Summary

The paper treats of various aspects of radiological investigation in general, and of gastric and duodenal conditions in particular. They are dealt with largely from the point of view of the physician and patient, though several technical problems also are propounded and discussed. At the same time it is pointed out how a general acquaintance on the part of the physician with these difficulties of the radiologist can help towards a mutual understanding between the two, to the greater benefit of both, and especially also of the patient, who, after all, is the cardinal member of the triangle and the one most concerned.

An attempt has been made to reconcile the necessity for the most thorough and exhaustive investigation in certain cases with the need for keeping *x*-ray costs in general within reasonable economic limits. Re-examinations play a large part in the procedure suggested as a solution, and the necessity for these should be recognized by the physician.

Distinction has been drawn between the problem of the early, or at least earlier, diagnosis of cancer on the

one hand, and that of the diagnosis of early cancer on the other. The latter is, in the light of our present knowledge, mainly an affair of radiological technicalities and the interpretation of *x*-ray evidence. The earlier diagnosis of cancer, however, would appear to depend mainly on the general principles enunciated. It rests not so much with the radiologist as with the medical profession as a whole and society in general.

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A CASE OF DERCUM'S DISEASE AND ITS TREATMENT BY DEEP X RAYS

BY

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Case History

The patient was a married woman of 50 years, who for five years had suffered continuous and intense pain in her legs, which had for the previous eighteen years been involved in a generalized obesity. Twenty years previously she had weighed 136 lb. In 1914, just at the beginning of the war, her third child was born; she was alone on a farm when the child came, and altogether it was a time of great mental strain. When the child was three months old she had a complete breakdown, and for two years suffered from what appears to have been a post-puerperal melancholia. Her weight fell to 100 lb. In 1916 she began gradually to recover; as she recovered she became stout, and in the course of a couple of years arrived at her present state of obesity. Her weight now varies round about 240 lb. She had no pain in the fatty tissue until five years ago, when her legs became sore all over, the right being worse than the left. She was never free from pain, which prevented her from sleeping at night. In her own words she describes the pain as "worse than childbirth" and "like a thousand teeth aching." It was "in the flesh, not in the bones."

Other points in the history were that she had always lived a normal sexual life since marriage, and had had a son and two daughters. The periods had always been regular, not excessive, and without pain until two years before, when for six months there had been flooding. She then had a subtotal hysterectomy and unilateral ovariectomy for fibroids. Micturition had always been normal and never excessive. Just after the operation she had had a little difficulty in holding the urine.

Lactation had been normal. The only unusual feature was that since the birth of the first child in 1905 (twenty-nine years ago) there had always been some secretion in the breasts, even apart from pregnancy. This persisted to the present time. She did not complain of headache or of any visual disturbance, but was, however, liable to attacks of nose-bleeding. On questioning she said that she had never been very hairy, but when the pain came on she completely lost all hair from the legs. A further leading question caused her husband to say that

he thought that, at the time of her breakdown, just before the onset of the obesity, there had been some protrusion of the eyes and tremor of the hands. This was, however, only in answer to the direct suggestion that such was the case.

There was no glycosuria, which is stated by Leyton³ to be associated with acidophil and basophil but not with chromophobe tumours. There was no evidence of diabetes insipidus. We did not have the opportunity of estimating the basal metabolism, but there was no sign of hypo- or hyper-thyroidism. Nor did we investigate the blood sugar or the blood calcium, but there was nothing to suggest impaired parathyroid secretion. The obesity, loss of hair, and pains in the limbs might have suggested myxoedema, but there was no loss of memory or mental torpor, no dryness or thickening of the skin, and no dryness or brittleness of the hair of the head. Moreover, the pain in the limbs was severe, and not just the aching which occurs in some cases of myxoedema.

Diagnosis

The patient was regarded as a case of Dercum's disease—*adiposis dolorosa*. Dercum originally thought that this syndrome was due to a depression or perversion of the thyroid function, but more recent investigations^{1,2} have shown in quite a large proportion of cases which have come to post-mortem some morbid condition of the pituitary gland.

In this case the only points in the history suggestive of a pituitary origin are (1) the obesity, such as is seen in dystrophia adiposo-genitalis (Fröhlich's syndrome) and in Cushing's syndrome (basophil adenoma); and (2) the lactation apart from pregnancy, which has been described as associated with tumours of the pars nervosa.³ Corner⁴ and Riddle and his associates⁵ have, however, brought forward convincing evidence that there is a special lactogenic hormone with its origin in the anterior part of the pituitary. Radiographic examination of the skull showed some changes in the sella turcica. The pituitary fossa was enlarged, the floor a little depressed, and the dorsum sellae thinned and thrust slightly backward. Radiographs of the thighs show great increase of the subcutaneous fat outside the muscle layers.

Treatment

The question of treatment then arose. No endocrine treatment had apparently been devised which would rid the patient of the pain which is the really troublesome

symptom in Dercum's disease. Injection of pituitary gland extract and oral administration of thyroid gland extracts have given fair results in reducing the adiposity but neither relieves the pain. In most cases the patient has to be told to make the best of things.

Now Fröhlich's syndrome, dystrophia adiposo-genitalis, has been shown to be associated definitely with hypopituitarism, which may arise either from depression of the function of the gland by the pressure of a tumour in the neighbouring structures, or in another part of the pituitary itself, or from diminished activity. In view of the beneficial results that had been obtained by the x -ray treatment of acromegaly, it was natural that x rays should be given a trial also in Fröhlich's syndrome. The results obtained have been, as might be expected, very variable. In fact, Holfelder⁶ condemned x rays outright on the ground that the syndrome was well known to be due to a depression of function, which presumably x rays would further depress. Nevertheless good results have been obtained. Probably what happens is that in cases which do well the depression of function is associated with destruction or pressure by a tumour and the tumour is affected by the radiation, thus relieving the pressure. This is the view upheld by Baensch⁷ in a recent article in which he shows that whereas the cells of the adult pituitary are insensitive to radiation those of the growing animal and of adenomata are sensitive. Reviews of cases of Fröhlich's syndrome treated by irradiation of the pituitary are given by Kupferle and Szily, 1926,⁸ and by Marburg and Sgalitzer in their work *Die Röntgenbehandlung der Nervenkrankheiten*, published in 1930.⁹ They collected forty cases which showed variable results, but, on the whole, most showed some improvement in one respect or another. Adiposity was in general uninfluenced, genital function was improved, diabetes insipidus improved, headache was relieved, and eye symptoms, where present, were relieved in just over half the cases. Since then further papers have appeared by Schulte,¹⁰ Baensch,⁷ and Harris and Selinsky.¹² Recently cases of Cushing's syndrome have responded well to irradiation of the pituitary.^{13 14}

No case of Dercum's disease has, however, been found which has been treated by irradiation of the pituitary. Maddox¹⁵ says that he is going to try it, and that the method has not yet been fully exploited. A case of Cushing's syndrome—basophil adenoma—reported by Dr. R. D. Lawrence and treated with x -radiation by Dr. Hugh Davis is stated to have had "pains in the limbs" which disappeared after treatment. In view of the poor results of any therapeutic means hitherto tried, and of the strong probability of the pituitary being primarily at fault, it was suggested that radiation might be tried in this case. It was made quite clear to the patient and her husband that the treatment was experimental, but the patient was in such pain that she was ready "to try anything."

Treatment as follows was given at eight weekly intervals from February 8th to March 27th, 1934: 200 kV 4 mA, 6×8 cm., 0.8 mm. Cu + 1 mm. Al. Right and left temporal fields alternately. Four treatments to each. 140 r units each treatment.

The result was beyond expectations. The pain improved after the second treatment, and has now almost entirely disappeared. The adiposity has not been influenced, although subsequent dietary treatment has caused a steady reduction of weight. The patient says that she cannot stand long and gets readily faint and tired, and when she is tired her legs ache, but not like they did before. She thinks that the size of her legs has decreased. She had lost a little hair from the head, but this has grown again. With regard to the pain she says, "Life is worth living again; it wasn't before." The improvement

in the pain is maintained to the present date, eight months after treatment.

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CAESAREAN SECTION IN INFECTED CASES

A SERIES OF FORTY-FIVE CAESAREAN SECTIONS IN
INFECTED OR POTENTIALLY INFECTED CASES,
WITH NO MATERNAL MORTALITY

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The risk of performing Caesarean section in infected or potentially infected cases is well known. Statistics quoted by Holland¹ give the maternal mortality as 9.4 per cent. where the operation is performed late in labour, 14 per cent. when it has been preceded by induction of labour, and 26.5 per cent. when it follows attempts at delivery by forceps or craniotomy. It is not, therefore, without a sense of serious responsibility that I admit having performed it in a considerable number of such cases. I report these, nevertheless, because indications are not lacking that the pendulum now tends to swing too far in the other direction, and that the lives of many infants and of a certain number of mothers are sacrificed, not because the operation is performed in potentially infected cases, but because it is not performed.

The possible dangers of a difficult instrumental delivery are not always realized, and those who refuse ever to perform Caesarean section in such cases as "failed forceps," for example, or the non-engagement of the head after a surgical induction of labour, may be unwittingly condemning their patients to a far greater evil.

It was the realization of this in my own practice, when, in a case which came under my care during labour, I had the misfortune as the result of a difficult delivery to lose both mother and child, that determined me to be less unwilling to perform Caesarean section in such cases in future. Apart from the maternal aspect of the case, the life of the foetus merits more consideration than it sometimes receives. It is difficult to understand why a life which is so jealously guarded, often at serious cost to the mother's health, during the first months of pregnancy should not be entitled to at least equal consideration during the last. To take only one illustration: it is well known that the foetal mortality in cases of prolonged uterine inertia, apart from organic obstruction, is very high. Bell,² in a series of forty-nine such cases occurring at Queen Charlotte's Hospital, reported a foetal mortality of 40 per cent., the maternal mortality in the same series being 10 per cent. And yet the condition of prolonged inertia is not one of the generally recognized indications for Caesarean section, the slight additional risk to the