

the life of the payee against tuberculosis. The fund realised in this way is utilised in providing model dwelling-houses, teaching the sanitary laws to the people, providing sanatorium treatment for those affected in the sanatorium established from the fund, providing for the family so long as the workman is under treatment and in finding easy and outdoor work for the convalescents. In this country, the Government could make a beginning by establishing one such among the poor clerks and workmen employed by Government, and I doubt not that it will do immense good to them, and will be taken advantage of by them to the fullest extent.

### HAZARIBAGH AND TUBERCULAR DISEASES.

BY B. H. DEARE,

MAJOR, I.M.S.

HAZARIBAGH has acquired a certain measure of reputation as a suitable place for the treatment of cases of pulmonary tuberculosis, and we often find patients suffering from this disease coming here for the benefit of their health under orders of their medical advisers. I think the limitations of Hazaribagh should be clearly understood by medical men, and the object of this short note is to emphasise these limitations, so that patients may be sent here at suitable seasons when the greatest benefit may accrue.

I would first note that the one season of the year when patients will derive good from the climate of Hazaribagh is the cold season, *i.e.*, from October 15th to the end of March. The daily variations of temperature in the hot months (and it is exceedingly hot for nine weeks) are very great, 15 to 20 degrees being the rule, and 25 degrees not uncommon; these marked changes are not, I find, beneficial to consumptives, in fact, are harmful. When the rains break, there is a great drop in temperature, but at the same time we then get a very chilly, damp, East wind, which is harmful to people in robust health, and dangerous to the class of patients under our present consideration. This season is also a time in which malarial fevers are very prevalent in the district.

My second point is that it must be remembered we are 43 miles from the line of rail, and patients often find the journey most trying. It is true a steam motor car service is running twice a week up and down, but the fumes from the cars are harmful. In a recent case under my care I ascribe a recurrence of hæmoptysis to this cause. No doubt, communications with the opening up of coal fields will be improved, but I would emphasize this point that the difficulties of transit should be borne in mind when sending cases here, as a journey may seriously throw back advanced cases.

A third point is the food-supply question, this more particularly affecting European patients. Except in the cold season there is no meat supply worth eating available, and fruit and vegetables are not locally procurable. Owing to the distance from the rail it is practically impossible to get supplies up in a fresh state, and the cost to many would be prohibitive. Ice also cannot be obtained. Our bread supply was very bad, but this defect has been remedied by the starting of a central jail bakery. The milk supply is fair, but will be good with the starting of the Reformatory School dairy. In the cold season we can get supplies (good and varied) to suit the delicate digestion of patients of this class, but I would particularly emphasize the dietary difficulties at other seasons of the year, and have on two occasions last year advised friends of patients requiring careful dieting not to send the cases here for this very reason.

With these limitations borne in mind, I am of opinion that one may safely say Hazaribagh from October 15th to the end of March is a suitable place for consumptives, specially those in the early stages of the disease. Then, with bright days, bracing air, equable temperature, good and varied food supplies, patients can come here and benefit greatly, but at other seasons Hazaribagh is not the place to which tubercular cases should be sent.

### HAZARIBAGH IN RELATION TO TUBERCULAR DISEASE AND ITS TREATMENT.

BY THE REV. I. G. F. HEARN, M.D.,

*Dublin University Mission, Hazaribagh.*

AN experience of 14 years' practice in Hazaribagh has convinced me of the healthiness of the district and more especially of the Hazaribagh Plateau from a tubercular point of view. Our dispensaries are mostly attended by the victims of malaria, dysentery, carbuncles and their sequels, and the percentage of tubercular lung disease is very small. For instance, to take the dispensary at head-quarters during the last three years, 21,900 new out-door cases were seen and the record of tubercle is only 50 cases or 0.22%. The number of cases admitted to our hospital during 13 years was 5,726, which included only 142 cases of phthisis.

Small as the number of cases of phthisis is, tubercular bone disease is still less. The number of cases have not been worked out yet, but they are comparatively rarely seen, though cases of both tubercular bone and joint disease do occasionally come in.

Most of the people in this part of the country are agriculturists, leading a healthy out-door life such as is calculated to diminish the chance of contracting tubercular disease so long as they stick to their ordinary conditions of life;

but the lack of immunity in the natives of the soil, if once exposed to infection, was forcibly brought home to us by the following experience. Six Indian Christian girls (aborigines) were sent up north-west to be taught nursing. Four of them were placed in the Cawnpore Mission Hospital and two in Delhi. Of the four who went to Cawnpore, three contracted phthisis, and one of the two who went to Delhi contracted tubercular intestinal mischief. Hence it has been thought expedient to arrange to have others trained in future on their native soil where there will be less risk of infection.

Besides the experience gleaned from the record of cases coming from the district to the dispensary, I have come across a good many cases of phthisis sent here, mostly from Calcutta, for a change. These have been (1) in connection with the temporary Consumptive Home, worked as an off-shoot of St. Mary's Home, Calcutta, where for a time I attended cases, and (2) Indian gentlemen who have been sent up from Calcutta.

The Consumptive Home was chiefly occupied by Eurasians, and except in hopelessly advanced cases the results were excellent, except during the hot weather when the hot dust-laden wind did not exert at all a good influence, and patients lost ground.

As regards Bengalis and other Indian gentlemen coming from Calcutta, they usually (except in the summer) do very well if the cases come in time and they observe the ordinary rules of open air treatment, but they object very much to the cold nights here in December and January, and they decline to admit the necessary degree of fresh air at night which materially retards their progress. *Puri* would seem to be better for the treatment of such cases as its temperature in the winter seems less sharp and more uniform. To sum up, in Hazaribagh the percentage of cases of tubercular disease is very small. The effect of the climate during most of the year is decidedly favourable to the treatment of such cases. It should rank high as a centre to which to send patients from such places as Calcutta and Patna. As far as one can gather, however, Almora would seem to be much more favourable still, and *Puri* and *Waltair* should, perhaps, also get preference.

That a sanatorium should exist for the treatment of consumption somewhere in Bengal all are agreed, and every effort should be made to induce Government to open one. If the sea coast places fail for any cause, sites more favourable than Hazaribagh town itself will be easily found on the hills skirting the Damodar valley (e. g., *Loogoo*, *Jhoomra*, *Jehadag*) where suitable spots could be found between 2,500 and 3,200 feet above sea level; these will be easily approachable before many years when the projected Damodar valley railway will be opened.

## NOTE ON DARJEELING CLIMATE IN THE TREATMENT OF PHTHISIS.

BY J. T. CALVERT, M.B.,

MAJOR, I.M.S.,

*Civil Surgeon, Darjeeling.*

THE question of the suitability of Darjeeling as the site of a sanatorium for the treatment of phthisis was carefully considered some years ago. The conclusion arrived at was that the place was both unsuitable for the treatment of natives with consumption, while it was also undesirable that they should be induced to come there owing to the obvious danger to the surrounding population. Eventually a ward was constructed with accommodation for twelve patients, as it was said that phthical subjects would come up with the hope of benefiting themselves, and that being so, it was better to make suitable provision for them in a well-equipped hospital, and thus lessen the danger of the spread of the disease, rather than leave them to seek accommodation in a crowded house in the bazaar. As regards the Eden sanatorium, there is no provision for phthical patients, and none are knowingly admitted.

There is one insuperable bar to Darjeeling ever proving a suitable place for poor European consumptives, and that is the cost of living, which is far in excess of any other hill station in India and which is still steadily mounting. It would be cheaper to take a trip home than to Darjeeling for people of moderate means. As to the suitability of the climate, it depends on the time of the year and on the case. Advanced cases do not do well, if there has been much lung destruction. They find considerable difficulty in breathing, and complain of discomfort and a sense of uneasiness. From the beginning of June till the middle of October there are heavy rains with mist and absolute saturation of the air with moisture. There is not much sunshine and exercise out of doors is curtailed. To keep out the mist and damp, rooms have to be shut up, and as there is not much air current, the house gets stuffy. During the period mentioned, I should say the climate was unsuitable for all classes of cases. From October to the middle of May I should regard the climate as very suitable for early cases. During the winter months there is much sunshine with clear bracing air. It is possible to be out of doors all day long, to take exercise without fatigue, the appetite is good, the desire for food and the capacity for digesting it are all increased, and sound sleep is obtainable free from insect pests and without the need of mosquito curtains and punkahs. As against these advantages it must be mentioned that building sites are few, house rent ridiculously expensive in consequence, and further living and sleeping rooms are very small, too small usually for the number of