These trials are now in progress, and it is proposed to publish the results as a supplement to this paper at a later date.

Summary

The synthetic oestrogenic substances stilboestrol, dienioestrol, and hexoestrol were given orally to 134 patients in whom it was necessary to inhibit lactation: 81 received stilboestrol, 37 dienioestrol, and 16 hexoestrol.

Ultimate success with regard to lactation was obtained in all cases, though in some there were breast symptoms. Forty-nine of the patients receiving stilboestrol, 15 of those receiving dienioestrol, and 6 of those receiving hexoestrol were symptom-free. The symptoms complained of in the remainder amounted to no more than a slight fullness of the breasts or a temporary leakage of milk. These results stand in contrast to the older methods of treatment, with which very hard and painful breasts were often seen.

The results were better when treatment was begun within one day of delivery than when it was started later. They were also better in patients in whom pregnancy had advanced beyond 32 weeks than in those in the earlier months of pregnancy. Cases of pregnancy terminating at between 20 and 28 weeks were especially difficult to treat.

After stopping treatment on the fifth day the breasts filled up in about a quarter of the cases, and further treatment was necessary, but ultimate success was achieved in every case.

Three patients with engorged breasts were successfully treated for this condition while lactation continued normally.

In the dosage tried stilboestrol was more effective than hexoestrol. Dienioestrol is a very potent oestrogenic substance, and success was achieved with one-tenth of the dose required in the case of stilboestrol.

No ill effects from the treatment were noted, apart from complaints of transient nausea in 3 patients.

Synthetic oestrogenic substances are valuable for the inhibition of lactation and for the treatment of engorged breasts. They are cheap and effective, and are easily given by mouth.

The supplies of dienioestrol used in these tests were provided through the Therapeutic Trials Committee of the Medical Research Council by Messrs. Boots Pure Drug Co. Ltd., the British Drug Houses Ltd., and the Glaxo Laboratories Ltd. The British Drug Houses Ltd. also supplied the hexoestrol used.

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In an investigation into the significance of an abnormal electroencephalogram (e.e.g.), Denis Williams (*J. Neurol. Psychiat.*, 1941, **4**, 257) comes to the conclusion that an abnormal e.e.g. in an otherwise normal subject is strong evidence of an inborn constitutional abnormality involving the central nervous system. This abnormality appears to be non-specific, and may show itself in the subject or his offspring as a behaviour disturbance which may be psychoneurotic, psychopathic, psychotic, or epileptic in type. Williams estimates that 40% of epileptics have a normal e.e.g. between fits, but the incidence of the abnormality in epileptics showing more than one type of clinical fit was 90%.

A NEW ASPECT OF DRY PLEURISY

BY

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The class of patients under review is that of young adults who present themselves with a history of pleurisy, usually associated with general malaise, pain on breathing or coughing, often no family history of pulmonary tuberculosis, no sputum, and no abnormal physical signs in the chest except a pleural rub. The radiograph is as a rule within normal limits, and the question arises, What is the cause of the pleurisy and what is the correct treatment of the case?

On the assumption that this pleurisy is tuberculous, it is usual to advise a long convalescence, and then a routine examination of the patient over a period of 6 to 12 months or more, together with sputum examinations and serial radiographs at intervals. In view of our present knowledge this treatment is correct, but economically it is not always possible.

Recently the problem has arisen because the chairmen of the National Medical Service Boards have sent patients with dry pleurisy for an opinion on their chest condition. The question whether they are fit for service has to be considered, and, if they are, in what capacity or group, or whether they should be referred for a further period before a decision is made.

A small series of lipiodol radiographs of patients with pleurisy of uncertain origin has been made, introducing the oil into the affected side; in some cases slight but definite bronchiectasis was shown. It must be pointed out that there was no clinical evidence of bronchiectasis, such as cough, sputum, haemoptysis, or clubbing. Bronchiectasis may give rise to pleurisy, and it is well known that in the dry haemorrhagic type there are often no physical or radiological signs; it was this observation that led to the present investigation.

Bronchiectasis, by definition, means a dilatation of the bronchi. However, the clinical condition of "bronchiectasis" has been expanded to include a variety of allied states, of which the relatively common congenital cystic disease of the lung is a good example. The degree of dilatation does not matter; in the earliest cases the only finding is a demonstration on the bronchogram that the bronchi fail to narrow in their distal parts as they should. It is this minimal type of bronchiectasis that has been found in certain cases.

Lipiodol radiographs were carried out on 24 patients with a history of acute dry pleurisy. In 5 of them bronchiectasis of this slight degree was demonstrated, and in 2 of these the original radiograph suggested an infection of the lung in an area which was later shown to be bronchiectatic.

Case Reports

Case 1.—A man aged 21 presented himself with a history of slight cough and pain in the right side of the chest and right shoulder. The pain was worse on breathing and coughing. There was slight sputum which had no taste or smell, but no haemoptysis. At the onset of his illness he had profuse sweats

FIG. 1A

FIG. 1B

for one or two nights, but there was no record of his temperature. The physical signs in his chest were normal, and a radiograph showed a slight smudge at the right lower zone (Fig. 1A). Three days later he was radiographed again before lipiodol was introduced, and it was found that the opacity had vanished. The bronchogram showed that the bronchus supplying the right

middle lobe was of uniform diameter throughout its whole length (Fig. 1B). The original radiograph, together with the history of night sweats, cough, and pleuritic pain, made it clear that the patient had a low-grade inflammatory lesion of the lung, the remains of which had fortunately been detected radiologically before resolution was complete. It would seem that the area of inflammation in the lung had originated in the region of the weakened bronchus.

Case 2.—A man aged 26 complained of acute pain on the left side for 4 days that was pleuritic in character, together with cough and sputum for 2 days; during this time his temperature was not recorded. There were no abnormal physical signs in his chest, the sputum contained no tubercle bacilli, and a plain radiograph showed a slight haziness at the left base (Fig. 2A). X-ray screening a week later failed to reveal any abnormality at all. The lipiodol radiograph showed that the left lower lobe bronchus was slightly dilated throughout its length (Figs. 2B and 2C). The history and the original radiograph show that the patient had an inflammation of the left lower lobe of his lung, which resolved within a week, and that this had occurred around a damaged bronchus.

FIG. 2A

FIG. 2B

FIG. 2C

Case 3.—This patient, a man aged 25, complained of intermittent pain in the right side of the chest, worse on coughing, for the past six years, together with slight cough and lassitude. There was no family history of tuberculosis. The physical signs in his chest were normal, and his sputum contained no tubercle bacilli; a plain radiograph was normal, but a bronchogram revealed a considerable degree of tubular bronchiectasis of the right lower lobe (Figs. 3A and 3B).

FIG. 3A

FIG. 3B

Case 4.—A man aged 47 first became ill in 1931, when he had acute pain in the right side of the chest, worse on breathing and coughing, associated with general malaise, pyrexia, and night sweats. This cleared up in about 2 weeks, but subsequently he had had 3 or 4 similar attacks, always on the right side, at intervals of 1 to 2 years. His last attack was in Dec., 1941, and at that time he had a pleural rub at the right base. A plain radiograph showed no abnormality, his sputum contained no tubercle bacilli, but a bronchogram revealed tubular bronchiectasis of the right lower lobe (Fig. 4).

Case 5.—The patient, a youth aged 19, had a history of general malaise and fever for 2 days, followed by cough and slight sputum. Four days after the onset of his illness he had

FIG. 4

FIG. 5

had acute pain on the left side of his chest, worse on breathing and coughing, and because of this symptom he went to his doctor. In this case also there is no record of the temperature. He came to hospital a week after his illness, the pain having disappeared in the meantime. There were no abnormal physical signs in his chest, and a plain radiograph was normal. A lipiodol radiograph revealed bilateral tubular bronchiectasis (Fig. 5).

Discussion

The series is small, and therefore the results might be misleading if represented as a percentage, but they do suggest the advisability of a routine bronchogram in cases of pleurisy of obscure origin. In those cases in which bronchiectasis can be demonstrated there is little doubt that the pleurisy is due to a low-grade infection of the lung around a damaged bronchus, because in Cases 1 and 2 the original radiograph revealed such an area of infection, which subsequently resolved in a few days, and it is reasonable to suppose that this may have been present in the other cases.

This aetiological factor is of importance because of the subsequent treatment. These patients do not need a long convalescence, nor do they need serial radiographs; and they are fit for service in the Forces—if not in Grade I, certainly in a lower grade. It is sometimes stated that the risk of a tuberculous infection in cases of bronchiectasis is greater than in normal people, but there is no doubt that this complication is by no means common.

The treatment of these patients can be divided into two stages—during the acute attack and between the attacks. In the acute stage, warmth, strapping, and relief of the cough usually clear up the pleurisy. Between the attacks the patient's general health is built up by a full diet and vitamins, and efforts are made to prevent reinfection. Thus upper respiratory tract infection is removed when possible, and the patient is advised not to frequent crowded places, because of the increased risk of picking up a respiratory infection. Most of these measures can be carried out in the Services.

As the figures show, inflammation around a damaged bronchus does not account for all the cases of dry pleurisy with negative physical signs and radiographs, but it does determine the aetiology of a proportion of them. The remainder should still be treated as tuberculous in origin; otherwise cases of pulmonary tuberculosis will be missed. Therefore a lipiodol radiograph is an important investigation in cases of dry pleurisy.

Summary

The aetiology of dry pleurisy occurring in young adults, without other physical or radiological signs, is discussed. Lipiodol was introduced in 24 patients, 5 of whom showed bronchiectasis, and in 2 of these evidence of infection was seen around the dilated bronchus.

The treatment of dry pleurisy due to infection of the lung about a bronchiectatic area is described and the importance of separating this group of cases discussed.

VITAMIN B₁ IN THE URINE AND PLACENTA IN TOXAEMIA OF PREGNANCY

BY

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Fulminating beriberi is a rare complication of pregnancy in this country. It is possible that subcritical—a term which we prefer to subclinical—states of avitaminosis B₁ do exist among some pregnant women. In Hong Kong there is a poor Chinese population in which avitaminosis B₁ is endemic. Early in pregnancy such women complained of cramps, pins-and-needles, fatigue, and oedema, just as our women do. Westenbrink and Goudsmit (1938) have shown that women of the poor part of Amsterdam—wives of unemployed—had a higher incidence of these symptoms than their non-pregnant sisters or pregnant women of the better class. Analysis of their diet showed that the food intake was much less, especially as regards brown bread.