Practical Points of Diagnosis and Treatment in Medicine.

THE BRONCHOSCOPE IN THE DIAGNOSIS AND TREATMENT OF PULMONARY DISEASES.

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THE quest for accuracy in diagnosis is responsible for a very considerable part of the growth of all the accessory methods of investigation which have developed in the last thirty years, and of these pathological, radiological and endoscopic methods are of the most importance.

Our article is concerned with the last of these. "To see is to believe"—and there is no doubt that to *see* the diseased part is of greater service and of more accuracy than a deduction of the condition present by other means. In this endeavour to get a "sight" of the diseased part the clinician has called to his aid the modern advances in optical and electrical science, and any part of the body which has an orifice available has been explored in this direction. The cystoscope, sigmoidoscope, gastroscope, and gastric camera have become essential to their respective departments, and recently the chest specialist is beginning to realize the uses of the bronchoscope. This instrument, although invented some thirty-five years ago, has been little used in this country in the diagnosis of diseases of the lungs and bronchi, and this tardiness has continued despite the fact that Chevalier Jackson in the United States of America has been for years an enthusiastic and expert exponent of its uses, both in diagnosis and treatment. Probably this delay in recognition of its great use has been due to the direction in which it has developed. Originally an instrument whose main use lay in retrieving foreign bodies, it was included in the armamentarium of the laryngologist, but foreign bodies being rare in this country, and other cases being seldom referred to the laryngologist for this examination, their experience of its use was mostly very limited. The laryngologist, through this accident of the use of the instrument, in the first place for removal of foreign bodies, has trespassed down the bronchi, which are undoubtedly part of the lungs, and the domain of the physician who specializes in that department. We have always felt that it was an instrument with great potentialities, and following Chevalier Jackson's visit to this country in 1930, we decided it was a method we should become conversant with. Having therefore learnt the art of bronchoscopy, we started a clinic at Victoria Park Hospital, and propose in this paper to briefly state a few of the results of a series of 650 bronchoscopies in which this investigation has proved of value. And here we would like to thank our colleagues at the Hospital who have so generously helped us by referring their cases to us for diagnosis, and, when suitable, for treatment by this means.

The diagnosis of pulmonary tuberculosis can usually be made from the history, physical examination, pathological examination and skiagram, but on occasion these

methods give an indefinite answer, and in such cases bronchoscopic examination may be of great value. We have frequently found this so, and the following case is a good example :—

A. M., female, aged 21. Cough and wasting some months. Physical signs of infiltration at the left base. Skiagram showed a shadow in this region. No sputum. Fæces negative for T.B. on several occasions. Bronchoscopy—swabbings taken from bronchi of the area involved showed T.B. to be present.

One of the commonest symptoms in diseases of the lungs is hæmoptysis. This always calls for very careful investigation. If this symptom occurs in a young person the patient remains a tuberculous suspect until another diagnosis is proved.

In the adult patient, at or past middle-age, not only must tuberculosis be considered but also bronchial carcinoma, which is equally possible as a diagnosis; indeed, both diseases may be present. The suspicion of either of these diseases which has been aroused by an hæmoptysis will often receive support from skiagrams and sputum examination, but in other cases these investigations will be negative, and in these a bronchoscopic investigation should most certainly be carried out; for although even with this investigation it may not be possible to prove the presence of tuberculosis, one may be able to find another cause for the hæmoptysis, and so provide the appropriate treatment and save the patient the stigma of remaining suspect of T.B.; whilst in older patients a new growth may be found or its suspected presence confirmed.

T. P., male, aged 20. For several years repeated hæmoptysis. Physical signs, skiagram and lipiodol negative. Bronchoscopy showed a crescentic vascular septum opposite the right middle lobe bronchus. This was cauterized, and there has been no further hæmorrhage.

A. M., male, aged 27. For the last few months has had occasional hæmoptyses, and a little purulent sputum. Skiagram showed no definite shadow. Bronchoscopy shows dilatation of the right middle lobe bronchus, which is exuding pus. This bronchus filled with lipiodol with the aid of the bronchoscope shows definite bronchiectasis in the skiagram.

G. M., male, aged 50. For the last few months had suffered from repeated hæmoptysis. Skiagram showed a dense shadow arising from the left hilus. New growth was suspected. Bronchoscopic examination revealed no neoplasm in the left bronchus, but pus was seen coming from the bronchus to the upper part of the left lower lobe. Bronchoscopic lipiodol injection demonstrated an abscess cavity, and since treatment by bronchoscopic aspiration there has been no further hæmorrhage.

The diagnosis of pulmonary suppuration (a general term including pneumonitis, abscess of varying ætiology and bronchiectasis) can usually be made from the history, physical examination, and, above all, from the macroscopic examination of the sputum, if the lesion is open to a bronchus; nevertheless, in order to arrive at a conclusion as to the type of suppuration and its ætiology further investigation is necessary. A lipiodol injection will in most cases demonstrate quite clearly a bronchiectasis, if present, but will give little help as to the cause of the condition.

The following cases illustrate this point :—

A. B., male, aged 25. Cough and purulent sputum for six months. Physical signs suggest bilateral bronchiectasis, right side more than left. Lipiodol examination confirms.

Bronchoscopic examination shows that the right main bronchus just below the middle lobe bronchus was partially occluded by a hard foreign body, which on removal was found to be half of a bone or composition button, and thus was not visible on the skiagram.

Although he had denied previously any history of such an occurrence, he remembered, after it was brought up, having "swallowed" the same six years previously.

Chevalier Jackson considers that every case of bronchiectasis should be examined to exclude the possibility of a foreign body as a cause of the condition. Though it appears to be an infrequent cause in this country, the *possibility* that it may be the cause is sufficient indication for a bronchoscopy in all cases of this disease.

If the pulmonary suppuration is due to a lung abscess the lipiodol injection will usually fail to show the abscess cavity, its entry being prevented by the inflamed mucous membrane of the bronchus of drainage. Bronchoscopic examination allows the passage of a tube along the bronchus of drainage, and injection through this of lipiodol into the cavity demonstrating its exact size and position.

J. B., male, aged 40. Four months previous to admission acute respiratory illness followed by coughing up foul sputum. Physical signs at the right upper lobe. Skiagram suggested pulmonary tuberculosis.

Bronchoscopy revealed pus from right upper bronchus. Lipiodol injected via the bronchoscope drainage tube defined the exact position of the abscess, which was subsequently reached by external operation.

Again lung abscess may be present though nothing is evident from physical signs and the skiagram may show no shadow at all. The mediastinal aspect of the lung in the angle of the diaphragm is not infrequently the site in these cases; bronchoscopic examination shows the pus coming from one of the internal divisions of the lower lobe bronchi and lipiodol injected down this demonstrates the cavity.

A. H., female, aged 20. Four weeks before admission acute respiratory illness, followed by cough and foul sputum. Physical signs at left base. Skiagram showed no shadows.

Bronchoscopy revealed pus coming from right lower lobe bronchus. Lipiodol injection of this bronchus showed an abscess cavity, which healed on bronchoscopic drainage.

In those cases in which a bronchial neoplasm is obstructing a bronchus, suppuration will take place distal to the occlusion, producing an abscess or a condition of bronchiectasis, giving all the signs and symptoms, and often the radiological appearance of a simple abscess or of bronchiectasis. Bronchoscopic examination is the only method by which the underlying neoplastic cause can be found.

F., male, aged 38. For the last few months, following pneumonia, patient has had repeated hæmoptyses, and brought up foul sputum. Signs at left upper lobe suggests an abscess. Skiagram also suggested diagnosis of bronchiectatic abscess.

Bronchoscopy revealed left upper bronchus to be occluded by a mass, and a piece removed for section proved this to be a new growth. Post-mortem confirmed.

The most common intrathoracic neoplasm is the bronchial carcinoma, and there is no doubt that this disease is increasing in frequency. The bronchial carcinoma probably starts as a small warty growth in the bronchus, and in this stage gives rise to no signs or any discernible radiological appearance, the only symptom being an irritating cough.

It is seldom that the patient comes for examination at this stage and still more seldom that a bronchoscopic examination is done, but if such a cough develops and persists in a man over middle-age a bronchoscopic examination is essential.

Somewhat later the growth may bleed and although physical and radiological signs are still absent, the hæmoptysis is a danger signal to both the medical and lay mind, and a bronchoscopic examination reveals the true state of affairs. The following case is a good example:—

P., aged 55. Repeated hæmoptysis. Physical signs nil. Repeated skiagram revealed nothing.

Bronchoscopy revealed a pedunculated tumour at the junction of the right middle and lower lobe bronchi. A piece of the tumour removed for section showed it to be an oat-celled carcinoma.

As the carcinoma grows bigger it may occlude the bronchus, and cause collapse of the area served by that branch. This pulmonary collapse gives rise to cough, pyrexia, pain, dullness to percussion, blowing breath sounds or diminished air entry, and the signs are usually mistaken for pneumonia. The acute symptoms disappear in four to six weeks, but the signs remain, and the disease slowly progresses.

W., male, aged 66. Eighteen days history of fever, cough and pain in chest, the condition not improving, and patient sent to hospital. Physical signs—diminished percussion, resonance and air entry at right base. Skiagram suggests consolidation. The history was so suggestive of bronchial carcinoma causing collapse that bronchoscopic examination was done within two days of admission, and a polypoid growth blocking the right lower main bronchus was seen. Section proved this to be an oat-celled carcinoma.

H. M. (example of carcinoma started as a “pneumonia”). Male, aged 44. Eight weeks before he came under our care he was admitted to a general hospital as pneumonia. After six weeks his condition improved, and he became afebrile, and was discharged. Two weeks later he attended as an out-patient, when signs of collapse at the right base were found, and confirmed by radiography.

Bronchoscopic examination showed a carcinoma of the bronchus, which was confirmed on section.

We have found the method of use in the diagnosis and/or treatment of the following conditions:—

Purulent bronchitis.

Dry bronchitis from infection of upper air passages.

Calcareous nodules and bronchiolitis.

Fibrosis and syphilitic disease.

To see results after phrenic avulsion.

Mediastinal growths.

Congenital bronchiectasis.

Hydatid disease of the lung.

Asthma.

Simple polypus.

Diagnosis of pneumothorax from cavity in the lung tissue.

To give a descriptive case history as an example of each of the above-mentioned conditions would require too much space and therefore we have merely enumerated them.

To sum up, we would suggest that all cases of hæmoptysis in which the diagnosis is in doubt, after the usual examinations, should be subjected to bronchoscopic examination. That all cases of pulmonary suppuration should be examined by this means in order to see: Firstly, if light can be shone on the cause of the condition; and secondly to define the type and localization of the lesion. That in any pulmonary case in which, after the usual investigations, the diagnosis is not clear, a bronchoscopic examination is well worth undertaking.

In treatment, the bronchoscope, apart from foreign bodies, has two main therapeutic uses, the most important being in the drainage of suppurating foci in the lungs and bronchi. The second, less hopeful, is for the intrabronchial application of radium to the neoplasm. As regards the first of these we are reporting our results elsewhere, and it is sufficient now to say that in the case of abscess:—

8 acute abscess treated	...	8 healed
14 chronic abscess treated	...	13 satisfactory results
		1 referred to surgeon

In bronchiectasis, repeated drainage is not curative, but in our opinion undoubtedly the best palliative measure.

As regards the application of radium to new growth, the number of cases we have treated in this manner is too small to give any indication of its value, but we are working along these lines and hope to be able to give the results at a later date; as we have stressed previously it is necessary to get these cases before they have definite signs, which occur late, and to bronchoscope many cases who prove to have no disease in an endeavour to get hold of those who have reached a stage when treatment is likely to be of service.

PSYCHO-THERAPY IN GENERAL PRACTICE.

By Dr. M. MARCUS, M.B., B.S.

THE management of nervous patients forms such a large part of our work in general practice that it is worth discussing how far the methods of psychotherapy can be applied by the general practitioner himself. If we begin by attempting some sort of classification, all would agree that patients suffering from a severe neurosis should be referred to the expert. Such cases are arduous and demand of the physician not only exceptional skill, but I venture to think, a certain gift and quality of temperament.

There remain, however, a host of simpler neurotic symptoms and conditions which form the basis of our everyday work, and which, given a fair working knowledge of modern psychological theories and technique, can be quite adequately treated by the general practitioner.

The great stumbling-block hitherto in the treatment, not only of nervous patients, but of disease in general, has been the arbitrary division of illness into "functional" and organic.

We, as general practitioners, have to deal, not with individual parts, but with people who are ill. Illness is a derangement of the whole personality, and in the body there is no dividing line between the soma and the psyche. While it is a convenient fiction to speak and think in terms of diseases of this or that part of the body, it must not be