technicians like surgeons and bacteriologists. They do not give these people a free hand with their patients, but call them in, consult with them, and then use them or not as seems fit.

There is an idea abroad that no psychological treatment except psycho-analysis is worth talking about. I have spent my life in trying to show that this is not true. I am saying nothing against psycho-analysis, which is probably the best treatment for certain cases, but there are a great number of patients who do not need it, for whom something quite simple is all that is required. I have no wish that medical students should learn analysis. It would be impossible for them to do so even if it were desirable. Time would make it so. For the same reason, even if psycho-analysis were the only psychotherapy, mental treatment would be impossible for the majority of patients. In my view there are, and have been for a long time, simpler and shorter methods of psychotherapy which are at least as old as Freud's system, and of which the greatest exponent was Dejerine of Paris. This depends on the fact that many symptoms are caused by conflicts and anxieties which are not necessarily unconscious in the Freudian sense, but which are not being faced properly. Taking a full history, in the course of which the patient may be induced to speak of these worries, be guided about them, have many of them explained so that they no longer cause anxiety, will in many instances bring about a great change for the better in the patient's mental outlook and in his health. Many of these anxieties will be on intimate personal matters, and talking about them will often give relief. Many will be about disease and health. It is incredible what extraordinary views people hold about health in general and their own in particular; and here it is that doctors should be more careful than some of them are in telling patients that they may have frail or impaired organs when the real truth is that these doctors themselves are unable to make a diagnosis. For the same reason students should be taught, when there is physical disease, not to put the gloomiest possible view before the patient, a thing done often with the best intentions so as to bring a patient to take some care of himself, but which may be followed by disaster.

There is one essential—namely, that the patient and the investigator must be alone together for their talks. People will not speak of intimate things before a crowd. Therefore it cannot be demonstrated to students how to do it; but students could be told the procedure and be supervised while they were learning to practise on patients. There will be cases which such a procedure will not cure; these are for the specialist. We expect a general practitioner to treat many dyspepsias, kidney diseases, headaches, and catarrhs by himself, and not to run to a specialist for every one. But there will be dyspepsias, headaches, and catarrhs for which he will need a specialist, and we expect him to learn which are those that he can treat himself and which are those where he should seek special skill. The same thing applies to the neuroses.

The Teachers

Who is going to teach the students? Time is needed. There should be someone who can teach them as clinical tutors teach them physical signs. These teachers may be under the psychiatrist; but whoever is at the head of this department should not be locked away in the department of psychiatry, but should be asked to come to the wards and consult with the physicians and surgeons as to whether there is a large emotional element in this case

or not. The medical or surgical chief and the student will then not lose sight of the case as they will if the patient is dismissed to the psychiatric department because the general ward has got tired of him. If I am told this is impracticable I answer that nothing is impracticable which has been done and is done. Dejerine did it in his wards, and said that he got better results than in private practice. It is being done in America, and an extremely vivid description of the psychiatrist being welcomed in the general wards and consulted frequently has been given by J. Kasanin of Chicago (1937).

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THE VALUE OF RADIOLOGY IN THE ELUCIDATION OF HAEMOPTYSIS*

BY

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Haemoptysis is an important symptom in diseases of the chest, and was formerly considered to be a certain indication of pulmonary tuberculosis unless the contrary could be proved. We know now that it may be a symptom of any chronic or acute disease from simple bronchitis to lobar pneumonia.

Haemoptysis in Pulmonary Tuberculosis

If pulmonary tuberculosis has been responsible for a haemorrhage from the lungs, a chest skiagram will nearly always supply evidence of this disease. But it sometimes happens that although the history and symptoms are suggestive of pulmonary tuberculosis, a skiagram fails to show any abnormality. It appears probable that this may be explained by the presence of a small focus of disease which either proves abortive or goes on subsequently to the development of a more obvious lesion. It is desirable, however, that a very careful radiological examination should be carried out, since a tuberculous focus, or even a small cavity posterior to the lung root or heart or behind the domes of the diaphragm, may be easily missed. The investigation should include a screen examination and radiographs taken in the oblique and lateral positions. The semi-oblique position, with the patient rotated so that the clavicle on the side to be examined is parallel with the cassette, is of special importance in demonstrating lesions in the vicinity of the lung root. Radiographs taken with the Potter-Bucky diaphragm or a fixed grid of the Siemens or Lysholm type are also of value, especially in stout patients.

The invention of tomography has considerably enlarged the scope of the radiological examination of the chest, and I think that in the future it will prove a method of considerable interest in the examination of cases of haemoptysis with no obvious lesion in the lungs. As some of these patients subsequently develop a lesion which can be demonstrated radiologically, it is important to carry out serial radiographs at intervals to exclude the presence of disease.

There are many other conditions besides pulmonary tuberculosis which may cause haemoptysis, the most

* Read in opening a discussion in the Section of Radiology at the Annual Meeting of the British Medical Association, Plymouth, 1938.

important being bronchiectasis, heart disease, new growth, aneurysm, and trauma. A frank haemoptysis may also occur in early pneumonia. An interesting paper was published in 1928 by Vinson describing work carried out at the Mayo Clinic on the relative frequency of haemoptysis in pulmonary tuberculosis, bronchiectasis, and mitral stenosis. The history of 100 patients suffering from each of these diseases was contrasted, and it was found that forty-nine of the 100 with bronchiectasis had haemoptysis, as compared with twenty-nine in the pulmonary tuberculosis group and only eighteen among those suffering from mitral stenosis. This suggests that while it is true that pulmonary tuberculosis usually is the cause of a pulmonary haemorrhage because of the greater frequency of the disease, the relative incidence is much higher in bronchiectasis.

Dry Haemorrhagic Bronchiectasis

The occurrence of haemoptysis in bronchiectasis has been known for a long time, but it is only since the introduction of lipiodol as a method of outlining the bronchi that the presence of what is termed "dry haemorrhagic bronchiectasis" has been successfully demonstrated. In this condition there are no obvious physical signs such as clubbing of the fingers or purulent sputum, which may reveal the presence of the disease on clinical examination. The radiological investigation is therefore of considerable importance. The preliminary radiographs may show evidence of fibrosis, or the dilated bronchi may actually be visible as a series of spherical or cylindrical clear spaces, but in any case lipiodol will be required in order to show the extent of the disease. The lesion may be found either in the upper part of the lung, where it closely simulates pulmonary tuberculosis in appearance, or, more commonly, in the lower zone, where it is less likely to be confused with other lesions. When the condition is developmental in origin and probably due to failure in budding, the dilatations are spherical in appearance, while in the acquired disease the dilatations are usually cylindrical.

There are many methods of introducing the oil in common use, the simplest of which is to drop it on the back of the tongue after abolishing the swallowing and cough reflexes by means of a 5 per cent. cocaine spray and 10 per cent. brush, in each case a little adrenaline being added. This gives good pictures when successful, and causes the patient a minimum of discomfort. The use of a nasal catheter is a surer way which enables the oil to be injected into any part of the lung under screen control. The lipiodol can also be introduced through the crico-thyroid membrane.

If the opaque medium is introduced through a bronchoscope the resulting films are never so good as those obtained by other methods. The lipiodol tends to be concentrated in one part of the lung, and the appearances are often deceptive owing to localized areas of alveolar filling, which may closely resemble cavitation in the lung. It is, however, often impossible to outline properly the cavity of an abscess of the lung by any other method.

The radiographic technique will naturally vary with the apparatus at the disposal of the operator. It is essential to take radiographs in the shortest possible time and to over-expose the films. It follows from this that a set of high output and the use of a rotating anode tube will give the best results. The exposure time should, if possible, be one-twentieth of a second or less.

Haemoptysis in Heart Disease

The radiological examination of the heart is an important branch of chest radiology that has made very much progress in recent years. The appearances of the heart and great vessels on screen examination and in the tele-radiograph have been exhaustively studied, and more recently kymography has been introduced as a method of examination which is already proving of considerable use. The apparatus consists of a moving grid with a series of horizontal slits at intervals of twelve millimetres which record the movements of the beating heart as a wavy line. Respiratory movements of the ribs and diaphragm can also be registered. In the examination of the heart the exposure is made with the breath held so as to avoid respiratory disturbance of the heart movements. Each region of the heart has a characteristic curve. The aortic arch also gives a wave form which distinguishes it from opacities due to neighbouring structures.

It is necessary to exclude any lesion of the heart when examining a patient with haemoptysis, since many of these patients are in reality suffering from heart disease. Haemoptysis is less common in heart lesions than in pulmonary tuberculosis or bronchiectasis, but it is an important symptom in mitral stenosis. Paroxysmal attacks of haemorrhage may occur in this disease, due to congestion in the lungs or to infarction. In an early case of mitral stenosis the first radiological sign in an anterior radiograph is a prominence of the pulmonary artery and pulmonary conus. Some enlargement of the left auricle may probably be detected at this stage in an oblique film. As the degree of stenosis increases there is a progressive enlargement of the left auricle, which can be seen bulging into the retrocardiac space both on screen examination and in radiographs taken in the first oblique and lateral positions with or without a barium swallow. The accompanying congestion in the lung fields is a characteristic feature.

Pulmonary Infarction

Pulmonary infarction is a possible cause of haemorrhage wherever there is vascular engorgement in the lungs. Such engorgement may occur in mitral stenosis and also where there is left ventricular failure. It also occurs as a post-operative phenomenon. The radiological changes seen in pulmonary infarction were not well known before the advent of the portable radiograph. As the patients are usually very ill the condition is rarely seen in the routine radiographs taken in the x-ray department. Shirley Smith (1938) in a recent paper has described thirteen cases with radiographic control. The changes are usually seen at the base of the right lung. The appearances are variable, and may consist of an area of clouding rather like the appearances seen in pneumonitis, or an irregular shadow may be present resembling that seen in lung abscess. An accompanying pleural effusion may mask the area of consolidation in the lung. It is worthy of note that in the absence of pleural effusion the heart is usually drawn slightly towards the side of the lesion.

Bronchial Carcinoma

A frank haemoptysis is uncommon in bronchial carcinoma, although it may be a leading symptom, for instance, in a malignant papilloma spreading from the bronchial wall. The lumen of the bronchus at the site of growth may be filled with necrotic material, and blood is not present in sufficient quantities to be obvious in the sputum. In the relatively rare benign bronchial growths, such as papilloma and endothelioma, haemorrhage is, on the other

hand, common and may be profuse. A bronchial carcinoma usually produces changes in the lungs that are easily seen in a film, but the small benign growth will not be detected unless it is large enough to block the lumen and cause atelectasis. It follows, therefore, that the radiological examination may be entirely negative. Examples of such cases were described by Morlock and Scott Pinchin (1935), McGibbon and Baker-Bates (1937), and others. The latter authors describe tracheal varix and non-specific granuloma as causes of pulmonary haemorrhage. The rare tracheal carcinoma may be the cause of haemoptysis, and is sometimes visible in the skiagram after lipiodol. If the radiological examination is negative and the attacks of haemoptysis continue, a bronchoscopic examination must be considered.

Aneurysm of the Aorta

In aneurysm of the aorta haemoptysis is only seen as a terminal event, staining of the sputum being a warning sign of the imminence of a rupture. The diagnosis of aneurysm is not always easy to the clinician, especially if the posterior part of the arch or the descending thoracic aorta is involved. Unfortunately it is not always simple for the radiologist, for any growth or tumour in the neighbourhood of the aorta will simulate an aneurysm, especially if the growth is one in close contact with the aortic arch and involving the pericardium. Mistakes often occur, and the Wassermann reaction is not an infallible test. Aneurysm may simulate a dermoid cyst if it is directed forwards and laterally in the superior mediastinum. Kymography is of great assistance in such cases, and I think that in the future it should lead to a correct diagnosis in most cases, since it enables us to separate the outline of the aorta from the growth and usually gives a characteristic picture.

Haemoptysis following Injury to Chest

Haemoptysis may follow injuries to the chest with or without rib fracture. Where the injury is severe the presence of a fracture is very easily shown, but there are many cases where radiological demonstration of a fractured rib is difficult. A general radiograph of the chest sometimes fails to reveal the injury. A localized view may be of assistance. This can be done by two methods. The cassette is placed in contact with the site of greatest pain and compression applied so as to prevent movement of this part of the chest wall. If the patient is then instructed to breathe lightly the part of the ribs in contact with the cassette will remain stationary and the outline of the remainder of the ribs will be blurred owing to the movement. The second method is to diminish the focal skin distance so as to blur the overlying ribs and bring the part of the chest nearest the cassette into focus.

Conclusion

This summary of the main conditions which may be the cause of a haemoptysis cannot be considered to be complete, but I hope it will have served to show that a radiological examination is an essential part of the investigation of these cases, and that it may be a deciding factor in the diagnosis. It is well known that no examination of the chest is complete to-day without a complementary radiological investigation.

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PLAY-THERAPY FOR "PROBLEM" CHILDREN

BY

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The object of this paper is to show the immediate results of treatment and the present condition of 154 of the children who attended the Institute of Child Psychology for varying periods between the years 1930 and 1935. With the exception of four cases all the children included in the follow-up were treated by the psychological method known as "play-therapy," according to the technique devised by Dr. Margaret Lowenfeld, who started the institute as a small clinic for problem children in 1928.

During the period under survey 247 children were accepted as patients. Of these thirty-two were consultation cases in which the children attended not more than three times and in which periodical advice as to management was all the treatment indicated and given. Although we know that some of these cases are doing well, they have not been included in the chart, as they were not treated by play-therapy. Fourteen patients were discovered to be mentally defective and were rejected; twenty-three cases were immediately transferred to other institutions for various reasons; and in twenty-four cases the parents proved uncooperative soon after acceptance and the patients ceased to attend. The remaining cases, 154 in number, received full treatment and are analysed in the chart below. The eldest child was 17 and the youngest 2½. They are divided into four categories—namely, neurosis, anti-social and behaviour problems, physical complaints, and educational difficulties.

The majority of the children were recommended by school authorities, social agencies, police-court officials, hospital doctors, and private practitioners. The remainder were brought by patients or friends.

Neurosis (76 Cases)

Under this heading are included cases in which the chief causes for reference were the following: anxiety, night terrors, sleep-walking, excessive or unwarranted fears and inhibitions, nervousness and hypersensitiveness, hysteria, tics and habit spasms, lack of concentration or self-confidence, inability to play, screaming fits, anorexia nervosa, insomnia, and obsessions. In addition to one or more of these symptoms seven suffered from enuresis, nine from speech defect, and fourteen were backward at school.

TREATMENT

Twenty-seven were treated by play-therapy alone. In addition to play-therapy forty-two had some kind of medical, surgical, or dental treatment for physical disorders discovered on examination, ranging from dental caries to undescended testicles; nine had speech-therapy; and fourteen educational coaching in one or more subjects. Some children needed two or three of these types of treatment.

Anti-social and Behaviour Problems (38 Cases)

These children were referred to the institute on account of difficulties such as excessive disobedience, temper tantrums, unmanageableness, truancy, vagrancy, lying, pilfering, stealing, excessive bullying, sexual offences, destructiveness, gangsterism, etc. In addition, seven of