

to percussion, especially in the right iliac region. The spleen was enlarged both in its longitudinal and transverse diameters.

*Course of disease.*—Until Sept. 2nd the general condition remained the same. There was no visible increase in the size of the enlarged glands. He was very restless at nights, having delirium with delusions. Fever was high, the temperature ranging from 103° to 105°. The pulse was rapid and feeble. Considering the stress and duration of the fever there was a notable absence of some of the commoner symptoms of high fever—viz., subsultus tendinum and dryness of the mouth and tongue. Headache was constantly present. On August 31st a marked injection of the right eye was observed with slight prominence of the eyeball. On Sept. 2nd a consignment of Yersin's anti-plague serum was received. It was decided after consultation that this patient was a suitable subject for serum treatment. Accordingly at 12 midnight an intravenous injection of 15 cubic centimetres and at the same time a subcutaneous injection of 25 cubic centimetres of the serum were made. The patient slept well after the injections and perspired freely for the first time since admission. Next day brought no remission of the temperature, but the buboes in the right groin, which had been extremely tender on the previous day, could now be touched without the patient experiencing more than a slight sense of pain. A like lessening in the tenderness of the axillary bubo was also quite manifest. A fall of temperature amounting to 4° occurred on the night of Sept. 3rd, and since then the improvement has been maintained. Three days ago (Sept. 9th) there was occurrence of pain in the glands of the right groin associated with a temperature oscillating between normal in the morning and 101° at night, probably due to suppuration of the bubo.

A pure culture of the bacillus pestis was obtained after puncture of the axillary bubo on the day after admission.

## A SUMMARY OF THE EVENTS IN THE RECENT OUTBREAK OF PLAGUE IN SYDNEY.

(FROM A SPECIAL CORRESPONDENT.)

THE population of the metropolitan combined sanitary districts of Sydney is 456,000, all being whites except a small colony of Chinese who number less than 4000. Cases and deaths occurred as shown in the table below; included among them are 10 Chinese, all males, of whom eight died. The first case appeared during the week ending Jan. 27th, and up to July 28th there had been 302 cases and 102 deaths.

Week ending	Number of cases.	Result.	Week ending	Number of cases.	Result.
Jan. 27th.	1	Recovered.	May 5th.	38	10 deaths.
Feb. 3rd.	—	—	„ 12th.	23	10 „
„ 10th.	—	—	„ 19th.	24	10 „
„ 17th.	—	—	„ 26th.	7	6 „
„ 24th.	2	1 death.	June 2nd.	17	3 „
March 3rd.	2	1 „	„ 9th.	4	3 „
„ 10th.	5	3 deaths.	„ 16th.	10	3 „
„ 17th.	12	3 „	„ 23rd.	6	—
„ 24th.	10	3 „	„ 30th.	12	3 deaths.
„ 31st.	23	6 „	July 7th.	1	—
April 7th.	29	9 „	„ 14th.	3	—
„ 14th.	29	12 „	„ 21st.	2	—
„ 21st.	16	8 „	„ 28th.	0	1 death.
„ 28th.	26	7 „			

Before the plague came the provisions of the Venice Convention were applied to vessels arriving from plague-infected ports, efforts were made to kill the rats on them, and notification of all cases of plague was made compulsory under the Public Health Act as soon as the presence of the disease in New Caledonia became known. On the appearance of the first case the Registrar-General was

requested to communicate to the department every information of death received by him after Jan. 1st, 1900, in which the cause was ascribed to blood-poisoning, septicæmia, acute abscess, septic intoxication, &c., with a view to investigation by the medical staff. It was publicly requested that all cases of illness of doubtful character should be reported to the department. This request was also specially addressed to the members of the medical profession by letter. Suspicious or doubtful cases thus reported were examined and diagnosed by a staff medical officer. On the appearance of the second case the coroners were desired to report all uncertified cases of death in which there was suspicion of plague, in order that the examination of the bodies might be supervised and to secure safe burial if plague were found to have been the cause of death.

Facilities for examining cases bacteriologically already existed in the excellent laboratories possessed by the department and under direction of a highly-trained microbiologist. A supply of plague prophylactic (Haffkine) had been procured long before and was in readiness. At first it was used for inoculating the staff and contacts only. A further supply was received during the second week of the outbreak and was used on contacts and on persons inhabiting parts of the city which appeared to be specially dangerous; this supply was continuously maintained by receipt of fresh consignments from India. Posters were exhibited in the streets in which brief information concerning plague and instructions to householders were given, and pamphlets to a similar effect were sent by post to every householder; the posters were also printed in Chinese, and exhibited in the small Chinese quarters which exist in Sydney.

Parts of the city from which numerous cases of plague had been removed were regarded as infected areas. They were dealt with under the quarantine law, surrounded by a guard, and then large numbers of men controlled by the Department of Public Works were turned into them who thoroughly cleansed them. A staff was organised for the destruction of rats. In addition, a capitation fee of sixpence for every rat was paid through the agency of the staff last mentioned and also through the agency of the various municipal councils controlling the districts into which Sydney is subdivided. The sewers were from time to time fumigated with burning sulphur by the staff of the engineer for water-supply and sewerage. This had the effect of killing some rats and of driving large numbers to the sewer mouth where they were drowned or destroyed. Another staff was organised which had for its duty to fumigate regularly with burning sulphur the ferry boats which ply on the harbour so as to destroy the rats. This duty was entrusted to the collector of customs. It was ordered that no vessel trading between Sydney, which was the only infected place, and other ports of New South Wales should be allowed to communicate with the shore unless it could produce a certificate that before leaving Sydney it had been fumigated and the rats had been destroyed. This duty was entrusted to a branch of the last-named staff. Vessels of all descriptions were forbidden to lie at any public wharf except under regulations calculated to prevent the landing of rats from them. They were to be kept four feet off the wharf by fenders—the fenders and gangways in use to be kept freshly tarred, springs and hawsers to be tarred, all openings in the vessel on the wharf side to be closed except when in actual use, all openings to be closed at night and the side to be brightly lighted, &c.

All local authorities were reminded of their powers and duties under the Public Health Act and the Municipalities Act and were exhorted to use great exertions to get rid of all accumulations of filth and of nuisances in general. Local authorities in country districts in communication with Sydney by sea or by rail were requested to secure the refusal of some cottage suitably placed in which a plague patient might be lodged if imported from Sydney.

Part of the maritime quarantine station was equipped and utilised as a plague hospital. A staff of experienced trained nurses was drawn from a general hospital under control of the department. A staff medical officer was placed in charge of the quarantine hospital; he was assisted by the advice of a leading member of the profession practising in Sydney who paid a visit on alternate days. Clergymen of three religious denominations volunteered for service at the quarantine station and officiated during its occupancy for plague purposes. They, as well as medical officers and medical visitors who desired to study the disease, were allowed to enter and leave the hospital enclosure on first

changing their clothes and on bathing before leaving if they had been inoculated.

Buildings at the maritime quarantine station standing outside the hospital enclosure, which are generally employed for housing healthy persons landed from infected vessels, were used as an isolation camp for contacts.

Communication with the quarantine station being by sea a service of steam-vessels was organised, by means of which communication could be had immediately at any time that a case was reported for removal. These vessels lay at a central depôt within the city, which was placed in quarantine. A special ambulance service was equipped for the purpose of removing cases of plague; it was lodged at the central depôt above-mentioned. A disinfecting staff was organised and lodged at the same central depôt. This was placed under control of the medical officer of health of the metropolitan combined sanitary districts.

All cases of plague or suspected plague were notified to the department direct; they were then visited by a staff medical officer. As soon as the staff medical officer had made up his mind that the case was plague he administered subcutaneously 40 cubic centimetres of Yersin-Roux serum (as soon as this became available on May 12th), communicated with the nearest police-station, forthwith placed the house and all persons in it in strict quarantine under a police guard, and reported.

When a staff medical officer's report was received (by telephone or otherwise) at the department, the ambulance staff was instructed to fetch the patient and, in separate vehicles, the other members of the household. A trained nurse accompanied the patient and attended to his needs during the journey.

On arrival at the maritime quarantine station protective inoculation was offered to the contacts; it was rarely accepted. On arrival contacts were deprived of their own clothes and were given clean clothes; their own clothes were restored to them after washing or disinfection in a steam disinfectant. Contacts, whether inoculated or not, were detained for five complete days and were then dismissed. Patients were discharged from hospital (a) if they had had a normal temperature for 10 days, (b) if they had no discharging sore, and (c) if they were, generally speaking, strong enough.

The bodies of persons (a) who were too ill on discovery for removal, (b) who were found already dead, or (c) who after investigation on report of coroners were found to have died from plague were dealt with as follows. The body was completely enveloped in a sheet soaked in sublimate solution and placed in a light coffin having watertight joints at the bottom. The coffin was screwed down; it was enveloped in coarse sheeting soaked in sublimate solution; it was then safely transported by the undertaker to the depôt already mentioned and thence to the maritime quarantine station, where it was buried without further precaution in a sandy soil on a slope falling towards cliffs above the Pacific. The bodies of persons who died at the quarantine hospital were coffined after a similar fashion in the hospital enclosure by the male nurses, who also carried them to the gate. They were then taken in charge by appointed persons who transferred them to the place of burial mentioned above.

After the house from which the patient had been removed was evacuated it was locked and remained in charge of the police who prevented general access to it. As soon as possible the disinfecting staff took possession of it. Usual methods of disinfection were used: sublimate solution was applied with Geneste-Hirscher sprays inside, solutions of 5 per cent. sulphuric acid being used for yards and basements. Clothing, bedding, and soft goods generally were removed in canvas bags to the steam disinfectant. The routine of disinfection varied slightly according to circumstances in individual cases; the whole premises were always thoroughly cleansed, but often only the room occupied by the patient was actually disinfected. Articles removed for disinfection having been replaced, the contacts resumed occupation at the beginning of the sixth day from their removal.

August 8th.

## POST-GRADUATE INSTRUCTION.

AT the beginning of the new medical session, which is now within a measurable distance of us, many qualified men will like to know the opportunities which are offered them in London for keeping up to date in their clinical work. The union of nine of the Metropolitan Schools of Medicine offers the best of these opportunities. A ticket for three months or six months can be obtained which entitles its holder to attend the clinical instruction, the operations, and the post-mortem examinations at each of the following hospitals, viz., Charing-cross, Guy's, King's College, Middlesex, St. George's, St. Mary's, St. Thomas's, University College, and Westminster. It will be seen at once what a wealth of material is open to those who desire to see as many cases as possible in a short period, and practitioners will be difficult to please if they do not find enough cases of real interest to study. If the scheme were more widely known there would be fewer who consider that they must go to Paris, Berlin, or Vienna to obtain clinical instruction. Particulars may be obtained on application to the honorary secretary, Metropolitan Schools of Medicine, west wing, Examination Hall, Victoria-embankment, London, W.C., between the hours of 12.30 and 3 P.M. daily, except on Saturdays.

*Medical Graduates' College and Polyclinic, 22, Chenies-strzet, Gower-street, W.C.*—This institution was established in 1898. Its principal object is to organise and to develop post-graduation study in the metropolis. The enormous field for clinical study which exists in London has failed to attract medical graduates in any considerable number largely because the existing facilities are but imperfectly known and the clinical teaching is not definitely organised to meet the wants of practitioners. The establishment of a central office where precise information may be obtained will, it is hoped by those interested in the institution, be of some influence in placing London in the position it ought to occupy as the most important centre for post-graduation study. In addition to an endeavour to secure coöperation among existing institutions the new College provides practical instruction under its own roof in all the special departments of professional work. It is well equipped with consulting-rooms, class-rooms, laboratory, lantern-room, dark-room, &c. There is also a well-furnished reading-room and library. In the Polyclinic consultations are conducted every afternoon at 4 o'clock by well-known physicians and surgeons. Patients whose circumstances warrant it may be sent by any medical practitioner and the opinion of the consultant is communicated not to the patient but to his medical adviser. Records of the cases are made and the valuable clinical material thus collected is to be published in the College journal. The annual subscription is fixed at present at one guinea. This secures the use of the library, reading-room, and museum with the right to attend the afternoon consultations. There are also at intervals special clinical lectures which are open to all annual subscribers. Medical visitors to London are invited to inspect the College, and further information may be obtained by application to the medical superintendent. The President of the College is Sir William H. Broadbent, Bart.

*Charing Cross Hospital.*—Special series of clinical lectures and practical demonstrations, exclusively arranged for the convenience of practitioners and post-graduate students, are given at the hospital throughout the year. The lectures for the year are arranged in three courses, each course consisting of 10 meetings and lasting 10 weeks. Two of these courses are held during the winter and one during the summer. The class meets on each Thursday in the board-room of the hospital and proceeds thence to the wards or to the department in which the demonstration may be held. The fee at present charged for each course of 10 lectures is one guinea. The first of the two winter courses for the ensuing academical year will commence on Oct. 11th next and will be conducted by the following members of the medical and surgical staff: Dr. T. H. Green, Dr. J. M. Bruce, Dr. F. Willcocks, Dr. H. M. Murray, Dr. J. Galloway, Dr. T. W. Eden, and Mr. S. Boyd, Mr. H. F. Waterhouse, Mr. F. C. Wallis, and Mr. C. Gibbs. Practitioners wishing to join the class can obtain any further information as to the

**ALUM IN BAKING POWDER.**—At the Bristol police-court on Sept. 5th a grocer was summoned for selling baking powder containing 52 per cent. of alum. He was fined 40s. and costs and informed that a second offence would result in imprisonment.