

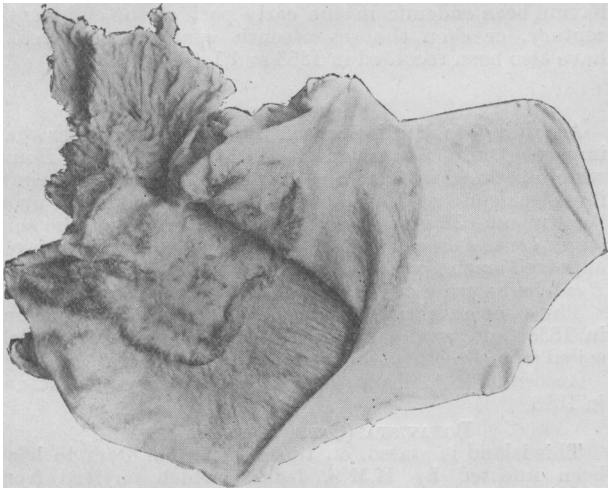
ness, and a definite edge could be felt to descend during inspiration. Elsewhere there was no abnormal tenderness or mass. There were no signs of tubercle to be found in other parts of the body.

Shortly afterwards an indefinite tender mass made its appearance in the epigastrium, its lower border corresponding with the sharp edge previously noticed. During the first fortnight there was a slight nocturnal rise of temperature, but afterwards this subsided and remained normal. As the condition was considered to be one of abdominal tubercle, the ordinary hygienic treatment was adopted, and, throughout his stay in hospital (about three months), he slowly and steadily gained weight and lost all symptoms. He was eventually sent to a convalescent home. Soon after his return, however, the same symptoms recommenced and became aggravated. In addition he lost weight more rapidly. He was readmitted on May 9th, 1910, having vomited some dark matter on three occasions during the two preceding days.

He was then desperately ill, very anaemic and emaciated, with a subnormal temperature and a rapid running pulse. The abdomen was very wasted, with an area of distension corresponding to the stomach, and a large tender mass felt in the epigastrium. The area of gastric resonance was much enlarged and, in addition to the large mass, a smaller discrete and harder one could be felt in the region of the pylorus. Well-marked visible peristalsis could be seen over the distended area. No other abdominal viscera could be felt, and the urine was normal. Owing to the inability to take food by the mouth, rectal feeding was resorted to, the preliminary wash-outs containing altered blood. Haematemesis commenced again three days later, and the general condition very soon became hopeless. A blood count showed extreme anaemia the red count being reduced to 2,300,000, and the haemoglobin 25 per cent. The patient died on the 25th, a thrombosis of the veins of the left leg having occurred a few hours beforehand.

Necropsy.

All the organs, except the stomach and liver, were found normal. The stomach was greatly dilated, but the external



surface appeared normal. Situated over the lesser curvature near the pylorus was a large oval ulcer extending for three inches on to both anterior and posterior walls. The ulcer was shallow, its base white and slightly uneven, but not markedly indurated. The edge was formed by a prominent sinuous ridge of infiltrated mucous membrane, a little everted and very indurated. Immediately above the pylorus, outside the stomach, was a large hard mass of glands. By the infiltration of the tissues at this spot the first part of the duodenum had been drawn towards the lesser curvature, and kinking with obstruction had resulted. The pylorus itself was not involved, and admitted the finger readily. A small nodule of growth projected into the first part of the duodenum underneath the mucous membrane. The gastric glands were enlarged and indurated. The liver was enlarged, its substance fatty, and scattered throughout it were numerous secondary deposits, the superficial ones having a typical umbilicated appearance. The vena cava was free from growth. There was a large adherent and friable clot in the left external iliac and surrounding veins. A microscopic section at the time showed the ulcer to be a columnar-celled carcinoma.

A photograph of the primary growth is reproduced.

As regards the age incidence of cancer of the stomach, Perry and Shaw in their series found the average age at death to be 52.1 years. The most fatal decade is, no doubt, between 50 and 60, and the disease is certainly infrequent before the fourth decade. Among the cases recorded before the twentieth year are Norman Moore's in a girl of 13, and Schäffer's in a boy of 14. Osler and McCrae, in a large series, found as many as thirteen between the ages of 10 and 20. Cullingworth describes a

case of cylindrical-celled carcinoma of the stomach in an infant of 5 weeks, Finlayson in a child of 3½ months, and Kaulich a "gelatinous" carcinoma in a boy of 1½ years.

Two cases of what was said to be congenital carcinoma of the organ have been described by Wilkinson and Widerhofer.

The percentage of cases occurring in the first three decades, as worked out by Schäffer, Reichert, and Bräutigam, only amounts to from 2 per cent. to 3 per cent., and of these by far the largest proportion occur between the ages of 20 and 30.

One of the chief points of interest in this case is that it illustrates how misleading the abnormal age incidence of a disease may be in coming to a correct diagnosis. Lastly, the temporary improvement, with proper medical care and nursing in the earlier stages of the case, is remarkable.

THE HISTORY OF YELLOW FEVER IN WEST AFRICA.

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IV.

YELLOW FEVER IN THE GAMBIA.

It is most probable that yellow fever appeared in the Gambia at the same period as in the case of Sierra Leone and in Senegal, for epidemics in North-West Africa appear to have been on most occasions in the past widespread, sometimes starting in one colony, sometimes in another, but usually ending by affecting all three—Sierra Leone, the Gambia, and Senegal.

The period embraced by these epidemics and sporadic cases extended from the end of the eighteenth century through the nineteenth up to the present epoch.

Outbreaks have been recorded in 1768 and 1769, 1842, 1845, 1852, and in 1878, when the fever is stated to have been severe. During this period it will be remembered that the ships of the mercantile and royal navies were perpetually infected with yellow fever, and that therefore the disease could be imported in any year until it became endemic. Of course the disease might have been endemic from a much earlier period, but as colonization only set in in the eighteenth century it is impossible to know what happened before this date, for here, as elsewhere, it was only by the arrival of non-immunes that the world was made aware of the existence of the disease.

We may reasonably suppose that the *Stegomyia* existed in the Gambia in early times just as it does to-day.

In 1837 Fergusson describes an outbreak of yellow fever in the Gambia, imported so he believes, by H.M.S. *Curlew*, which sailed from Freetown, where it had remained one week, and during an outbreak members of the crew contracted the disease, and when the ship arrived in the Gambia the sick were taken ashore and the disease spread amongst the residents. The Colonial surgeon died from it. In the same year yellow fever was present in Senegal.

From the annual report of the West African station, it appears that 4 cases of yellow fever occurred, of which 2 proved fatal, in the garrison in the period 1841–2.

In 1878 a severe epidemic is stated to have occurred, but so far I have been unable to come across an account of it. It was also present in Senegal in this year.

In June, 1900, 9 fatal cases of yellow fever were reported officially from the Gambia. It was present in Senegal.

Bathurst was declared an infected port in June, 1901, also Senegal.

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V.

YELLOW FEVER IN SENEGAL.

The history of yellow fever in the French Colony is comparatively very complete, numerous French authorities of eminence having carefully described the various

epidemics. As in the case of Sierra Leone, so in this Colony, the history of the disease is coincident with white colonization and commercial advance.

Outbreaks of sporadic cases are recorded in 1768, 1769, 1778-9, 1814, 1816, 1828, 1830, 1837, 1840, 1841, 1845, 1846, 1852, 1858, 1863, 1866-7, and 1872. The symptomatology of very many of the outbreaks has been carefully recorded by Béranger-Féraud, so that there is no doubt about the nature of the disease.

From the year 1830 yellow fever, however, attracted the attention of numerous observers, and, as in the case of the other West African Colonies, the symptomatology is given with care, so that here, again, there is no doubt about the true nature of the disease. Schotte, in describing the great epidemic of 1778-9, states that fifty-nine whites died; that the deaths were most frequent amongst the whites, next in frequency amongst the mulattos, and least often amongst the blacks. The symptoms were: intense headache and lumbar pain, congestion of the eyes, obstinate vomiting or hiccough, black vomit (coffee-ground-like material), urine greatly diminished or total suppression, delirium, coma and death. Frequently the very characteristic and often fatal symptom of "feeling better" occurred towards the termination of the illness. From 1778 to 1814 no large outbreak occurred, then in 1816 the disease broke out at Cape Manuel. From 1817 to 1830 Schotte considers there were numerous sporadic cases. In 1830 a widespread epidemic occurred which affected Gorée, Saint Louis, and Dakar.

In 1837 the disease again broke out in the island of Gorée, introduced, as it was thought, by some from Bathurst; Bathurst had meanwhile attributed their own outbreak to infection from Freetown (see Sierra Leone).

From 1837 to 1859 there is an apparent absence of recorded outbreaks. Then in 1858-9 the disease again attracted attention. Again, from 1864 to 1867 there are records of small outbreaks.

In 1872 a severe epidemic occurred which spread from Gorée to Saint Louis, and then to Bakaë in the Upper Senegal. That is to say, the disease now showed its characteristic tendency to penetrate into the interior from the coast, following the trade routes. The writers of the period also state that up to this date yellow fever was usually regarded as imported from Freetown or the Gambia. But after 1872 authorities were disposed to admit its endemic origin.

In 1878 an outbreak is recorded, and it was stated also to be present in 1897.

From 1900 to 1906 there is an annual record of cases. In 1900 quarantine was officially declared, and Dakar, Gorée, and Conakry were declared infected ports. The 1900-1 outbreak has been made the subject of more than one monograph. Kermorgnant states that there were 146 cases and 225 deaths, and describes how it spread up into the interior and along the railroad from Kayes to Dioubéba in the Soudan. Béranger-Féraud has also written the history of the epidemic. Both authorities mention how the disease was considered by many as endemic in Senegal. The possibility, however, of the ever-shifting Syrians having introduced the disease is also mentioned.

In 1902 a recrudescence of the disease is recorded in the Soudan and Upper Senegal.

In 1904 Dakar is declared to be an infected port.

In 1906 yellow fever breaks out at Bamaku in Upper Senegal, and at points along the Kayes-Niger Railway; the first case appeared to start in Segou in the Soudan.

An official communication from the British Consul-General in Dakar states that yellow fever was present in 1906 during the months of September, October, and November in the Upper Senegal and Niger Territories. Thus, in Senegal there has occurred an advance of yellow fever from the coast into the interior following the railroad and trade routes; this same phenomenon has repeatedly occurred in Central America (see my Honduranian report), and will be repeated in Nigeria and in the Gold Coast colonies unless preventive measures are taken at once. This year the disease has penetrated to Saw Mills on the Gold Coast, and there are as yet not sufficient protective measures enforced to prevent it spreading to either the tin-mining centres in Nigeria, to Tarquah and Obuassie, the gold-mining centres on the Gold Coast.

The interior of a country offers no protection from yellow fever.

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VI.

YELLOW FEVER IN ASCENSION, BONAVIDA (CAPE VERD ISLANDS), AND FERNANDO PO.

The interest attaching to yellow fever in these islands is mainly from the historical point of view. They were ports of call for the West African ships in the eighteenth century, so that ships with yellow fever cases on board arrived regularly every year. The medical authorities of the period differed as to whether the yellow fever which did occasionally break out in epidemic form was imported or of local or endemic origin. Of course it would be difficult to settle that question now, as both views were readily possible, but at the time they gave rise to bitter controversy.

On the whole, the evidence is in favour of the disease having been endemic in the early part of the eighteenth century, or even the seventeenth century. Outbreaks have also been recorded in 1863 and 1868.

ASCENSION.

According to Staff Surgeon Barry, yellow fever was imported into Ascension in 1823 by H.M.S. *Bann*, which became infected in Freetown during the yellow fever epidemic of 1823-4. Yellow fever broke out upon the ship, and 32 men died; the sick on arrival of the ship were sent ashore, and a few days afterwards fever appeared amongst the garrison, and of these 17 died. The *Bann* had a crew of 130, and of these 38 perished.

The same authority states that yellow fever broke out in 1838, and was, as before, attributed to a ship which sailed from Freetown during an epidemic.

According to Malcolm, genuine yellow fever was present in 1818.

BONAVIDA (CAPE VERD ISLANDS).

This island is stated, on the authority of Pym, to have been infected by H.M.S. *Iedair*, which arrived from Freetown during the epidemic there of 1844-5.

On the other hand, it is stated that yellow fever made its appearance in these islands in the sixteenth century, and that they became an endemic centre from which the disease spread to the African Coast.

FERNANDO PO.

In 1829 yellow fever is said to have been introduced in its malignant form by H.M.S. *Eden*, but it has been also stated by medical chroniclers of the time that the disease might have been endemic (Pym). Outbreaks are also recorded in 1839 and 1862.

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(To be continued.)

THE twentieth congress of the German Surgical Society will be held this year in Berlin in April (19th to 22nd) under the presidency of Dr. L. Rehn of Frankfurt. Among the subjects proposed for discussion are free transplantations; the disinfection of the hands and of the field of operation; Basedow's disease; floating caecum. The tenth congress of the German Orthopaedic Society will also be held in the Langenbeckhaus, Berlin, on April 18th.