

CHAPTER IV

PUBLIC HEALTH

CLIMATE

The district of Dinajpur has at all times been notorious for unhealthiness. According to tradition, fever, which is the prevailing scourge, was introduced into the district during the war between Krishna and Ban Raja about the time of Alexander's invasion of India. In 1807, Buchanan Hamilton, speaking of natural checks on the increase of population, wrote : "The grand check, however, to the excess of population is disease, which makes ample room, and fever annually sweeps away immense numbers; although I do not think that any means would ever render Dinajpur a country remarkably salubrious, yet I am persuaded that the excessive prevalence of fever is more owing to the want of stimulating diet and of comfortable lodging and clothing, the consequence of poverty, than to any extraordinary degree of malignity in the air; and the great poverty of the natives is no doubt to be chiefly attributed to their improvidence, especially in forming early marriages, by which they have been involved in debt. The fevers are often of the remitting kind and terminate fatally in a few days; but more commonly they terminate in agues, or com-

mence under that form, and are accompanied by enlargements of the spleen and dropsical swellings, which carry off sufferer after long confinement. In fact, there are few who escape with less confinement than one month in the year, and the whole are a sickly, poor-looking people." Major Sherwill, the Revenue Surveyor, Writing in 1863, emphasises the dread in which the district was held by strangers. "The climate," he says, "is very unhealthy, and is justly held in great dislike by strangers, including Bengalis, on account of its insalubrity. When the Second Division, Revenue Survey, was ordered from Burdwan into Dinajpur, many of the oldest and best native Bengali Surveyors resigned, rather than face the dangers of so dreaded a climate. In the seasons of 1857-58 and 1858-59, this survey was nearly disorganised by sickness. As many as 13 surveying parties were unfit for work at the same time, and almost all were sick and weakly from the effects of fever, which is the prevailing epidemic. The villagers have a sickly appearance, and many are annually carried off by fever and cholera. Natives are more easily affected by the climate than Europeans, which is probably attributable to the freer mode of living of the latter, which enables them the better to withstand its baneful effects, also to the greater exposure of natives to the night air."

The remarks of these two officers still hold good in a general sense, though it is probable that with the introduction of the use of quinine, and the gradual clearance of jungle, the general health of the district has somewhat improved in recent years. The standard of living, too, amongst the natives of the district has risen since Buchanan Hamilton's time, and the people are no longer conspicuous for poverty though they still live poorly enough, and their houses and their surroundings are not so prosperous looking and well kept as those of the villagers in many other parts of India. In the matter of providence there has been little change in the habits of the people. They still waste a lot of money, which might be spent on increasing their comfort, on marriages and ceremonies, and on unnecessary extravagance at the local fairs.

It is difficult to arrive at any satisfactory conclusions by comparing the vital statistics for any considerable period, as the system of registering births and deaths has been changed more than once in recent times. In 1869, the

VITAL STA-
TISTICS

duty of registering deaths in the district was entrusted to the village chaukidars or watchmen while in Dinajpur town this work was performed by the officers of the municipality. In 1888, the municipal authorities began to register births. In 1892, the mofussil chaukidars began to register births as well as deaths, while in the town the collection of vital statistics was transferred from the municipality to the police.

Under this system, vital statistics, both in urban and rural areas, are collected by the chaukidars. These report to the thana officers at the weekly parades, and the latter submit returns to the Civil Surgeon, in whose office the statistics for the district are compiled. These statistics, though far from complete, and without any great pretensions to accuracy, afford data for gauging the growth of the population, for comparing one year with another in the matter of healthiness, as well as for comparing the mortality due to different diseases. Taking the period 1883-1905, it appears that the highest death rate (45.85 per mille) was recorded in 1900, and the lowest (17.62 per mille) in 1884. The highest birth rate (49.36 per mille) was recorded in 1902 and the lowest (27.05 per mille) in 1892, the first year in which the registration of births began throughout the district. The steady tendency of both the birth rate and death rate to rise throughout this period appears to me to indicate clearly that the increase in the latter is not due to a deterioration in the health of the district, but to more careful registration. The registration of births is still very far from perfect. A comparison of the average birth rate per thousand with the average death rate in the ten years from 1893-1902 shows that the deaths exceeded the births by 4.18 per thousand, and even the large amount of immigration would hardly suffice to counterbalance such a decrease.

PRINCIPAL DISEASES. Malarial fever is not only the most prevalent, but by far the most deadly disease. As Buchanan Hamilton says :
MALARIAL FEVER "Fever makes such ample havoc, that little room seems to be left for other diseases." The chaukidar, of course, who is the reporting agency, displays the usual tendency to report all deaths which are not obviously caused by cholera, small-pox, or some well-known disease, as due to fever, but enquiries have shown that most of the deaths reported under fever may really be ascribed to malarial affections. Regarding the types of fever found in Dinajpur, Major Rogers, I.

M. S., who was selected by Government in 1904 to make a special enquiry in to the causes of the prevalence of fevers in the Dinajpur district, found that the most usual type of fever was the malignant tertian, common to Calcutta and most parts of India. He also found the quartan type, which is said to be the most common in the Duars, and which is usually of a chronic nature, and terminates fatally after several months of sickness. According to this authority, the districts of Rangpur and Dinajpur were the home of the terrible kala-azar of Assam. During the course of his enquiry in 1904, he found traces of this disease, which is characterised by a great enlargement of the spleen, accompanied by general wasting and darkening of the skin, still surviving in the district. The disease, though not general, was found fairly frequently in Ranisankoil thana, in the north-west of the district. It seems to be gradually disappearing. Other common types of fever are simple, tertian, quotidian, and remittent. On the average for the ten years 1893-1902 the deaths from fever for the wole district were 33.30 per mille as compared with 3.24 due to all other causes. The lowest average fever death rate, 21.84 per mille, is shown against Dinajpur municipality, while Ranisankoil thana has the highest, with 38.59 per mille. Birganj thana with 36.54, and Raiganj and Kotwali thanas with 36.28 each, show the next highest averages. The thanas of Kaliyaganj, Bansihari, Gangarampur, Phulbari, Nawabganj, Thakurgaon, and Pirganj, all show averages of over 32 deaths per mille from this cause. It is a matter of regret that old writers such as Buchanan Hamilton and Major Sherwill were unable to give statistics of mortality with which the statistics of recent years might have been compared. It is thus impossible to judge with any accuracy to what extent the health of the district is improving or deteriorating. A comparison of the death rates from fevers in 1888 and 1889, with those in the four years 1906-1909 is greatly in favour of the former. These death rates were 1888-27.84, 1889-25.74, 1906-41.54, 1907-39.22, 1908-36.75, 1909-35.45 per mille. The decennial average for the years 1899-1908, namely, 37.84 per mille is also higher than that for the years 1893-1902, already quoted. These figures would seem to show that the health of the district is growing worse instead of better, notwithstanding that the country is getting more opened up, and the use of quinine more general. It is almost

certain, however, that the increased death rate shown recent years is due to better reporting, and not to an increase in unhealthiness. I have already drawn attention to the lower death rate from fever in the Dinajpur municipality, as compared with the surrounding district. This, to one who knows the place, does not indicate that the town is really more healthy than elsewhere. It is rather the reverse. The inhabitants of the town, however, are more enlightened than the villagers, have a more comfortable standard of living, and resort freely to quinine and other European medicines when ill, while the villagers are dependent on the kabirajes, with their obsolete methods of treatment, and have an unreasonable dread of quinine, which many think causes fever instead of curing it. Many of the town dwellers, too have their homes in the country, or in other districts, and when they get seriously ill go home to die, or recover, as the case may be. The cause of the prevalence of malarial fever in Dinajpur has never yet been satisfactorily determined. Major Sherwill says the north of the district is healthier than the south, as there is less jungle there, and fewer tanks and marshes. Recent sanitary reports show that at the present day the contrary is true, as the northern part of the district is unhealthier than the southern. The Civil Surgeons seem generally to be of opinion that the unhealthiness of the district is due to its water-logged condition. By water-logged it is not meant that the country is subject to periodical floods and inundations, as is the case with some of the more easterly districts, like Bakarganj and Dacca. On the contrary, to the superficial observer the district seems a rather dry one, and in the cold weather many parts of it resemble Behar rather than Eastern Bengal. In reality, however, this appearance is deceptive, not only is the country full of old tanks which, being choked with jungle, form an excellent breeding ground for mosquitoes, but even in the height of the dry season water is struck in most parts at a depth of 7 or 8 feet, while in the rains it is very near the surface indeed. This characteristic was especially noticeable in the drought of 1909, when a number of old tanks, most of them completely dried up, were re-excavated as test or relief works. The average depth of these tanks when work was started on them was some 7 or 8 feet below the level of the surrounding country. In almost every instance water was struck when 4 or 5 feet had been excavated. In certain parts

of the district the water level is much lower, and these are generally found to be the most healthy localities. Major Rogers in his report speaks of "a remarkable relationship between a high ground water level and high spleen rates and fever mortality of the thanas, and *vice versa*. Thus at Porsa the ground water level was 33 feet down, and the spleen rate was only 28.3, the lowest met with, while the fever death rate of 29.05 per thousand was also the lowest of all the thanas. Exactly the reverse holds good of the Ranisankoil circle, in which the highest ground water level coincides with the highest spleen and fever rates. Similarly Dinajpur, Birganj, and Thakurgaon thanas show high ground water levels and spleen and fever rates, while those of Balurghat and Churaman have lower rates approaching those of Porsa." The heavy mortality from fevers in this district and especially in Dinajpur town has exercised the minds of the authorities for many years, but it is only recently that systematic attempts have been made to combat the disease. Major Rogers found the system of selling pice packets of quinine at post offices, which was started in 1892, unsatisfactory. The villagers do not visit the post offices in any numbers, and when they do seldom think of purchasing quinine. In 1906, on the recommendation of the Civil Surgeon, some of the Hospital Assistants attached to the charitable dispensaries in the district were instructed to visit the weekly markets nearest their dispensaries, and distribute quinine to the villagers. The Hospital Assistants complained that these visits to the market interrupted their ordinary work, and that the villagers showed no eagerness to take quinine from them. In 1908-09 five new dispensaries were opened by the District Board, and early in 1909, on the recommendation of the Civil Surgeon, a number of primary school teachers were induced to undertake the sale of quinine tablets. As regards Dinajpur town, several schemes for improving its sanitation, by levelling the beds of the Ghagra and Kachai Nalas, and thereby abolishing the ponds and cess-pools, which now form the beds of these canals, have been mooted from time to time, but have always been abandoned as costly and uncertain in their results. As an alternative measure, and anti-malarial campaign, on the lines of that recommended by Major Ross for Mauritius, was started in the town in January 1908. The principle followed was to fill up all hollows of manageable size, to remove

rubbish of all sorts from the neighbourhood of the houses, to clear ditches and tanks of jungle, and to treat small tanks and pools with raw kerosine. An integral part of the campaign was the wide distribution of quinine amongst the inhabitants of the town. In March 1909, Dr. Bentley, a specialist in malaria, visited Dinajpur at the request of the Sanitary Commissioner, and made an enquiry similar to that made by Rogers five years before. Like the latter he held that it was little use attempting to destroy the anopheles mosquito, but that the injury done by this insect might be greatly diminished, and in time almost entirely done away with, by the systematic use of quinine. Accordingly, while the clearing of jungle and removal of rubbish was continued, redoubled efforts were made to push the distribution of quinine amongst the inhabitants of the town, while studying the effects produced. It is too early yet to judge of the result of these measures, but the statistics supplied by the Civil Surgeon with his report on the progress of the campaign in 1909 are distinctly encouraging. The ratio per thousand of deaths from fever during the year, which was not by any means a healthy one, was slightly lower than the average ratio per thousand for the five years from 1904 to 1908, while the proportion of deaths from fever to total deaths was very much lower.

CHOLERA

Outbreaks of cholera are of yearly occurrence, but are rarely of a very serious nature. These outbreaks occur generally at the beginning of the cold and the hot seasons, and last for a month or six weeks at a time. It is hard to say that one part of the district is more subject to such outbreaks than another, but the disease usually seems to follow the course of one of the bigger rivers, the infection being doubtless carried by the river water. It is noticeable that in years of deficient rainfall such outbreaks are more marked, and assume more of the epidemic form. The reason why cholera is much less prevalent in this district than in many others is probably that the population as a whole get their drinking water from wells in their own compounds, and these are naturally much less liable to contamination than public sources of supply, such as tanks and rivers. These wells are, however, seldom deeper than 12 to 15 feet and in a rainless season they run dry and the people are driven to drinking tank or river water, frequently with disastrous results. The death rate from cholera in this district is so small

as compared with that from fever, that it seems hardly worth while comparing one year with another, but the year 1891 may perhaps be mentioned as an exceptionally bad one, when the deaths from this cause came to a total of 6,491 or 4.17 per thousand. This death rate, though high for Dinajpur, is low as compared with many other districts of the province.

The diseases next in importance to cholera are dysentery and diarrhoea, which may be classed under one head. The mortality from these is small. In the mango season a kind of choleraic diarrhoea, caused by eating unripe mangoes, is common enough, but seldom ends fatally. Outbreaks of small-pox are fairly frequent, but the type is not virulent, and does little damage. Cases reported as small-pox are frequently found on investigation to be really chicken-pox, a comparatively harmless complaint. Buchanan Hamilton speaks of leprosy being common in his day, and says that one person in a hundred was supposed to be affected with it. Nowadays the disease is comparatively rare. Goitre and elephantiasis are occasionally seen. The former disease seems to attack women especially, and is most common in the neighbourhood of the Punarbhaba and Atrai rivers. Skin affections and intestinal worms are fairly prevalent complaints. Diseases of the eye are not particularly common. Insanity is rare, the total number of idiots and insanes being returned in 1882 as 569, and in 1891 as 1,019. The reason for this probably is that the people are on the whole very temperate, and little addicted to drink or drugs. Also the district is an agricultural one, and fairly prosperous, so that the burden of life does not fall very heavily on the ordinary man.

Vaccination is compulsory within municipal limits only. The people recognise its utility, and seldom raise objection to themselves and their children being operated on. In fact, when an outbreak of small-pox occurs, they are eager to get the services of a vaccinator. On such occasions the work of vaccination is carried on with extra vigour, and it is probably greatly on this account that the district suffers so little from the disease. As an instance of the work that is being done by the vaccinators no less than 113,766 vaccinations were performed in 1909, when there was a rather severer epidemic than usual.

OTHER DISEASES AND INFIRMITIES

VACCINATION

MEDICAL
INSTITU-
TIONS

Till very recently the medical needs of the district were much neglected. This was not due so much to want of will on the part of the authorities, as to the poverty of the District Board, the bulk of whose funds had to be spent on keeping up communications. The number of dispensaries was very small for such a large district. Not counting the railway dispensary at Parhatipur which, being only open to railway servants and travellers by the line, could not be called a charitable dispensary, there were only 11 such institutions in the whole district. Of these the dispensaries at Thakurgaon, and Phulbari, were maintained at the cost of the District Board, aided to some extent by subscriptions from the public, while the male and female hospitals in the town of Dinajpur were maintained partly by the District Board, partly by the Municipality, and partly by Government. All these institutions, except those at Birganj and Phulbari, provided accommodation for in-door patients. The dispensaries at Raiganj, Churaman, Ramganj, Hariapur and Sitabganj were maintained at the cost of certain public spirited zamindars. They only treated out-door patients. The hospital at Balurghat and the dispensary at Birganj were mainly supported by subscriptions though they received some slight assistance from the District Board. At the end of 1906, the Civil Surgeon made a special appeal to the District Board to increase the medical expenditure, pointing out how unhealthy the district was, and how difficult it was to obtain medical treatment in many parts of it. In response to this appeal the District Board decided to open several new dispensaries, as funds would permit, and accordingly new dispensaries were opened in the years 1908 and 1909 at Patiram, Patnitola, Porsha, Gangarampur and Raniganj. Of these the dispensaries at Patiram and Raniganj receive substantial aid from the local zamindars. The Churaman wards estate also opened a new dispensary at Durgapur. A comparison of the number of out-patients treated at the District Board dispensaries in 1905 (24,001) with the number treated in 1909 (42,295) shows that substantial progress has been made in bringing medical aid within the reach of the people. If the same rate of progress is maintained the district will soon bear comparison in this respect with the most advanced districts of the province such as Bakarganj. The private institutions are no less popular than those maintained by the District Board and perhaps

the best attended dispensaries in the district are those at Ramganj and Churaman. The hospital at Dinajpur is well found and popular, but the female hospital situated close to it is not an unqualified success. This, although well found and equipped, possessing ample accommodation even for *purdah* ladies, and under the control of a competent lady doctor, is but poorly attended. The prejudice which prevents respectable women from attending a hospital, however private and well managed, is alone responsible for this.