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✓ CARCINOMA OF THE BRONCHUS

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Ten years ago a symposium on this subject was published in this journal. Since then much water has flowed under the bridges, and our knowledge, not only in regard to the diagnosis of lung cancer but also in regard to its treatment, has improved considerably. There can no longer be any doubt that this condition, which at the beginning of this century, and indeed for more than a decade after, was regarded as one of the rarities of medicine, is now acknowledged to be a common disease. In our original symposium Harnett⁴ showed that, while the total number of cancer deaths in both sexes had risen by 22 per cent., that for respiratory cancer had risen by 120 per cent. Since that statistical survey the mortality from lung cancer

has continued to rise and, at the present time, it is estimated that the number of deaths per annum in this country is something in the neighbourhood of 12,000.

Investigations into the aetiology of bronchial carcinoma continue to occupy the attention of pathologists and medical statisticians. The factor of chronic irritation, the significance of which is obvious enough in experimental cancer in animals, has been much emphasized of late in numerous articles dealing with the incidence of the disease in smokers and non-smokers, respectively. In assessing the practical value of the latest statistical reviews it is important to keep a certain balance of judgment. The much-discussed papers of Doll

and Bradford Hill⁸ demand the most careful study. They represent what is probably the best and most exhaustive investigation so far produced by authors who are acknowledged experts on this side of the question. It must be remembered, however, that, in the view of most students of human cancer in all its aspects, there is a basic genetic factor; in other words, it would seem that certain types of persons are more likely to develop the disease than others, and that various external causes acting upon such predisposed subjects may determine the site of the growth in individual cases. More than that it is, perhaps, inexpedient to say at the moment; many of the most dogmatic expressions of opinion in medical literature are at best but *ex parte* statements.

The continued improvement in our technical methods of examination has undoubtedly led to the recognition of the presence of bronchial carcinoma in numbers of patients in whom even a decade ago the condition would have been missed. Not only do we see more and better radiograms, but bronchoscopy is employed with increasing frequency. Nonetheless it is still necessary to emphasize the importance of symptomatology and the vital responsibility of the clinician in insisting on the most complete examination by those special methods in the case of a patient, especially in the age-period around 55, in whom he has the slightest reason to suspect the possibility of a bronchial growth. Even now, in spite of all the work that has been done in the last 10 years, there is a regrettable tendency to allow certain cases to progress without adequate investigation, because, as so often happens, the physical and even the radiological phenomena in the chest are minimal. This is especially true of cases of slight haemoptysis in which the radiological and bacteriological exclusion of a tuberculous lesion of the lung has appeared to satisfy the practitioner that no serious disease is present. Again it is necessary even today to issue a reminder that in certain illnesses apparently due to pulmonary inflammation the true underlying cause may be a new growth. The term 'unresolved pneumonia' is still a frequent euphemism for an unrecognized bronchial carcinoma.

The clinical and radiological phenomena as-

sociated with lung cancer will be dealt with in detail in the various articles of the following series. It is, however, as well to remind our readers of two aphorisms of importance in regard to the early diagnosis of malignant bronchial growths. Rienhoff⁵ remarks 'there are no characteristic signs and symptoms of primary carcinoma of the lung'; and Brock¹ insists 'if we are to diagnose this grave and fatal condition in a reasonably curable phase, it must be remembered that the slightest departure from normality in the lungs and bronchi is suspicious and needs pursuing.' It is some years since the above observations were made, but it is still not uncommon to find instances of incomprehensible delay in submitting to complete and adequate investigation patients who, in the light of modern knowledge, should afford the practitioner ample ground for suspecting the presence of lung cancer. Even when X-ray examination has disclosed a definite abnormality there is still an inexcusable tendency on the part of some practitioners to procrastinate, and to suggest a repetition of the X-ray after a month's interval rather than call for an immediate consultation with a thoracic surgeon. Confirmation of the diagnosis by biopsy or by the examination by special methods, of trap specimens obtained during bronchoscopy is always more satisfactory to the surgeon who is called upon to explore the chest; but it is not always possible, and in the last resort an exploratory thoracotomy may be imperative as the only way of reaching a decision. It must also be remembered that even then the diagnosis may not be established with certainty during the course of the operation, and the surgeon may have to plan beforehand for partial or complete lung resection in a case which ultimately proves to be non-malignant rather than run the risk of leaving untouched an operable carcinoma.

We have often expressed the view that, despite much sententious verbiage about team-work, there is in actual practice a lack of sufficient co-operation between physicians and surgeons in the general handling of these cases. We do not suggest that it is possible or even desirable to add to the anxiety and worry of the patient and his relatives by burdening their minds either with technical details or with elaborate statistics of survival

rates. On the other hand, it does seem to us that in such grave circumstances the lay public have the right to expect a fair statement of the essentials of the position and to demand that their medical advisers should, so to speak, put their cards upon the table. To fulfil this duty is never a pleasant task, nor is it always easy. It is known that of all the cases of lung cancer which come for examination only a small proportion appear on investigation to be operable. It is further known that of those regarded in the first place as operable again only a small proportion prove to be so when actually explored. The relatives of the patient have the right to know these facts when their consent to operation is sought, and the information given to them should be as full and as explicit as is consistent with their ignorance, as laymen, of the technical details of pathology and surgery. Such explanations usually fall to the lot of the physician, and it is of importance that he should have a real and not merely a vague acquaintance with the present state of our knowledge and with some of the difficulties of his surgical colleagues. It is important to emphasize the urgency of operative treatment with a reasonable degree of optimism, and at the same time with some warning as to the possibility of disappointment, even in cases which *prima facie* appear to offer good prospects of radical cure. These growths vary considerably in the rapidity with which they give rise to metastatic deposits elsewhere in the body, and the results of exploratory thoracotomy cannot be predicted with certainty.

A study of the survival rates furnished in recent years by various competent authorities does, without doubt, show a marked improvement in the present outlook in regard to lung cancer in comparison with that of a quarter of a century ago, when to make such a diagnosis was tantamount to signing the patient's death warrant. Today we can at least say that some cases are cured, albeit the number is not great. Out of 112 operable cases in which the growth was removed Rienhoff⁶ recorded a survival rate of 39 per cent. for periods varying from one month

to 13 years. Of 79 patients operated on at the Brompton Hospital⁷ and followed up, 5 per cent. had survived for more than five years, 16 per cent. for more than three years, 23 per cent. for more than two years and 39 per cent. for more than one year. These figures, which are by no means the latest, are sufficient to give some idea of the improved position and to counteract the attitude of pessimism still adopted by some practitioners when treatment by radical surgery is proposed.

It is generally admitted that, in the present state of our knowledge, radical surgery is the only form of treatment which holds out a real hope of cure, and radiotherapy, though a valuable palliative, is not curative. It is possible, and perhaps likely, that in the future better results may be obtained by a combination of the two. At present, as Smithers³ has pointed out, 'Even though surgery deals most effectively with the few operable cases of bronchial carcinoma, it only touches the fringe of the problem and is unlikely to improve its position greatly without either a revolution in diagnosis or by combination with some other form of treatment. . . . Radiotherapy tackles a larger section of the problem than surgery, but tackles it less efficiently.' Chemotherapy, though useful in the treatment of certain forms of the reticuloses, has proved disappointing in cases of bronchial carcinoma.

Prognosis in the treatment of lung cancer in the last 30 years has been slow but real. In view of the increasing number of recorded cases of successful treatment, there seems good ground for the belief that in the coming years the outlook for these patients will be even more hopeful.

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