will be posed, and perhaps answered by Dr Kamburoff.

More than 80% of resistance to gas flow is offered in the large airways, and a correspondingly small component is due to the peripheral airways. Disease of these small airways, which in quiet respiration are gravity-dependent for closure, may occur in smokers and also in some occupational disorders of the lung.

These patients are not easily investigated by routine spirometry, which may not disclose any abnormality. The role of radial forces, exerted on the small airways by surrounding alveoli is an important one, and Dr Stretton will be discussing small airway disease and its detection.

As clinicians, we are very properly concerned with the treatment of bronchial obstruction. The double autonomic innervation of the bronchi leads to a dual pharmacological approach, with sympathomimetic and anticholinergic drugs respectively.

Dr Prime will describe experiences with selective β -adrenergic stimulants.

Last, but by no means least, we should remember that the lung does not exist in isolation whether in function or malfunction. The effect of cardiac disease on lung function may be very significant, and I know that Professor Hertz has an important contribution to make on this topic.

Finally, I must thank Astra Chemicals and Fisons Ltd, for their financial support of this seminar. Without their very generous and willing aid, it would not have been possible to hold it.