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The Spring Meeting of the Thoracic Society was held on 7 and 8 March 1969 at the Royal College of Physicians, London. There were 17 short papers, one symposium, and one lecture. Summaries follow.

ALLERGIC DISEASE OF THE BRONCHI

J. PEPYS, H. O. J. COLLIER, N. B. PRIDE, and R. E. C. ALTOUNYAN There have been considerable advances in recent years in the understanding of the nature of allergic reactions occurring in the lungs and the many ways in which these reactions present in clinical practice. This symposium is aimed at considering the mechanisms and clinical implications of these allergic reactions, with particular reference to their importance in disorders of the bronchi.

First, the nature and mechanism of allergic reaction in pulmonary disease are considered. The chemical mediators of some of the responses to these allergic reactions and the effects of administration of specific antagonists to these substances are then reviewed.

Recent studies have demonstrated that one of the most important reactions, airways obstruction, cannot be explained simply as broncho-constriction; current views are presented together with their relevance to the limitations of spirometric methods of assessing changes in airways obstruction.

Finally, practical aspects of the identification of patients in whom an allergic reaction is causing, or is contributing to, their bronchial disorders, and the assessment of its importance in individual patients are considered.

THE RELATIONSHIP BETWEEN ATRIAL AND VENTRICULAR RATES IN PATIENTS WITH COMPLETE HEART BLOCK

T. J. BAYLEY and K. D. LEE The atrial rate was measured at various pacemade ventricular rates in patients with complete heart block. The atrial rate was measured from the interval between P waves (P–P intervals) in the electrocardiogram and the ventricular rate from the interval between pacemade ventricular complexes (R–R interval).

When the ventricular rate was increased there was a slowing of the atria over the range of pacemaker rates from 25 to 90/minute. There was an inverse relationship between P–P and R–R intervals which was linear over this range.

After intravenous atropine (0.6 mg.) there was some alteration of the relationship between P–P and R–R intervals. A larger dose of atropine (1.2 mg.) abolished the slowing of the atrial rate with increase in the ventricular rate.

The P–P interval was also measured during ventricular standstill. There was initially a lengthening of the P–P interval followed by progressive shortening, reaching a plateau after 12–14 seconds of ventricular asystole. When ventricular systole was re-established there was a gradual slowing of the atrial rate to the pre-standstill level. After intravenous atropine (1.2 mg.) there was no atrial quickening during ventricular standstill nor was there slowing with ventricular systole. The atrial response to ventricular asystole was not modified by the interposition of up to three pacemade ventricular beats.

COMPARATIVE TRIAL OF SURGERY AND RADIOTHERAPY FOR OAT-CELL CARCINOMA OF THE BRONCHUS: FIVE-YEAR RESULTS

A. B. MILLER The patients admitted to this trial were clinically operable, fit for resection or radical radiotherapy, and had had a diagnosis of small- or oat-celled carcinoma made as a result of a biopsy obtained at bronchoscopy. They were allocated at random to a policy of treatment by surgery or a policy of treatment by radical radiotherapy.

Of 71 patients admitted to the surgery series, three (4%) were alive at two years and one (1%) at five years. The survivor was a patient who, although fit for surgery when admitted to the trial, became too breathless to withstand a resection before operation could be performed and was therefore treated with radiotherapy. In comparison, of 73 patients admitted to the radical radiotherapy series, seven (10%) were alive at two years and three (4%) at five years. All three survivors in the radiotherapy series received radical radiotherapy. These differences do not attain statistical significance, but the mean survival for the patients in the radiotherapy series was significantly longer than that for the surgery series.

The implications of these findings are discussed.

HIGH DOSE NITROGEN MUSTARD THERAPY FOR BRONCHIAL CARCINOMA

JOHN MANNS The results are presented of single high-dose intra-atrial nitrogen mustard used to treat 10 patients with bronchial carcinoma who presented with superior vena caval obstruction. The relative ineffectiveness of conventional nitrogen mustard therapy could be due to inadequate, local concentration as a consequence of low dosage and the rapid decay rate of the drug.

A catheter was introduced into the right atrium via the femoral vein. A single dose of nitrogen mustard,

0.8 mg./kg., was given. Of the 10 patients treated, four were completely relieved, five were partially relieved, and only one showed no response. The speed of response varied from one to 10 days. Symptomatic improvement was notable. The duration of relief varied from four weeks to eight months. Recurrence of superior vena caval obstruction needing further treatment was seen in two of these patients, and another patient died of recurrent superior vena caval obstruction.

It is felt that the results of this small series warrant further consideration of this readily available method of treatment as an alternative to radiotherapy.

LUNG TRANSPLANTATION

LLOYD D. MACLEAN Important lessons in transplantation, in general, gleaned from 100 cadaver renal transplants are reviewed. The problems of suitable donors, likely recipients, and the importance of histocompatibility matching and the difficulties in the use of anti-lymphocyte serum are discussed in relation to lung transplantation.

Experimental as well as clinical lung transplantation indicate several unsolved problems that include the blood supply to the bronchus of the transplanted lung, the need for bilateral pneumonectomy in some potential recipients with the attendant risk to normal respiration and cough reflex, lack of a proven index of rejection, and the necessity to transplant a contaminated organ. These problems in relation to a personal lung transplant are reviewed.

THE PROBLEM OF GENERAL ANAESTHESIA IN PATIENTS WITH CHRONIC RESPIRATORY DISEASE

J. A. THORNTON Opinions vary regarding the advisability of general anaesthesia in subjects suffering from chronic respiratory disease. If general anaesthesia is decided upon, there is a further division of opinion as to whether ventilation should be spontaneous or controlled.

Twenty-one subjects with severe chronic obstructive disease of the lung have been subjected to a detailed analysis of respiratory function before, during, and after general anaesthesia. The findings are briefly presented, and recommendations are made in relation to the selection and management of these subjects for operative surgery.

During general anaesthesia, ventilation should always be controlled, the ventilatory requirement being adjusted to take into account the increased dead space of these subjects. Oxygen enrichment of the inspired mixture is necessary to maintain adequate oxygenation of arterial blood. Provided that the anaesthetic and surgical teams are prepared to offer ventilatory support to these patients in the immediate post-operative period, few patients will need to be barred from surgery.

THORACIC MANIFESTATIONS OF BEHÇET'S SYNDROME

A. G. DECROIX The case of a 52-year-old man with thoracic manifestations of Behçet's syndrome is described. The disease presented with an arthritis of the left knee which cleared spontaneously within one month. Later there were aphthous lesions of the mouth and genitalia, bilateral uveitis with hypopyon, and thrombophlebitis of the subclavian and innominate veins, associated with superior vena caval obstruction. At the same time diffuse bilateral pulmonary opacities were observed in the chest radiograph. Biopsy of the lung revealed diffuse fibrosis with many new vessels within the fibrotic areas. Capillaries were enlarged and engorged with red cells. Thromboses, haemorrhages, and peri-arterial infiltrations with lymphocytes and plasma cells were also noted. Similar histological changes have been observed in other sites in patients with Behçet's syndrome.

MEDICAL INVESTIGATIONS AMONG THE INDIANS OF BRAZIL

P. HUGH-JONES The upper Xingu region of Central Brazil is of great anthropological and medical interest because, until the time of the aeroplane, it had remained completely isolated by the vast areas of the Mato Grosso to the south and by numerous waterfalls as the Xingu river goes into the Amazon to the north. A proposed road between Brasilia and Manaus will go across the upper Xingu.

The Royal Society–Royal Geographical Society expedition from 1967–1969 was made primarily to study the ecology of the area, but incidentally provided interesting medical and anthropological material.

There has been about a 50% mortality among Indians soon after their first contact with civilization which appears to be from respiratory virus infection. Methods of obtaining blood samples and of their preservation for the study of this problem are discussed, and a brief review of life among the Indians in this region is given to outline the social, medical, and anthropological interest of these Indians.

THE SMALL PULMONARY ARTERIES IN PRIMARY PULMONARY HYPERTENSION AND EMPHYSEMA

P. G. I. STOVIN The frequency distribution of injected pulmonary arterial branches of different diameters was studied in one normal 36-year-old man, in one woman of 32 years with primary pulmonary hypertension, in a 58-year-old woman and a 69-year-old man with panacinar emphysema, and in one 60-year-old man with centrilobular emphysema. The data are presented to try to assess the extent to which arteriolar contracture, hypertrophy, and loss of branches individually and together have played a part in the pathology of the lungs in these cases.

AN OPERATION FOR PECTUS EXCAVATUM

G. H. WOOLER The main force keeping the sternum forwards in an elevated position is the filling and contrac-