

fessedly uninstructed of our profession (whom Dr. Carr does not address) talk in these terms now; fewer write in them; and very few, indeed, who hear or read them are thereby much misled.

Sir, I trust I have succeeded in showing that even as far back as some years ago there was a little medical knowledge that has not been upset, but has even been endorsed by fresh "research;" and I trust, also, that Dr. Carr will not anaesthetise me with the formula of *perant qui ante nos nostra dixerunt*.—I am, etc.,

Harley Street, W., Sept. 5th.

H. B. DONKIN.

UNUNITED FRACTURE IN CHILDHOOD.

SIR,—I certainly agree with Mr. R. W. Murray regarding the rarity of ununited fracture of the leg bones in children. Although my experience is but small compared with Mr. Murray's, I have, since succeeding him as Surgeon to the Liverpool Infirmary for Children, performed osteoclasis of the tibia thirty-three times. These cases have all been carefully followed up, and in every instance firm osseous union has resulted. I have also within the past three months treated two cases of simple fracture of the tibia in children caused by very slight indirect violence, in neither did non-union occur. I have only met with one instance of fibrous union following osteoclasis of the bones of the leg; the operation was performed at a general hospital when the child was 1 year old. At the age of three years the case came under my care. My first operation, resecting the fibrous tissue with careful approximation of the fragments failed, as also did subsequent forcible rubbing together of the fractured ends. It is my intention to make a further attempt at union by refreshing the fractured surfaces and wiring. I shall watch the case with much interest on account of Mr. Edmund Owen's remarks at the Portsmouth meeting on the frequent failure of operative interference. I may say that in this case I observed no atrophy of the lower fragment at the time of operation. From my knowledge of Mr. Murray's results and my own experience of osteoclasis I look upon it as a safe procedure by no means frequently followed by non-union.—I am, etc.,

6, Rodney Street, Liverpool, September 5th. ROBERT CRAIG DUN.

CERTIFICATES ISSUED BY SOCIETIES.

SIR,—The Council of the Medical Defence Union has lately appointed a Subcommittee to inquire into the question of certificates, etc., which are used for the purpose of medical practice, and which are issued by medical practitioners or societies. It is necessary, before a report be made, to collect facts relating to (1) the prevalence of the use of such certificates, so-called diplomas; (2) the method of granting them; (3) the use which is made of them by the "diplomates." The Subcommittee venture to ask members of the profession who may be able to assist in the inquiry on the lines named above, to kindly communicate any facts known to them, and to make such communication to me.—I am, etc.,

4, Trafalgar Square, W.C., Sept. 5th.

A. G. BATEMAN,
General Secretary.

THE ETIOLOGY OF BERI-BERI.

SIR,—In the BRITISH MEDICAL JOURNAL for August 19th, in discussing the etiology of beri-beri, you remark that it would be interesting to know what part fat formed of the dietary in the Richmond Asylum, Dublin, before the appearance of beri-beri there. Beri-beri broke out in the Richmond Asylum, Dublin, in the summer of the year 1894. At that date the general dietary of the patients not under special medical treatment was as follows:

Breakfast.—Bread, $\frac{1}{2}$ lb.; tea, 1 pint.
Supper.—Bread, $\frac{1}{2}$ lb.; cocoa, 1 pint. (The tea consisted of 1 oz. of tea leaves, $\frac{3}{4}$ ozs. of sugar, and $\frac{1}{2}$ pint of new milk to every 7 pints; the cocoa of $\frac{1}{2}$ oz. of ground cocoa, $\frac{1}{2}$ oz. of sugar, and $\frac{1}{2}$ pint of new milk to every pint.)
Dinner.—Sunday, Monday, Wednesday, and Saturday: Beef, 8 ozs. for men and 7 ozs. for women. Tuesday: Bacon, in the same quantities. Thursday: Pork, home grown and very fat, in the same quantities. Friday: Dried ling, $\frac{1}{2}$ lb., males and females.

Besides these rations bread was supplied at dinner every day and potatoes for about eight months in the year. Every day, except Friday, there was also another vegetable, cabbage, turnip, parsnip, or the like. These vegetables were prepared with dripping. The fish on Fridays was served with sauce, consisting of 1 pint of new milk, 1 oz. of butter, and 1 oz. of flour

to every seven patients. With regard to the beef, it is to be observed that the meat was bought in sides and quarters for use on three days in the week and therefore contained a good mixture of fat. One day in the week neck beef was used, which is of course very lean.

On the whole this dietary does not seem more deficient in fat than most dietaries in similar institutions. It was certainly superior in this as in other respects to most Irish asylum diet scales of the same period, and infinitely before the dietaries of Irish workhouses.

Ling, owing to certain administrative reasons, was not given to the epileptics. They had coffee and bread and butter (1 oz. each) for dinner on Fridays. They were the members of our population who suffered most severely from beri-beri in the 1894 epidemic.

The opportunity arising out of the beri-beri epidemic was taken advantage of to improve the dietary. From the latter part of 1894 to the present time, butter ($\frac{1}{2}$ oz. to each patient) has been supplied for breakfast and for supper, fresh fish (cod, hake, ling, and haddock mixed) has been used for Friday's dinner; neck and leg meat has been discontinued. Waste dripping not used for cooking vegetables has been worked up into pastry (meat pies, etc.).

Beri-beri, after being absent during the year 1895, has revisited the asylum in 1896, 1897, 1898, and doubtfully even in 1899.

On the whole, I am afraid our experience does not lend aid to the newest any more than to the older notions of the dietetic origin of beri-beri. It would be out of place to discuss here the many theories as to the etiology of beri-beri, each of which has, at various times and places, seemed able to appeal to weighty evidence. Probably many elements, some varying, determine any particular outbreak, and Kohlbrugge—as you pointed out in the JOURNAL a short time ago—has shown that the affection seems to follow some obscure law of periodicity. But it is interesting to observe, with regard to the latest European epidemic (that in the Asylum at Sainte-Gemmes-sur-Loire) that Chantemesse and Ramond have pointed out that the affection is probably identical with a singular epidemic which appeared in the same asylum in 1855, and the following years. If this be so it affords confirmation to the doctrine of those who hold that the poison of beri-beri is specially connected with certain localities. On the other hand, the recent epidemic at Sainte-Gemmes only attacked patients of the "indigent" class, whose diet was the poorest in the asylum, and the disease was most fatal among the epileptics. Again, our Dublin records show the difficulty of generalising from a limited experience. In the Richmond Asylum only the insane were attacked in 1894, and the epileptics were specially affected. In 1896, 1897, and 1898, the epileptics were not particularly liable to the disease, which in each of these years attacked sane members of the asylum staff as well as the insane patients.—I am, etc.,

Dublin, Aug. 28th.

CONOLLY NORMAN.

THE REPORTED OUTBREAK OF PLAGUE IN RUSSIA.

SIR,—There would seem now to be little room for doubt that plague has made its appearance in European Russia. The outbreak is at present confined to the village of Kolobovka, in the Government of Astrakhan, and near the mouths of the Volga. It was in this neighbourhood that the last appearance of plague in European Russia—the Vetlianka epidemic of 1878-79—occurred. That outbreak, it will be recalled, although extremely severe in the few villages attacked, was entirely confined to them, and there was no general spread of the infection to other parts of Europe. This consideration should do much to lessen any apprehensions with which the present outbreak might be regarded—even were it not quite overshadowed in interest and in the apprehensions which it arouses, by the much nearer outbreak in Portugal.

In view of the re-appearance of plague in Russia the following details, which have not yet I believe appeared in the English press, relating to the outbreak which occurred it will be remembered last autumn in Central Asiatic Russia, are not only of interest but of considerable importance, pointing as they do to a possible source of infection in the present outbreak. These details have only recently come to my knowledge, partly from a report published by Dr. A. M. Levin, who

personally visited the scene of the outbreak, and partly from the minutes of the frequent meetings of the Imperial Commission which the Russian Government despatched at the time to Central Asia, under the personal presidency of H.H. the Prince of Oldenburg. For the latter papers I am indebted to the courtesy of Dr. Yassenski, who, after conducting the Russian Plague Commission to India, was appointed in charge of the plague measures in the Khanate of Bokhara.

The scene of the outbreak was Anzob, a village near a mountain pass of the same name, which divides the province of Samarkand from the Khanate of Bokhara. It lies on a stream which falls into the Fan-Darya, one of the sources of the Zeriatshan River, which flows through Samarkand. It is 220 versts, or 140 miles, south-east of Samarkand, in a mountainous region most difficult of access, and some six or seven thousand feet above sea level. It was at the end of September, 1898, that the authorities first heard of the outbreak, and on the 3rd (15th) of October a medical man, Dr. Aphramovitch, reached the spot. His inquiries elicited the following very interesting facts. At the end of August in a village called Marzitch, sixteen versts from Anzob, a boy named Shukur, aged 12, sickened and died after four days' illness. Ten days after his death his brother Shakir, aged 9, sickened and died also on the fourth day. A few days later their mother sickened and died on the third day.

These were all the cases in this particular village. Two days after the last death a woman named Ashur Bibi, a relative of the deceased, came over from Anzob. She washed the body of the last patient, took part in the funeral, and received the customary present. Returning to Anzob, she became ill and died on the third day of the illness. After this cases occurred among this woman's relatives and among people who attended the funerals. The rapid spread of the disease was ascribed to Divine wrath, and one of the villagers, Hassan Rakhimof, induced the others to believe that the scourge was sent because, in burying Ashur Bibi, they had omitted some of the rites prescribed by the Shariat or traditional Mohammedan law; so the body was exhumed and reinterred with full rites. But the scourge was not stayed. Those who helped in the exhumation died first—among them Hassan himself, his three sons, their mother, his two daughters-in-law, his brother, and the brother's wife and son. The terrible mortality in Anzob may be judged from the fact that, out of a population of 387 inhabitants, only 150 remained alive on October 3rd; 237, or over 61 per cent. of the total, having died in about six weeks. Of 60 families, only 3 escaped without a case.

It would occupy too much space to quote or discuss the symptoms the disease presented. Though they differed to some extent from those most frequently met with in plague in India, there seems no room for doubt that it was plague, particularly as the bacillus associated with the disease was isolated from some of the cases.

The most interesting question is, How and whence did the infection reach this remote spot? Dr. Levin asserts that it could not have come directly from India. He suggests one or two other possibilities. The ordinary pilgrimage routes to Mecca being closed last year, it is faintly possible that pilgrims from Central Asia, making their way from Bokhara, through Afghanistan, to Bombay (*sic*), chose the mountain paths instead of the ordinary roads, but there is no evidence whatever of this. A second suggestion is that pilgrims from Bokhara (which has constant communication with India) may have visited the tombs of local saints or *ishans*, which exist both in Anzob and Marzitch. But a much more important point brought forward by Dr. Levin is the following: He examined every surviving inhabitant of both villages. In many he found buboes in various stages of absorption, or which had been opened and were in various stages of scarring. Now in several other persons, who had not been attacked in the recent epidemic, exactly similar appearances were present. These persons said they had been ill two, four, or even ten or twenty years previously. They described the illness as lasting from three to five days, and as characterised by headache, fever, pain, and swelling in one groin; the swellings suppurated and either burst or were opened by the "wise women" of the village. That the swellings were not venereal in origin was proved by the fact that children of 5 or 6 had had them. Neither syphilis nor scrofula was present in a single case, and

small-pox could be excluded. Swellings of this kind were found in 30 people in the two villages above-named.

The author of the report comes to the conclusion that there exists in these *kishlaks*, or mountain villages, an endemic disease, which he names "lymphadenitis femoralis suppurativa." Might not plague, he asks, have been introduced into this remote spot twenty years ago, and remained to give rise to occasional epidemics? Epidemics of this kind might easily escape notice. For example, last year's outbreak only became known by an accident. The villagers of Margif, though only eight versts (5½ miles) from Anzob, had heard nothing of the appalling occurrences there until a month after they began, when 200 people had already died. They had run short of linen "for shrouds" (even to the last detail the story of these poor highlanders is gruesome and pitiful), and some of them went to Anzob to borrow some. It was they who reported the occurrences there to the authorities. Supposing, it is very appositely asked, they had not run short of linen? A whole village might have died out and the world been none the wiser.

The last suggestion made by the author is that the recent outbreak was caused by imported infection from Bagdad, where, he states, plague was epidemic in 1873, and where there were many isolated cases at least as late as 1892.

I have already trespassed far upon valuable space, and must leave the facts here brought forward with but the briefest comment. Their importance is obvious. It is certain that last autumn a concentrated and virulent epidemic of plague occurred in the region described; it is possible that the disease has been epidemic in certain centres there for many years past. Such centres in this region would be closely analogous to the so-called endemic centres in the Himalayas, in Gurwhal and Kumaon. They would be the nearest, and most probably are the actual, centres whence the infection has during the past week or two been introduced into European Russia. By far the larger part of the traffic between Central Asia and European Russia passes through Astrakhan, and it is therefore not surprising that it is in the neighbourhood of that town that plague has made its appearance.—I am, etc.,

London, Aug. 29th.

FRANK G. CLEMOW, M.D., D.P.H.

PHTHISICAL PERSONS AS OUT-PATIENTS.

SIR,—It is generally admitted that persons suffering from phthisis who have fever require complete rest, and that at all stages of the disease any over-exertion or undue fatigue is decidedly prejudicial. Many authorities are also of opinion that a phthisical person travelling by public conveyances—as railway trains, omnibuses, etc.—is a source of danger to the travelling public. In spite of these commonly-held opinions, it is a notorious fact that hundreds of men, women, and children in all but the last stage of consumption weekly, if not daily, leave their homes in the suburbs to journey to the three or four consumption hospitals in London, there to obtain medical treatment.

This journey means—in the cases I am specially interested in, say—a quarter of an hour's walk to the station, standing for several minutes on the platform, three-quarters of an hour in the train (at least), five minutes' walk and waiting for an omnibus, half an hour's ride in the omnibus, and another short walk to reach the hospital; and the same reversed to return home. At the hospital there is also usually one to three hours' waiting and deprivation of proper food. An experience of this kind is well known to cause headache and exhaustion, lasting one or two days in moderately strong persons, but in the average phthisical patient it must and does cause increased fever, impairment of digestive functions, and extension of disease of the lungs, which is probably not recovered from before the next visit augments the mischief.

It is not to be wondered at that the working class public should resort to the hospitals for out-treatment, for they know the beneficial results often obtained by in-patients, and even by out-patients in suitable cases, and they cannot be expected to see that these results are not simply the effect of the medicine prescribed. But it is to me matter of surprise that the able members of the medical staffs of the consumption hospitals should encourage these visits. Surely it is no disparagement to these gentlemen to assert that their skill is not suffi-