and what it implies appeared to be little understood. On the use of the term "absolute rest" candidates were vague.

Concerning the more recent advances, such as collapse therapy, they were not as familiar as they might have been with the detailed account of the procedure and technique. Take, for example, phrenic evulsion. It was generally known that the phrenic nerve was evulsed, but how one proceeded to get at the phrenic nerve appeared to baffle a number of students. One perhaps ought to admit that the case was not a straightforward chest case, but correct routine examination would have produced more satisfactory results. Finally, whilst the general principles may be understood, detailed knowledge of procedure is expected in an examination of the standard of the M.R.C.P.

INTRATHORACIC GOITRE.

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OF the purely medical aspects of intrathoracic goitre there is indeed little to be said; the duties of the physician in such cases are mainly concerned with the question of differential diagnosis. It is therefore of importance to consider the general clinical picture likely to be presented by a patient suffering from a hidden goitre, and to emphasize such points as may enable us to distinguish this condition from other forms of intrathoracic tumour.

The growth of thyroid tissue below the sternum is not a common phenomenon; true intrathoracic goitre is an extremely rare condition. Joll,¹ in his recent monograph, has pointed out the looseness with which the term intrathoracic goitre is sometimes used in the literature of the subject and has classified these tumours into four varieties: (1) Intrathoracic goitre proper; (2) mediastinal goitre; (3) goitre plongeant; (4) substernal goitre. He makes it clear that the term substernal goitre should be reserved for those growths which are only partly intrathoracic, the goitre plongeant being ordinarily intrathoracic, though it may be forced upwards into the neck by coughing, straining, and so forth. It is the first two varieties which are most likely to give rise to difficulty in diagnosis; such cases may demand no little consultation and necessitate much team work between physician, surgeon and radiologist.

The first point on which we may lay stress is that the symptoms in cases of intrathoracic goitre, of whatever variety, are mainly those caused by pressure of the mass on surrounding structures, and that although, as in any form of thyroid enlargement, toxic symptoms may make their appearance, these are not nearly so prominent in the general clinical picture as, for example, in Graves' disease or other forms of hyperthyroidism associated with a visible tumour. Pressure symptoms in cases of hidden goitre do not differ essentially from those met with in any other kind of intrathoracic tumour, but are more likely to appear as early

Symptoms and Signs.

¹ Joll, C. A. "Diseases of the Thyroid Gland." London, 1932. Heinemann, Ltd.

than as late manifestations of disease. I should be inclined to place some reliance upon this point in cases where there is uncertainty as to the diagnosis, and where the possibility of a hidden goitre is under consideration. Dyspnoea is usually a marked feature of the condition, and may be very severe. The degree of respiratory embarrassment may vary with alterations in the position of the head, and this fact may be of importance clinically in the diagnosis of difficult cases. Dysphagia is another frequent complaint. Venous engorgement is usually seen, though this, as may be imagined, is a phenomenon common to most intrathoracic tumours which have increased beyond a certain size. Cough of a reflex character, from pressure on the trachea, may be present, and in some instances a certain amount of actual stridor may occur, Abductor paralysis of one vocal cord, from involvement of the recurrent laryngeal nerve, is also occasionally observed.

Substernal or intrathoracic goitre may have to be distinguished from aneurysm of the thoracic aorta; tracheal tugging may be present in both conditions, but movement of the tumour on deep inspiration or on swallowing may be detected by X-ray examination and occasionally by palpation, and this would be more in favour of the presence of a thyroid tumour. The peculiar ringing aortic second sound characteristic of an aneurysm may be of assistance, since this would not be observed in any other condition. The absence of this auscultatory sign, however, would be of little or no value in excluding aneurysm.

Differential Diagnosis.

Another condition which may cause confusion is thymoma. In the latter the triangular outline seen on X-ray examination may give a clue to the nature of the tumour being in some cases rather characteristic. The age of the patient may be to some extent a guide, malignant growths in association with the thymus being seen chiefly in very young children, in whom, however, one would probably observe much more severe general illness, grave anæmia, &c.; the presence of metastases in the cervical glands, moreover, might enable one to obtain histological evidence which would establish the diagnosis of thymoma.

In other varieties of intrathoracic growths such as cancer, lymphadenoma, fibromata, or dermoid cysts, pressure effects do not as a rule occur until the later stages of the disease, though in certain cases of lympho-sarcoma arising in the mediastinum the growth may be very rapid, and the resulting dyspnoea and cyanosis, which are often extremely marked, may be among the earliest symptoms and signs. In most cases, however, of sarcoma or endothelioma there are other points in the clinical history, such as the occurrence, for example, of a pleural effusion, which would at once raise the suspicion of malignant disease of the lung or mediastinum.

As in other varieties of tumours within the chest, the X-ray appearances are of the utmost importance, and indeed may often form the grounds on which we have chiefly to rely for diagnosis. Endothoracic goitre shows a rounded outline which is rather striking and which gives a shape suggestive of thyroid tumour, though it is by no means pathognomonic and may quite possibly be confused with the shadow caused by certain of the benign growths such as fibromata of the lung. Here especially do we see an example of the need for correlation of radiological with clinical features.

Radiology in Diagnosis.

The X-ray appearances in Hodgkin's disease are much more definite, the shadow

being usually lower in position than is that of an intrathoracic goitre, and often spreading more obviously from the hilum of the lung. Dermoids and hydatid cysts are generally quite characteristic, and are not very likely to be mistaken for goitre. In cases of primary carcinoma of the lung or bronchus the X-ray picture in the earlier stages is totally different, and when taken in conjunction with the clinical history is generally sufficiently clear.

In regard to the treatment of intrathoracic goitre, I can hardly do more than outline the broad principles which should underlie the physician's general attitude towards this matter. The advice given in any individual case must, as in all questions

Treatment. of co-operative medicine and surgery, be governed by the needs of the particular patient, due weight being attached to such factors as the amount of disability experienced, the circumstances in which the patient is placed, the probable course of events if the condition is left untreated, and the risks of operation as balanced against the problematical chances offered by purely expectant treatment.

The whole case for the operative treatment of non-malignant intrathoracic tumours, of whatever kind, rests upon the fact that sooner or later these growths are going to cause pressure, which at the least will constitute an intolerable disability and at the worst will ultimately kill the patient. It cannot be said that there is any drug that we know of which can be relied upon to cause marked changes in the size of a thyroid tumour, and when, as is usually the case, a patient comes for advice on account of symptoms due to the increasing size of the mass, one cannot justifiably hold out much prospect of relief from such medical treatment as may reasonably be tried in the common forms of manifest goitre.

In considering the question of operation, the duties of the physician are to acknowledge frankly to the patient or to his relatives the risk of a surgical procedure which, even in expert hands, is admittedly a serious one—to strengthen the position of his surgical colleague by pointing out the possible fate of the patient if surgical measures are not undertaken—and perhaps to take the lead in advising, with regard to the general features of the case, the optimum moment at which operation should be performed.