28. You see here the metacarpal bone of a child. Here is the lower epiphysis of the radius. That child had sarcoma of its testicle removed and developed a growth in the bone.

Diagnosis of Cancer.

It would be correct to say that no case of cancer begins with pain. There is a popular delusion that cancer is always a hideously painful thing, and people come with advanced disease who say they did not come before because they never had any pain.

The early diagnosis of cancer is one of the more difficult problems. A patient over 40 years of age comes with haematuria. What is to be done? Send him for cystoscopy straight off. In eight times out of ten the man of over 40 with haematuria has cancer somewhere in his genito-urinary tract.

If a woman over 45, or after menstruation has ceased, has haemorrhage, and no simple cause can be found, the sooner she has her uterus out the better. Nothing may be found in one case out of twenty, but in the other nineteen there is carcinoma somewhere.

In nineteen times out of twenty, if a man comes to you over 40 years of age and he cannot swallow, and he shows you he cannot swallow, he has got carcinoma of his oesophagus. X ray with bismuth meal will clear this up.

The first symptom of carcinoma of the stomach is "indigestion." A man of 50 who has never had indigestion all his life and comes to you complaining of indigestion, which Gregory powder has not cured, nearly always has carcinoma. You must have him examined with a test meal to show whether he has got a normal acidity and have him x-rayed by a specialist. Now examination of the stomach by the radiologist is sometimes derided and said to be of no value, but that is because people have not got the right man to examine the stomach. The x-ray stomach specialist can diagnose cancer of the stomach in almost every case which comes early.

Stricture of the sigmoid colon is a very common result of carcinoma. These patients say they have never had any trouble with their bowels before. Now they have to take medicine and the longer the time the more the medicine, and the longer time the more the rumblings inside. If a patient of 50 comes to you saying he has got constipation and cannot get rid of it, and he has rumblings inside enough to keep his family disturbed or even to disturb himself—think of carcinoma, because if it can be diagnosed early it can be treated with great success.

ENLARGEMENT OF THE THYROID GLAND IN MALARIA.

By J. B. HUME, M.R.C.S., L.R.C.P.,

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ENLARGEMENT of the thyroid appears to have hitherto been an unrecognized complication of malaria. Some thirty cases of it came to my notice during the East African campaign; and I recorded some preliminary observations in a paper before the Dar-es-Salam Medical Society on May 18th, 1918. My interest was the greater because in June, 1918, during an attack of malaria, I developed a marked enlargement of the gland myself.

The condition is characterized by an acute enlargement of one or both lobes of the thyroid gland during an attack of malaria, and occurring some twelve to thirty hours after the fall of the temperature.

All the cases were among white troops, soldiers with varying periods of service in German East Africa, the majority of whom had had several attacks of malaria. None of them gave any history of goitre, or even of fullness of the neck previously; in several instances I had made a definite note of the absence of thyroïdal swelling on admission. In no case could I obtain a family history of thyroid disease.

Malarial parasites were found in the blood in every case, usually in rather scanty numbers. Subtertian forms predominated, but benign tertian, and mixed infections also occurred. No opportunity presented itself of studying the condition *post mortem*.

In a typical case the enlargement of the thyroid appeared suddenly, in the course of an attack of malaria, from twelve to thirty hours after the fall of temperature. The previous

pyrexia had lasted from one to three days, and no subsequent rise of temperature occurred. One or both lobes became markedly swollen, and somewhat painful and tender to touch. There was no redness of the skin, the consistency of the swelling was uniform, and it showed all the characteristics of a generalized enlargement of the gland.

Dysphagia, in varying degrees, was a prominent symptom. Pain and throbbing in the head were frequent. There was usually a slight muscular tremor. In only two cases was there any exophthalmos. Tachycardia was very constantly present, the pulse rate being usually in the neighbourhood of 100-110, but sometimes as high as 130. Some alteration of the heart sounds at the pulmonary base was common—either a systolic bruit, or an accentuation of the second sound. The spleen was enlarged at some stage of the attack in about 70 per cent. of cases.

The treatment was usually carried out on routine lines. Quinine bihydrochloride was given by the mouth, and in a few cases also by the rectum. The usual procedure was to give 5 grains, three-hourly, omitting one dose in the night, over the first four days. Then a smaller dose, 15 to 20 grains daily, combined with arsenic, increasing to the full dose over the relapsing period on the ninth, tenth, and eleventh days.

In most cases there was, in from four to ten days, a marked reduction of the swelling, but in my own case it has not yet entirely disappeared. In subsequent malarial attacks it has invariably enlarged for a time.

The following cases occurred in No. 84 General Hospital, Dar-es-Salam:

CASE I.

Lieut. J. M. C., aged 30. Temperature 101° on admission. Very scanty subtertian rings present. Slight enlargement of thyroid in an attack six months previously; scarcely any enlargement on admission. Nine or ten attacks of malaria altogether. Enlargement of both lobes occurred on the third day, twenty-four hours after fall of temperature. Dysphagia, dyspnoea, pain, and a fine tremor were all present. Pulse 120. No exophthalmos. Spleen enlarged. The usual quinine treatment was given. On the fifth day 3 c.cm. of adrenalin given subcutaneously. On the sixth there was a definite increase in the thyroid. There was a decrease from that time to the fourteenth day, when, following another slight rise of temperature, the gland again enlarged. When the officer was invalided it had not disappeared.

CASE II.

Pte. P. S., aged 20. Temperature normal, but pyrexia reported by medical officer on day before admission. Many previous attacks of malaria. Both lobes of thyroid enlarged, mainly right. Both benign tertian and subtertian parasites present. Dysphagia, slight dyspnoea, tremor, and some tachycardia. Pulse 103.

CASE III.

Spr. S., aged 20. Temperature 103° on admission. Subtertian parasites present. First attack of malaria. Bilateral enlargement appeared on second day. Slight exophthalmos and tremor present. Pulse 100-110. Spleen enlarged. Marked reduction in ten days, under quinine treatment.

CASE IV.

Capt. J. B. H., aged 25. Temperature 101.6° on admission. Second attack of malaria. Scanty subtertian rings. Pyrexia lasted twenty-four hours; enlargement of both lobes, especially left, occurred twelve hours after fall of temperature and reached its maximum twenty-four hours later. Dysphagia and dyspnoea present; neck painful and tender to touch. No tremor nor exophthalmos. Pulse 110. Spleen slightly enlarged. There was a definite reduction in size in seven days, but the swelling has never entirely disappeared. It increased three months later, following another attack of malaria, and was invariably larger after slight attacks. In July, 1919 (one year from first appearance), enlargement of left lobe was still present, but without symptoms.

The following three cases present rather different features, in that the tachycardia was much more marked and the thyroid enlargement, though of old standing, had in every case first arisen as a sequel to an attack of malaria:

CASE V.

Pte. T. P., aged 33. Eleven previous attacks of malaria. Subtertian parasites. Noticed choking, tight sensation in throat, and dyspnoea in four previous attacks. Bilateral thyroid enlargement present. Marked and persistent tachycardia; pulse about 140. Spleen slightly enlarged. Thyroid decreased under quinine and arsenic treatment. Tachycardia decreased very slowly, in spite of absolute rest in bed, Pulse about 110 when invalided.

CASE VI.

Pte. F. G. A. B., aged 22. Six previous attacks. Admitted with tachycardia. Was in another ward in No. 84 General Hospital with subtertian malaria three weeks previously. Noticed enlargement of neck before readmission, when in Camp

Hospital with malaria. Bilateral enlargement, some discomfort in throat, but no dysphagia or dyspnoea. Pulse 120-130. Spleen not enlarged. Progress as in Case V.

CASE VII.

Cpl. J., aged 24. Two previous attacks. Benign tertian parasites. Constriction in throat and dyspnoea noticed after second attack. Had slight bilateral enlargement of thyroid, accompanied by marked tachycardia—120 and slight tremor.

The frequency of occurrence of marked thyroid enlargement is probably not greater than from 5 to 10 per cent., though the cases with some very slight temporary enlargement immediately after an attack of malaria might probably represent an additional 10 per cent. Since my paper was read, in May, 1918, the condition has been observed by a number of medical officers; and these facts would go to show that the thyroid enlargement is a definite clinical entity, evidencing a marked disturbance of the endocrine system in malaria.

What is, then, the cause? It may be due to sporulation of the parasites in the capillaries of the gland, analogous to the condition in cerebral malaria. This would cut off the supply of iodothyron from the blood stream, and upset "thyroid equilibrium." To regain this compensatory hypertrophy takes place, and equilibrium is regained in the course of time. The remaining thyroid swelling becomes purely a hyperplasia; or there is a compensatory hypertrophy of the other ductless glands. On the other hand, enlargement of the thyroid may be compensatory for the exhaustion of other parts of the endocrine system.

There is considerable evidence to indicate that the ductless glands are affected by malaria. In the case of the thyroid the tachycardia and tremor would show that the condition is one of hyperthyroidism, but against this is the very rare occurrence of exophthalmos. The observation that sexual infantilism is common in malarious districts is quite definite; the children are often semicretins, having large heads, poor physical development, and low mentality, whilst their protuberant abdomens cannot be wholly accounted for by splenic enlargement. Sexual infantilism is known to occur clinically and experimentally in cases of thyroid deficiency. Pigmentation of the skin occurs in Europeans in chronic cases of malaria, but this might be indicative of either thyroid or adrenal disturbance.

Degenerative changes have been described in the adrenals in malaria; and disturbance of these glands may be the cause of the "algid type" of malaria, which, clinically, injections of adrenalin are most valuable in combating. The low blood pressure, and the subnormal temperature, which often lasts for days after an attack, both indicate a condition of hypoadrenia.

Orchitis in malaria, first described by Charvot, is of not infrequent occurrence. Such cases are often admitted as venereal, but, after searching examination has failed to show any evidence of syphilis or gonorrhoea, malarial infection has been discovered. I have observed instances when, with rest in bed, specific malarial treatment and anodynes to the affected parts, the swellings have gone down in from seven to twenty-one days. Often testicular tenderness has been extreme, but without tenderness of the cord. The loss of sexual power so frequently observed after attacks of both treated and untreated malaria is likely also to be due to the effect of the disease on the testes.

These facts have led me to believe that the changes in the ductless glands in malaria may be far more marked than our present knowledge shows, and that physiological and pathological research may show that in these changes lie the explanation of some at least of the conditions that have been referred to.

AN American Memorial Hospital, to be established at Rheims by the American Fund for the French wounded, has been accepted by the French Government. The city gives the site and the Fund proposes to expend £20,000 in erecting a hospital of 100 beds.

THE medical practitioners of Madrid have decided to erect a building for the exhibition of Spanish and foreign mineral waters and pharmaceutical products. There will also be rooms for social gatherings and for meetings of colleges and medical societies. The top stories will be fitted up as a hotel for doctors visiting Madrid. The total cost is estimated at £240,000.

STUDIES ON ACUTE NEPHRITIS.

BY

PROFESSOR KARL PETRÉN.

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To begin with, I will remark that as none of my patients have taken part in the war, there is here not the question of that form of nephritis that we now know as trench nephritis, but only of the old forms long known from experience in peace.

The origin of these studies was that my attention had been aroused by the fact that in recent years the number of cases of acute nephritis treated in my clinic have been great—considerably greater than in general. The number of cases of acute nephritis in the different years that I have been at work at the clinic in Lund is as follows:

1911 ...	...	15	1916 ...	...	7
1912 ...	...	3	1917 ...	...	15
1913 ...	...	8	1918 ...	...	17
1914 ...	...	7	1919 (to May 31st)	...	4
1915 ...	...	3			

I must admit that the great number of cases of acute nephritis in the year 1911 had escaped my memory. I must add that the conditions for receiving the patients in my ward have, during these years, not altered; and even if, in general, our means of receiving the patients which were seeking treatment have been different at different times, we have always made room in the ward for patients suffering from acute nephritis. In consequence we must conclude that the number of cases of acute nephritis in the population from which the patients of this clinic are recruited has been very different in the different years which are here taken into consideration. Further, I may add that, as far as we know, in none of these cases was the nephritis caused by scarlet fever.

When we take the different facts here mentioned into consideration, we must raise the question whether the number of cases of acute nephritis occurring in a certain part of this country is influenced by what was formerly called the genius epidemicus. It seems to me that my experience gives good grounds for such a possibility quite apart from the influence of living in the trenches, but of course I do not mean that this experience suffices to give a clear answer to the question.

Since I began to revise the experience from my clinic of acute nephritis I have made a closer study of the cases of the later years, and have chosen for this purpose the cases of acute nephritis observed in my clinic during the years 1917 to May 31st, 1919.

Analysis of the Symptoms.

In recent years many authors in different countries have accepted the suggestion which has been formulated, especially by German authors (Friedrich Müller, Volhard and Fahr), that one can divide the cases of acute nephritis—I leave out of consideration the whole question of chronic nephritis—into different forms of disease: on the one hand acute glomerulo-nephritis (consisting in inflammatory changes of glomeruli), and on the other hand "nephrosis" (consisting in purely degenerative changes of the tubuli). According to these modern views the clinical characters which are most important for the diagnosis between these two different diseases would be the following: for acute glomerulo-nephritis the occurrence of red blood corpuscles in the urine, a rise in blood pressure, but no oedema; for acute nephrosis, on the other hand, the occurrence of oedema but not of red blood corpuscles in the urine and no hypertonia.

I limit my reference to these ideas, now so often accepted, to these few words, and will here only give the results of the examination of my cases on those points where these results have some interest for forming a judgement on the above mentioned ideas.

All the cases of acute nephritis observed during the period 1917 to May 31st, 1919, are here taken into consideration; their number was 36. Among them were only 6 that did not show oedema and only 7 where red blood corpuscles were not found in the urine. As no case occurred in both these groups, we come to the result that 23 of the 36 cases have shown both oedema and red blood corpuscles in the urine. In consequence, the greater part