

organ in the body without producing some accompanying effect on all the others, but the public, or at least some of those who can afford it, would like to have one medical man for their heart, another for their stomach, a third for their kidneys, and so on. The craze does not even stop here; some people are not even content with having advice from a thoroughly sound surgeon but they seek advice from a man who does nothing but treat joint affections or even one who confines himself to some particular joint, if they could find him. I have known where a lady had one medical man to give advice about the condition of her heart, while another was to treat her stomach, and a surgeon was at the same time to attend to an injury of the lower extremity. Neither was supposed to encroach on the domain of the other. Need I point out that if all were not well-educated medical men who thoroughly understood the management of diseases in general and that each carried out the treatment for one particular ailment the various treatments would be almost certain to clash and great would have been the danger to the patient. There is no one more willing than myself to recognise the advisability of specialism under proper conditions. Some of the best work has been done by men whom the public would regard as specialists—such as Spencer Wells and Lawson Tait—but these were men who were possessed of a broad and comprehensive knowledge of medical science as a whole. On the other hand, you will find that the greatest work of all is done by men who have not specialised in the ordinary sense but who extended their work over wider fields. I need only mention such men as Lord Lister, Jonathan Hutchinson, Kocher of Berne, and Doyen of Paris among the host of workers. On the subject of medical specialism I think I cannot do better than refer you to some observations of Dr. Oliver Wendell Holmes, one of the most cultivated minds that the profession has ever produced, which you will find in his charming little book, "Over the Teacups."

Having thus in a very imperfect manner brought before you the leading principles which should guide you in acquiring a knowledge of the science and art of surgery and the subjects which are so closely interwoven with it, let me earnestly entreat you to make use of the excellent advantages which this College and its associated hospitals afford for medical education; by doing so you will not alone bring credit to yourselves but reflect it on your teachers and the Cork Medical School; and will hereafter, I trust, make, if not brilliant, at least what is more valuable, successful and worthy exponents of medicine and surgery. To aid you in so doing shall be my constant and earnest desire. But let me ask you in conclusion also to cultivate those higher faculties of which Tennyson speaks—

"Self-reverence, self-knowledge, self-control,  
These three alone lead life to sovereign power;  
Yet not for power (power of herself would come  
Uncalled for), but to live by law,  
Acting the laws we live by without fear."

## UNCOMPLICATED ÆSTIVO-AUTUMNAL FEVER IN EUROPEANS IN THE GOLD COAST COLONY, WEST AFRICA.

By ALBERT J. CHALMERS, M.D. VICT., F.R.C.S. ENG.,  
ASSISTANT COLONIAL SURGEON.

*Preliminary.*—As the published accounts of the fevers of the Gold Coast Colony are not numerous His Excellency the Governor, Sir Frederick Hodgson, K.C.M.G., has kindly permitted me to offer this note for publication. I have to acknowledge the kindness of Dr. Henderson, the chief medical officer, in giving me advice, the benefit of his long tropical experience, and every encouragement in this work.

*Prevalence.*—Æstivo-autumnal fever is perhaps the most common type of malarial fever among Europeans on the Gold Coast and this, in its uncomplicated form and without malignant symptoms, forms the subject of the present note. It is most prevalent in the wet season, and during the last three years the largest number of cases in Accra have occurred in either June or July.

*Predisposing causes.*—Predisposing causes to fever are numerous and to the medical attendant at least are most

important. The chief of these are as follows: 1. Chills.—Chills are especially to be avoided on this part of the West Coast, as they form an important predisposing cause of fever. They principally act in the cold or wet season. 2. Constipation.—Constipation, by tending towards a loaded condition of the portal system and by this to impairment of the action of the liver, upsets the equilibrium of the functions of the body and in this way predisposes to fever. 3. Mental worry.—This is a very common predisposing cause. In my experience here I have known men worry about their work to such a degree that it has impaired the vitality of their system and has rendered them more open to take fever. 4. Excesses of any description.—(a) Over-work; (b) over-exertion; (c) sexual excess; (d) alcoholic excess; and (e) excessive indulgence in food. These excesses by lowering the vitality of the body predispose to fever. Over-work—i.e., working more than a man has strength for—is an important factor. Alcoholic excess is not the great predisposing cause of fever which many people think it to be. 5. Disease of an organ.—Disease of an organ of the body predisposes by lowering the vitality. A most common predisposing cause, in my opinion, is gonorrhoea. 6. Food.—Insufficient or bad food or a sudden change from poor and insufficient to better food by upsetting the digestion may predispose. This is seen in persons who return from long residence in the bush. 7. Insolation.—Exposure to intense heat in the midday without actual sunstroke may act as a predisposing cause. These are the most important predisposing causes met by me in Accra, and in my opinion they can be one and all summarised into one—viz., anything which lowers the vitality of the body.

*The method of infection.*—Infection is without doubt by means of the mosquito, of which fact I have had numerous proofs. The genus *Anopheles* is the one which I have found responsible for the fever and generally the species *pictus* and *costalis*, but in Kumasi I found a small variety which, as far as I know, is new, and a short account of which may be interesting. Unfortunately, owing to the nature of the march to the coast I lost all my specimens, and during the siege of Kumasi I had not time to make drawings. During the month of April—i.e., at the commencement of the wet season—there were a number of cases of æstivo-autumnal fever among the European residents in Kumasi; out of 16 persons six suffered from this fever, and of the remaining one had just had fever and another developed an attack in May. At the end of April and at the beginning of May eight more Europeans arrived, and of these five suffered from fever and one died. So that out of 24 persons 13 had fever—i.e., 54.16 per cent. During April mosquitoes were rare and particularly the common genus *Culex*, but a small *Anopheles* was invariably to be found in the quarters and even in the mosquito curtains of Europeans. This small *Anopheles* frequently contained the malarial germ in its stomach and, in my opinion, was the direct cause of the outbreak of æstivo-autumnal fever. This little *Anopheles*, I believe, has not been described. I therefore venture to call it "*Anopheles Kumasi*" and to append a very brief description.

*Anopheles Kumasi.*—It is a small black mosquito. The wings have four black spots on the costa separated by three yellowish spaces and distinct dark spots on the other veins scattered over the wing. The abdomen is black and not banded, but the posterior portion of each segment is darker than the anterior. The female is a small black mosquito 3.5 millimetres in length and having wings three millimetres long. The head is black with light-coloured hairs; the antennæ have light-coloured joints; the palpi are black with three yellow marks; and the proboscis is black except at the apex. The thorax is slate-coloured with two dark lines dorsally and two slanting lines laterally. The hairs are light yellow. The wings are iridescent with four black spots on the costal margin and others scattered about on the veins. The four black spots on the costal margins are separated by yellowish spaces. Of these spots the first is the longest, extending along about one-third of the costal margin and the other three are much smaller. When examined closely these spots are seen to consist of two rows of dark scales situated on the costal margin and on the longitudinal vein directly below and parallel to it. In the first large spot these dark scales start from the junction of the wing and thorax on the costal margin, but on the vein only half way along the line of costal scales. The abdomen is black without rings but with the posterior portion of each

segment darker than the anterior. The legs are in general dark coloured; the femora are not yellowish at the base, and the tibiæ are not yellowish on the outer side. The tarsi are ringed distally and proximally. The male is much the same as the female. Its length is four millimetres and the length of the wing is three millimetres. Its habitat is in dwelling-houses in Kumasi, Ashanti, West Africa.

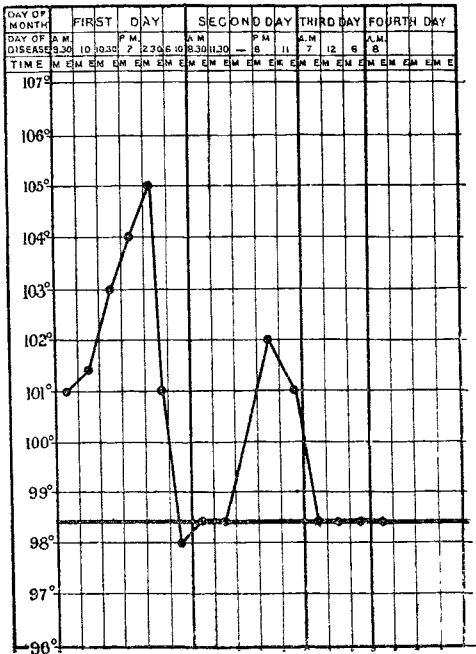
Such is the brief and, I am afraid, imperfect description drawn from notes which I was able to bring from Kumasi in the march out. I regret that the times were not settled enough to make photographs of the mosquito in Kumasi. I was able to find its larvæ on the margin of the marsh which nearly surrounds Kumasi.

*The causation.*—This is the parasite of the æstivo-autumnal fever, “*hæmomenas præcox*.” At first small and unpigmented, the parasite grows and may be of the size of from one-fifth to one-third of the corpuscle and becomes pigmented. The parasites which I have most commonly found in the blood have been unpigmented, containing a darker central spot (that is to say, ring-like forms), but pigmented specimens are common. The relationship between the parasite and the disease is demonstrated by the following case illustrated by a temperature chart (Chart 1).

Date.	Time.	Temperature.	Parasites in the blood.
Oct. 25th, 1899.	9.30 A.M.	101° F.	Chill, no parasites.
	2 P.M.	105° F.	No parasites.
	6 P.M.	101° F.	Unpigmented parasites.
Oct. 26th, 1899.	8.30 A.M.	98.6° F.	Pigmented parasites.
	3 P.M.	99° F.	Well-developed pigmented parasites.
	6 P.M.	102° F.	A very few parasites.
Oct. 27th, 1899.	8 A.M.	98.4° F.	No parasites.

*Clinical types of the fever.*—Generally the clinical type of the fever is quotidian (vide Chart 1), rarely it is tertian (vide Chart 2), but these typical fevers may be altered and become almost continued fevers by slight complications without malignant symptoms, e.g. (Chart 3), a quotidian

CHART 1.



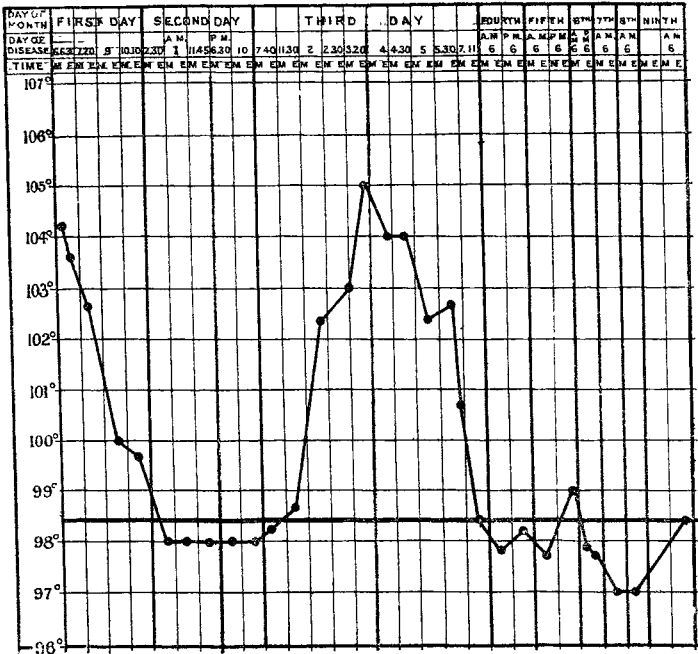
Quotidian type.

fever masked by a severe attack of gonorrhœa. In my experience the most common of these slight complications which produce alterations in the fever chart are due to (1) insanitary surroundings; (2) undermining of the constitution by such things as repeated fevers, any form of excess, or by disease in some organ of the body; and (3) mental worry. The attack may be ushered in by a chill or may simply begin with pain in the limbs and back and perhaps sickness. The initial rise of temperature is generally high, often 105° F. or more; sometimes a pseudo-crisis and pre-critical elevation

are noted and the temperature may fall at the crisis below normal. In the masked fever a crisis may not be noted. The attack may be repeated for a few days and then resolve in the uncomplicated cases, but it leaves the patient always more or less anæmic and asthenic from the destruction of red blood corpuscles.

*Principal symptoms.*—These include headache, pains in the back and legs, sense of weariness, thirst, and anorexia

CHART 2.

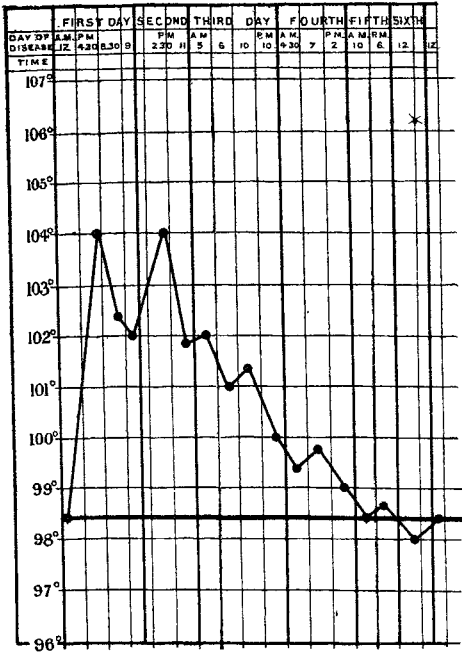


Tertian type.

with nausea. Tenderness over the liver and spleen. After the attack the patient often complains of great weakness.

*Principal physical signs.*—The enlargement of the liver and spleen is often marked. There is frequently vomiting and often the bowels are not properly opened or are even constipated. The pulse-rate is increased during the rise of the temperature and sinks below normal on the fall. The heart-sounds and the respiratory sounds are not altered as a rule.

CHART 3.



Complicated quotidian type.

Respiration is quicker than normal during the rise. The urine is febrile. The nervous system, even with high temperature, is little affected.

*Mortality.*—Without the malignant symptoms the death-rate is very low.

*Prognosis.*—Without complications and in an otherwise healthy individual the prognosis is good.

*Treatment.*—During the rise, antipyretics and if necessary cold applications and aperients; during the remission, quinine and some saline diaphoretic mixture; and after the attack, tonics. If the temperature is over  $104^{\circ}$  10 grains of phenacetin with or without five grains of calomel and a hot lime drink are commonly given. Cold applications are necessary if the temperature refuses to react to drugs; as ice is difficult to obtain on the Gold Coast it is usual to resort to a brine bath—i.e., salt, vinegar, lime-juice, and Florida water are mixed with the water and the patient is either sponged with this, packed, or placed in the bath. The latter is at times dangerous owing to the shock which it produces. The saline diaphoretic mixture generally used is liquor ammoniæ acetatis in one-drachm doses, together with spiritus ammoniæ aromaticus, spiritus ætheris nitrosus, and a little syrup of orange. Quinine is often given in 10-grain or 15-grain doses twice a day, in the morning and in the afternoon. This, of course, is only given in the remission of the fever, and as soon as convalescence is established it is cut down to 10 grains once a day; then five grains once a day, next five grains every other day, and lastly, it is stopped after a little time. In the convalescence stage quinine is only given in the morning. In convalescence, in order to treat the anæmia and to improve the general system of the patient some tonic is necessary. A common prescription here is 10 grains of the citrate of iron and quinine with three minims of the liquor of strychnine hydrochlorate and a little syrup of orange for a dose. After repeated attacks of fever and the consequent anæmia a patient is invalided to either (1) the Government Sanatorium at Aburi, situate on the hills 26 miles from Accra at an elevation of 1440 feet and surrounded by beautiful gardens; or (2) a sea trip to Sierra Leone, Canary, or England according to his condition.

*Prevention.*—This is important and much can be done by using common-sense and obeying the ordinary rules of life and hygiene. Chills must be avoided and clothes should be changed if they get wet (this, however, is often impossible). Constipation and excesses can be avoided. Proper and sufficient food should be taken if it can be procured. Recreation and certain kinds of amusement can easily be obtained on the coast and often help to counteract mental worry. Possibly some alcohol should be taken to counterbalance the deleterious effects of a hot moist climate. If possible, Europeans should live in the good airy bungalows which are common on the coast and which have been built by the Government for officials, and should also be provided with mosquito nets, which I am glad to say are in general use. A little quinine in the damp cold weather or when wet or before a long trying march has been found useful. In my opinion persons have many times been prevented from having an attack of fever by being given a purgative and a few grains of quinine. As the country gets opened and as the forests are cut down and the swamps are drained by the gold-mining and other industries now beginning, the malarial fevers will, in my opinion, diminish, even as they have in the Fens and in Kent.

Accra.

## ON THE DIAGNOSIS OF THORACIC ANEURYSM BY THE ROENTGEN RAYS.

By HUGH WALSHAM, M.A., M.D. CANTAB.,  
M.R.C.P. LOND.,

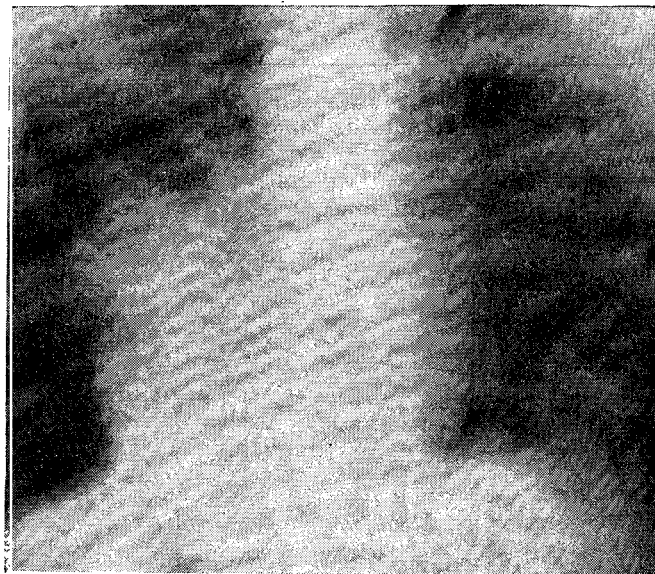
ASSISTANT PHYSICIAN TO THE CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST; ASSISTANT MEDICAL OFFICER IN THE ELECTRICAL DEPARTMENT, ST. BARTHOLOMEW'S HOSPITAL.

MANY aneurysms of the aortic arch can, of course, be readily diagnosed without any help from skiagraphy, but there are others, and they are not a few, in which the physical signs leave us in doubt between an aneurysm of the aorta and a mediastinal new growth, or the aneurysm may be unsuspected. In cases such as these the x rays come to our aid and I would emphasise the importance of examining such a case with the screen, because the pulsation of an aneurysmal sac can only be discovered in this way in an aneurysm buried deeply in the thorax. The following two

cases, both of which came under my observation in the out-patient room at the City of London Hospital for Diseases of the Chest, are, I think, worthy of record.

CASE 1.—A man, aged 33 years, came to the out-patient room on April 19th, 1899. He gave the following history. He had had syphilis 16 or 17 years ago. 12 years ago his right elbow-joint was excised by Lord Lister in King's College Hospital. Five or six weeks before coming to the hospital he noticed a "cramp-like feeling" in the region of his heart which extended down his left arm. This sensation only lasted for a few minutes at a time but was severe. This lasted for two or three days and then disappeared. About the same time he noticed that he was getting short of breath on exertion. For a few weeks he had had a slight cough with frothy expectoration. He had never had rheumatism. On examination the heart's impulse was found to be in the fifth interspace in the left nipple line. In the third and fourth interspaces on the left side, three and a half inches from the mid-sternal line, there was a diffuse area of expansile pulsation over which a systolic murmur was audible. The aortic and pulmonary second sounds were clear. At the apex there was a systolic murmur following the first sound. The expansion of the left side of the chest was a little less than the right. The breath sounds all over the left side of the chest were a little weak. There were numerous crepitations to be heard over the left base behind. The pupils were equal and reacted to light. Both vocal cords moved well. The pulse was 72, regular and equal on each side. On May 3rd, 1899, he was admitted to the hospital under the care of Dr. Eustace Smith. The first skiagram (Fig. 1) was taken the day before his admission.

FIG. 1.



Showing the shadow of the aneurysm at the left base of the heart.

The chest is viewed from the back. The first point noticed is the very peculiar shape of the heart. The projecting shadow to the left of the base of the organ corresponded exactly to the pulsation felt on the chest wall. The shadow occupies the position of the left auricle. On a screen examination well-marked pulsation was visible in this projecting shadow. The diagnosis arrived at was that the patient had an aneurysm, and if aneurysms of the left auricle were not so extremely rare, there being, according to Dr. Wickham Legg,<sup>1</sup> only three or four cases on record, it might have been thought from the skiagram that the patient had an aneurysm of this chamber of the heart. The patient left the hospital of his own accord on June 1st, 1899, the physical signs remaining practically the same. A fortnight after, owing to palpitation of the heart, he went to the Middlesex Hospital and was admitted, remaining there for three weeks. After his discharge from the hospital he kept fairly well for five or six weeks. He attended again at the Middlesex Hospital for examination and was again admitted for six weeks. His condition remained much the same until the last week in November, 1899, when he fainted in the street.

<sup>1</sup> Dr. Wickham Legg: Some Account of Cardiac Aneurysms, Bradshawe Lecture, delivered before the Royal College of Physicians of London, 1833.