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EUROPEAN CHILD-LIFE

IN

BENGAL

BY

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BENGAL MEDICAL SERVICE.

Read before Medical Soc^y of London 1872.

LONDON

J. & A. CHURCHILL, NEW BURLINGTON STREET

1873

BUROPHAN CHILD-LIKE

BENGAJI

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LONDON

W. & A. G. BENTLEY, NEW BOND STREET

EUROPEAN CHILD-LIFE IN BENGAL.

THE subject of infant European life and health in British India must always be one of considerable interest, especially now when that country is becoming so great a field for European enterprise; and it is one, therefore, upon which accurate information is most desirable. For where can we find a city, town, village or community—I might almost say family—in England in which some one does not look towards India with interest, or expect with anxiety the arrival of each weekly mail that may bring tidings of relatives or friends in the far East? And this interest is daily enlarging among all classes, not so much from the extension of our empire in the East, as on account of the impulse recently given to various industries and arts, and to the development of the almost boundless resources of that great peninsula, which is calling for and giving employment to all classes of our countrymen.

The European infant population is no doubt rapidly increasing in India, and all that concerns its life and health must therefore be of great social as well as sanitary interest. As the missionary, the schoolmaster, the railway, the telegraph, and the printing-press exercise their inevitable

influence on civilization and on the development of the intellectual no less than the physical resources of the more remote as well as of the more central parts of the empire, so is an ever-increasing tide of Europeans, by whose aid these ends are attained, attracted thereby; for although native agency and labour are, and always must be, mainly relied on, it is found that European supervision and skill are indispensable, and that their supply increases in proportion to the demand.

Matters have changed in respect of the condition of the Anglo-Saxon in India during the last quarter or half a century; or to date from an earlier period, one might say since the days when Europeans not in the covenanted service of the Honourable East India Company were looked upon and styled interlopers and adventurers, and were permitted to remain in the country only on sufferance, being at any time liable to expulsion.

The position of the European resident in India of those days was very different from that of his countryman now. In some respects, perhaps, he had greater, though in many he had certainly less, advantages than his successors. If he had the opportunity of gaining greater wealth, more power, prestige, and of leading a more luxurious life, his voyage to India was seldom accomplished by the long and tedious sea route round the Cape in less, often in more, than from four to six months. If on his arrival in the country he found himself placed, even in youth, in an office of considerable responsibility, dignity, or much emolument; and if his life were one of Oriental luxury (a condition, by the way, which is grievously over-rated), yet he was cut off from his family and friends, and his communications with them were so few and at such long intervals that he gradually became isolated from home and its influences as much in mind as in person; and it is no exaggeration to say that this expatria-

tion was not more conducive to his moral than to his physical welfare.

All this is altered now. He reaches India from England in three weeks; he goes, if he will, from Calcutta to Simla in as many days; or, if he can afford it and feel so inclined, he may take leave, and, having spent half of the time in China or England, can be back in India by the expiry of three months—in less time than it formerly took him to go from England to Calcutta. The moral and social atmosphere in which he lives has changed, as might be expected: he lives more under the influence of home interests and impressions, and in all respects his life is different from that of the Anglo-Indian of former days. He has weekly communication with home by letters, daily by telegraph; he has all the new books, periodicals, reviews, journals but little later than they are to be found in the reading rooms of remote parts of the United Kingdom. He has all that is new in art, science, and literature—the railway, the telegraph, the penny (anna) post, gas, ice, theatres, museums, social and scientific societies, opera, clubs, circulating libraries—all that he could have in England; not quite so good, perhaps, as in London, but still sufficient to make life in India as tolerable as heat, malaria, damp, mosquitoes, and the dread of cholera will permit.

It is seldom much good occurs without bringing in its train some evil; nor have we any exception here. The European class in India is no longer confined to the covenanted *employés* of former years. The so-called “adventurer” class has increased: and by this I do not mean the merchant, the planter, the tradesman; these, like their covenanted and uncovenanted service brethren, are well enough as a general rule provided for, and well-to-do—free from the “*res angusta domi*.” I allude rather to the artisans, who are now numerous enough in India, on the railways, in factories, and

engaged in many subordinate offices formerly held by natives, and on whom and their families the necessities of life press hard enough in such a climate, and who have, in addition to the disadvantages natural to it, all the anxieties inseparable from the care of a family to contend with.

Among other improvements resulting from the spread of knowledge and the advance of science, those of a sanitary nature have not been of the least importance, for they are diminishing the death-rate and raising the standard of European health in India. I do not intend to refer to figures and statistics further than by a brief reference to the last report of the Sanitary Commission: those who care to study this question may do so by referring to the sanitary reports published by the Indian Government. Sufficient for the present to say that some improvement has taken place, and that European life is becoming more valuable than it used to be. I speak chiefly from the experience of military life—that is, of the British soldier—for so far as I know the only reliable health statistics are those relating to the sanitary condition of the army; but the principle applies to all, and among others, to the children.

Dr. Cunningham says, “It may be observed that the experience of the year 1871 has, on the whole, been favourable. In the case of Bengal this remark is peculiarly apt, for here in no year of which there is any accurate record has the mortality been so low. The death-rates in this Presidency for each year since 1858 are shown in the annexed statement, and the ratios for Madras and Bombay have also been included, so far as I have been able to obtain the required information.

Statement showing the Mortality per 1000 of Average Strength among European Troops in the Three Presidencies during 1871, compared with that of each year since 1858.

| Years. | BENGAL. * | | | | MADRAS. † | | | | BOMBAY. ‡ | | | |
|--------|-----------|-------------------|------------------|--------|-----------|-------------------|------------------|--------|-----------|-------------------|------------------|--------|
| | Cholera. | All other causes. | | Total. | Cholera. | All other causes. | | Total. | Cholera. | All other causes. | | Total. |
| | | In hospital. | Out of hospital. | | | In hospital. | Out of hospital. | | | In hospital. | Out of hospital. | |
| 1858 | 9·16 | 91·39 | 10·52 | 111·07 | § | .. | .. | .. | § | .. | .. | .. |
| 1859 | 8·67 | 35·30 | 1·38 | 45·35 | .. | .. | .. | .. | .. | .. | .. | .. |
| 1860 | 12·04 | 24·14 | ·59 | 36·77 | .. | 19·1 | 2·04 | 21·14 | .. | .. | .. | 31·70 |
| 1861 | 23·73 | 21·06 | 1·14 | 45·93 | .. | 14·5 | 1·8 | 16·3 | .. | .. | .. | 24·72 |
| 1862 | 9·61 | 17·44 | 1·06 | 28·11 | .. | 17·09 | 1·7 | 18·16 | .. | .. | .. | 24·60 |
| 1863 | 4·09 | 18·85 | 1·18 | 24·12 | .. | 16·5 | 3·01 | 19·51 | .. | .. | .. | 16·14 |
| 1864 | 2·55 | 17·39 | 1·16 | 21·10 | .. | 16·5 | 3·6 | 20·1 | .. | 14·4 | 1·5 | 15·9 |
| 1865 | 3·12 | 20·40 | ·72 | 24·24 | .. | 19·5 | 2·9 | 22·4 | 16·0 | 17·8 | 1·3 | 35·1 |
| 1866 | 1·37 | 17·34 | 1·40 | 20·11 | 2·3 | 17·9 | 1·5 | 21·7 | 0·6 | 10·7 | 1·4 | 12·7 |
| 1867 | 13·84 | 16·16 | ·95 | 30·95 | 0·36 | 15·34 | 2·3 | 18·0 | 5·0 | 12·4 | 1·9 | 19·3 |
| 1868 | 1·81 | 16·94 | 1·36 | 20·11 | 0·5 | 15·8 | 3·0 | 19·3 | 0·8 | 12·1 | 1·0 | 13·9 |
| 1869 | 16·46 | 24·98 | 1·45 | 42·89 | 2·2 | 18·8 | 2·3 | 23·3 | 5·2 | 13·7 | 2·5 | 21·4 |
| 1870 | ·63 | 19·74 | 1·53 | 21·90 | 3·5 | 13·4 | 2·3 | 19·2 | 0·1 | 15·3 | 1·3 | 16·7 |
| 1871 | ·71 | 16·07 | 1·05 | 17·83 | 3·32 | 15·40 | 1·38 | 20·10 | ·09 | 13·10 | ·83 | 14·02 |

“The death rate for Bengal in the past year—17·83 per 1000—although lower than it has ever been previously, is still above the ratio which has been attained in the other Presidencies, and specially in Bombay. The marked fluctuations in the Bengal mortality, chiefly due to cholera, contrast as a rule with the comparatively steady proportion of deaths in both Madras and Bombay.”

* From Dr. Bryden's tables.

† From 1860-70, Sanitary Commissioner for Madras, Report for 1870, page 2; for 1871, Dr. Bryden.

‡ From 1860-63, Army Medical Reports; 1864-70, Report of Sanitary Commissioner, Bombay, for 1870; page 12, for 1871, Dr. Bryden.

§ The proportion of the deaths due to cholera in the Madras and Bombay Presidencies cannot be shown for the early years. The figures in these columns have been supplied by the Sanitary Commissioners.

The death-rate of British troops in India in 1871 was only $17\frac{1}{3}$ per 1000 ; of officers 12·49 per 1000.

According to Dr. Townshend—

Mortality of Ten Years—1860-69.

| | Max. | Min. | Mean. |
|----------------|--------|-------|-------|
| Men | 45·93 | 20·11 | 29·98 |
| Women | 68·03 | 25·46 | 43·31 |
| Children | 145·22 | 71·36 | 94·90 |

1870.

| | Strength. | Deaths per 1000. |
|----------------|-----------|------------------|
| Men | 33·373 | 21·90 |
| Women | 3·519 | 32·68 |
| Children | 5·644 | 81·68 |

Deaths of Children per 1000.

| | ENGLAND. Mean of 29 years, 1838 to 1866. | BENGAL. PRESIDENCY. 1870. |
|----------------------|--|---------------------------------|
| Under 5 years .. | 67·58 | 148·10 |
| 5 and under 10 years | 8·80 | 17·73 |
| 10 „ 15 „ | 4·98 | 11·51 |

It has often been asked if the Anglo-Saxon can colonize India—*i.e.* can the race unsupported and unrecruited from home continue to reproduce itself and exist there? Can he, in short, do in India what he has done in America, Australia, —colonize or establish himself, take root, continue his race, people the country, and of course in so doing displace, or rather replace, the autochthones, and his older Aryan brethren, who have become acclimatized during an occupation of many centuries? I think not. But if I am asked, Why not? I must admit that I have no proof to give that it would be so, and that I have only my impressions to offer in support of the conviction, as the data for framing a precise reply do not, so far as I know, exist. I am not aware that the opportunity of testing the vitality and durability of the Anglo-Saxon race cut off from all communication with its own country or with the in-

digenous races has ever occurred ; but I feel convinced that, had India been colonizable by the European, his position, important though it be, would have been very different to what it actually is. This, however, though a curious and important point of ethnic inquiry, is not the subject now to be discussed. I desire to consider, not the question whether the Anglo-Saxon can colonize India, but whether he can rear his children—the first generation—in that country, and with what prospect of success ?

Sanitary science is doing much : life is being prolonged ; health and the conditions of existence are altogether being improved. The European who becomes an item in the fixed population, who leads an ordinarily temperate and correct life, has expectations of life perhaps little below those he might have had in England. But still he is in a tropical or quasi-tropical climate, he is liable to certain grave and sudden disorders, he incurs a risk which has been variously estimated by life insurance societies, all implying greater danger to life than in England. This would be a question, also, of interest, and one that might furnish subject for profitable investigation.

But, as I have said, it is not of himself that I now wish to speak, but of his children, and especially of those whose parents are unable, from any cause, to send them to Europe for nurture and education. What are their chances of life and health, brought up and trained in India ?

Now, with reference to the rearing of European children in India, much has been done during the last half-century. The necessity for proper schools, and establishments where not only their physical but their moral health would be regarded, has been the subject of serious thought, attention, and action of many good and great men in India, and has led to the establishment of schools and orphan asylums in

the Presidency and other towns and hill stations, which have contributed much to these good ends; and the various orphan asylums and schools in Calcutta—the Lawrence Asylum at Sanawar, and the Bishop's schools in the hill stations—will, as long as we remain in India, bring down with grateful remembrance to posterity the names of Claud Martin, Ellerton, Kidd, Sir H. Lawrence, Bishop Cotton, and others.

In these institutions the problem of infant health and progress in India is solved to a certain extent; but as a reply to the essential question I wish now to consider, that of European infant health, it is only partially satisfactory, for the reasons that, in the first place, some of the schools are situated in the hills, in an almost European climate; in the second, the children are to a great extent of mixed parentage.

The introduction of the indigenous race element of course entirely modifies the value of the information we thus receive. An opportunity, however, does exist in Calcutta of studying this very important question, and it would hardly be possible to imagine one better calculated to illustrate the subject.

In or about the year 1815 an asylum was founded in Calcutta for the female orphans of Europeans of the poorer classes in India, and the original reasons for it are set forth as follows in the annual report of the institution:—

“It has long been observed, by persons whose situations have enabled them to know the state of the children in the King's European regiments in this country, that those who become orphans at a very tender age, being usually left in the charge of careless nurses, and in many cases altogether unprovided with nurses, are very seldom reared to maturity, through the ignorance, indolence, and cruelty of those who

are entrusted with their management. An asylum, therefore, for the reception of such orphans would tend to the preservation of many lives which are now lost through the neglect or mismanagement of nurses, or the want of nursing altogether.

“1. This Asylum is established for the reception and education of female European orphans generally, but especially those of the King’s regiments in India.

“2. Those children only are admissible whose fathers and mothers are both Europeans.

“3. The objects of this charity are admissible (if under 10) whenever they become orphans, at however early an age.

“4. That destitute children deprived either of one or both parents be eligible to the benefits of the institution, until the number reach to the amount of one hundred.”

Originally intended for the orphan children of soldiers in the King’s regiments (the only class of Europeans then in the country whose circumstances were so poor as to render it impossible for them to make provision for their children in case of death), it has of late years become of much wider application, for the class of Europeans who may require such a provision for their children is, and has been, as I have before said, increasing, and for many years a large proportion of its inmates have not been the children of soldiers—these being for the most part provided for by the Lawrence Asylum or other institutions founded of later years.

I would observe that this European Orphan Asylum differs from all the others in this respect, that it extends its benefits to children of pure Europeans only—any mixture of native blood rendering the child ineligible. The question of the growth, nurture, and vital statistics of the *Eurasian* child is one of great interest, but is apart from that with which I am now concerned.

It is this which gives it such value as a crucial test in studying the influence of climate in the growth and development of the European child, and is the reason why I have selected it as the basis on which the following remarks are made. The report on which these remarks are chiefly based commences in January, 1863, and is continued up to May, 1871, or for more than eight years, and also on the previous history for many years as related by the Secretary and confirmed by letters from Drs. Jackson and Webb.

It appears from these records that about 130 individuals have been under observation during this period, ranging in age from 1 year to 18 years—a daily average of about sixty-five girls. Say that in January, 1863, there were sixty-six in the institution; to these, before May, 1871, were added sixty-four, and of that number seventy had left. During this period there have been six deaths—one in 1863 from dysenteric diarrhœa, one in 1865 from mesenteric disease, one in 1866 after amputation, one in 1866 from convulsions in teething, one in 1868 from typhoid, and one in 1868 from atelectasis pulmonum.

It is remarkable how great an immunity these children have had, not only from the diseases peculiar to the country, but from all others of a severe kind. There has been during the period under report, and for many years previously, I believe, no cholera, no diphtheria, no scarlatina, no croup, no pleurisy, no pneumonia, no ophthalmia, no typhus, no phthisis, no severe malarious fever or its complications, no dengue, and no malarious cachexia. The diseases have been—a few cases of dysentery, one only fatal, in a child (a mistress died of that disease); a few cases of diarrhœa, simple fever, febricula; a few cases of typhoid (one death), slight rubeoloid,

slight hooping-cough ; a few cases of modified small-pox—varicella ; some catarrhal and bronchial affections ; herpes, abscess, stomatitis, slight conjunctivitis, convulsions, simple sores.

SANITARY REPORT OF THE EUROPEAN FEMALE ORPHAN
ASYLUM FOR SIX YEARS, COMMENCING JANUARY, 1863.

During this period the monthly average of each year of the number of girls in the school has been, in round numbers—In 1863, 68 ; in 1864, 70 ; in 1865, 67 ; in 1866, 66 ; in 1867, 59 ; in 1868, 60—being an average of 65. The ages vary from 1 to 18 years, the great proportion being between the ages of 5 and 16.

The sanitary history of this institution is as gratifying as it has been during previous years, and is not less remarkable for the absence of disease than for the generally vigorous state of health enjoyed by the inmates. The abstracts of admission into hospital show that there has been great immunity from epidemic disease of any severity, and the very low mortality, as well as the small amount of sickness, proves that the European child, under proper hygienic conditions and careful physical training, may live and thrive in the plains of Bengal *almost* as well as in its native country. It is not merely in the absence of any serious disease and the low death-rate that this is manifested, but in the vigorous, healthy appearance of the children generally. This was remarkably noticeable at the last yearly distribution of prizes, when the girls were assembled ; and it is no exaggeration to say that their appearance on that occasion would have borne favourable comparison with that of the girls in any similar institution in Europe.

For this very satisfactory state of matters the thanks of

all interested in the institution are due to the careful and judicious management of the Ladies' Committee, who have supervised the institution, and especially to the lady superintendents, who have, under their directions, so vigilantly watched over the moral, mental, and physical education of their charges. It is impossible too highly to estimate the advantages of such management, and I am glad to have this opportunity of recording my impressions on the subject, and of declaring how much the high state of efficiency of the school, as well as the continued good health of its inmates, is due to the unwearied exertions and admirable administration of the past and present Lady Superintendents.

Disease during Six Years : Daily Average about Sixty-five Children.

| | | | |
|------------------------------|----|--------------------------|----|
| Abscess | 2 | Icterus | 2 |
| Adenitis | 2 | Lumbrici | 1 |
| Œdema | 2 | Marasmus | 2 |
| Anæmia | 1 | Operatio | 1 |
| Aphthæ | 1 | Parulis | 2 |
| Bronchitis | 1 | Pleurodynia | 1 |
| Catarrh | 24 | Pneumonia | 1 |
| Cephalalgia | 1 | Rubeoloid | 29 |
| Conjunctivitis | 5 | Scabies | 3 |
| Convulsio | 2 | Sprained ankle | 2 |
| Curvature of spine | 1 | Stomatitis | 3 |
| Cynanche | 3 | Subluxatio | 1 |
| Debilitas | 3 | Torticollis | 1 |
| Diarrhœa | 81 | Tuberculosis | 1 |
| Dysenteria | 15 | Tumor | 1 |
| Dyspepsia | 16 | Ulcus | 3 |
| Febris (simp.) | 77 | Vaccinia | 2 |
| Febris (typhoid) | 2 | Varicella | 4 |
| Febricula | 5 | Varioloid | 2 |
| Furunculus | 33 | Vulnus capitis | 2 |
| Herpes | 49 | Vulnus digiti | 1 |

There are several points of interest in the sanitary history of this school that might be considered, but I shall only advert to those which are most appropriate to this brief report. And first I would remark on the absence of any severe form of

epidemic disease. In looking over the monthly abstracts of admissions into hospital, I find that there has not been a single case of cholera; and that the only death from dysentery, which is the disease peculiarly to be dreaded in Calcutta, was that of —, aged 5 years, which occurred in 1863, and this was rather a case of dysenteric diarrhoea in a naturally delicate child.

With reference to the class of disorders peculiar to early female life, I may say on this head that nothing could be more favourable, and that although there be certain indications of the influence of climate in either accelerating or modifying the usual functions, the state of health of the girls is, in this respect, most satisfactory.

The disease returned as measles was a rubeoloid fever of a mild form, slightly contagious, showing little tendency to spread, which has occurred from time to time, and has not been followed in any case by those grave sequelæ that so frequently result from measles in Europe.

Two cases of modified small-pox only are recorded, and there has never been any tendency in the disease to spread. The children have all been protected by vaccination, which has succeeded admirably in all upon whom it had not previously been tried.

A few cases of genuine typhoid or enteric fever have occurred, one of which proved fatal in 1868, the case of —, aged 5. The other forms of fever have been of the simple continued form, or mild manifestations of the influence of malaria.

The same may be said of the cases of convulsions, a few of which have occurred.

Hooping-cough has been altogether absent.

A few cases of skin disease, but those of a simple and tractable kind, have occurred.

As might be expected among so large a number of children,

strumous disease has not been altogether absent, and one death from pyæmia in the Medical College Hospital after amputation of the thigh, the other thigh having been previously amputated a year before, for extensive disease of the knee-joint; and another from marasmus, the result of strumous disease of the mesenteric glands, have been recorded.

Of acute inflammatory disease, whether of the head, chest, or abdomen, there has been almost none.

Diseases of the liver or spleen, whether from malaria or other causes, have been also singularly few, if not altogether absent.

Pulmonary and bronchial complaints have been very few and slight; with the exception of one case of capillary bronchitis with atelectasis in a child aged fourteen months, who came in ill and died a week after admission; and a few slight catarrhal attacks involving the bronchial tubes,—none are recorded. Indeed the mildness of disease and the absence of those forms of it, with few exceptions, that characterize the Indian climate, have been remarkable.

The number of children under two years of age has been small, and therefore it is not to be expected that the diseases of first dentition should occupy a marked place; indeed, they have been almost altogether absent. The cases of convulsions recorded were due more probably to either centric irritation or the influence of malaria on the nerve-centres. But the evidences of malaria have been, on the whole, I am bound to say, very slight, as may be readily seen in the fresh colour and red lips of the children.

I would here remark, in proof of the improved sanitary condition of the girls, that lateral spinal curvature, of which ten years ago there were several cases, has now disappeared from the school. There can be no doubt that the very satisfactory state of health enjoyed by these children is mainly due to the sound hygienic arrangements, and the moral as

well as physical discipline under which they live. They inhabit a well-built, ventilated, and commodious house, surrounded by a large open space of garden or ground, in which they find amusement and healthy recreation in gardening, or play in the open air. The nature of their occupation is such as to conduce alike to their moral and physical well-being. They have sufficient mental labour to develop without fatiguing their intellects, and of a character suited to the sphere of life in which they are intended to live. With this is combined methodic occupation of a fitting character, regular hours, a good but plain and nutritious diet; and all that could tend to injure the health from constant or overwork of any special kind is strictly avoided.

The following statement of their daily occupations, diet, and recreation by the Lady Superintendent, explains how the time is passed; and it is a system that might well be followed by other educational establishments here and elsewhere.

Diet.—Three regular meals in the day, and bread early in the morning. Breakfast (half-past nine), bread and milk. Dinner (half-past two), meat every day for girls above twelve, and three times a week for those under; dhall and rice, etc.; fruit three days in the week. Supper (half-past seven), bread and milk. The milk is pure; no water with it.

Habits.—All through the year the children rise at five a.m., bathe in cold water, and then take exercise in the compound.

Occupation.—During the cold season school commences at seven, and in the hot weather at six a.m. Five hours of regular school, and one of study (preparing lessons) through the day. During the hours of recreation, skipping and active play are encouraged, and, as a rule, the children are as active and fond of a good romp as children in England. In-door exercise consists of cleaning the house, which is all done by the girls. Calisthenic exercises every morning.

The conditions of a healthy mind in a healthy body are here all existent, and the results show how materially a just combination of mental and physical training will, when supported by example in those whose duty it is to teach, conduce, even in the climate of Bengal, to ensure a high standard of moral and physical health.

In reference to the question of growth and development of the European child brought up and educated in Bengal, I may give the following illustration from the average measurements of five girls at sixteen years of age, which was—height, 5 feet 4½ inches; weight, 7 stone, 11 pounds; girth of chest, 34·7 inches; girth of hips, 35·7 inches—a stature and weight which would probably not be much exceeded in Europe.

During the next twenty-eight months—*i.e.*, from January, 1869, to May, 1871, the health of the school was excellent. Disease has been almost entirely absent; the general standard of health has been high. There has been no death. But two cases of any severity have occurred; one of pelvic abscess, from which, after an operation, the girl recovered, and is now in robust health; another had typhoid fever rather severely, but recovered. I would notice one or two causes, which are, no doubt, potential in preserving health, and have recently been introduced. First, the children now all wear flannel, and have a blanket at night under the sheet on which they sleep; and, secondly, they drink the new water from the stand-pipe. Both of these changes are beneficial. The absence of disease and the general good health that have prevailed is somewhat remarkable in a school of nearly seventy girls. In 1869 there was a slight outbreak of measles in January. Eight girls only were affected, and there were no unpleasant sequelæ. Except the two cases already alluded to, there was absolutely no other disease in this year. In 1870 there were a few cases of varicella; and in July, two cases of typhoid fever; both recovered. There was no other disease during 1870. Up to the date of the report

(May 6, 1871)*, there has been almost no sickness, with the exception of a few very slight cases of whooping-cough. The disease was clearly imported by one of the girls who had been out on leave. The cases are mild, and it shows no inclination to spread. Throughout the whole period there has been no small-pox; the children are all protected by vaccination.

The following table shows the ages at which each of twenty-seven girls commenced to menstruate. These girls are all of pure European lineage, such being a condition of their admission into the Asylum. It appears that seventeen were born in India, two in Ceylon, six in Europe, one in Australia, and one whose birth-place is not known. The earliest age at which the catamenia appeared was at 12 years and 2 months in a girl born in India; the latest at 16 years and 4 months in the case of a delicate strumous girl who died, after amputation (in the Medical College Hospital), of pyæmia; she was also born in India. The next latest was a girl born in England, in whom it commenced at 15 years and 8 months. Of the seventeen girls born in India, the catamenia commenced in two between 12 and 13; in five between 13 and 14; in eight between 14 and 15; in one between 15 and 16; and in one between 16 and 17. Of the six born in Europe, the catamenia commenced in one between 12 and 13; in one between 13 and 14; in two between 14 and 15; and in two between 15 and 16. Of the two born in Ceylon, it commenced in both between 13 and 14. One in Australia, between 15 and 16; and the one whose birth-place was unknown, between 12 and 13. Thus of the whole number—

| | | | | | | | | |
|-------|-----------|---------|----|-----|----|-------|----|------|
| Four | commenced | between | 12 | and | 13 | years | of | age. |
| Eight | „ | „ | 13 | and | 14 | „ | „ | „ |
| Nine | „ | „ | 14 | and | 15 | „ | „ | „ |
| Five | „ | „ | 15 | and | 16 | „ | „ | „ |
| One | „ | „ | 16 | and | 17 | „ | „ | „ |

* This state continued until I left India in March, 1872.

Tabular Statement showing the Birth-place, Date of Birth, and Age at which the Catamenia first appeared in Twenty-seven Girls of European Lineage, educated and brought up (many born) in India.

| Where born. | Date of birth. | Date of first menstruation. | Age. | Remarks. |
|-----------------|--------------------|-----------------------------|---------------------------|--|
| India | March 3, 1851 | March 13, 1864 | 13 years 10 days | Regular (left school). |
| India | October 20, 1850 | April 1, 1864 | 13 years 5 months | Regular. |
| India | October 19, 1851 | December 21, 1864 | 13 years 2 months 11 days | Irregular (left school). |
| India | September 28, 1848 | February 10, 1865 | 16 years 4 months | Illness occurred twice (dead). Died March, 1867. |
| India | January 14, 1852 | September 15, 1865 | 13 years 9 months | Regular. |
| India | July 27, 1854 | October 10, 1866 | 12 years 2 months | Regular. |
| Ceylon | January 11, 1852 | October 17, 1866 | 13 years 9 months | Regular. |
| England | November 11, 1852 | December 3, 1866 | 14 years 19 days | Regular. |
| India | November 18, 1852 | January 9, 1867 | 14 years 1 month | Regular. |
| India | April 23, 1853 | January 12, 1867 | 13 years 9 months | Regular (left school). |
| India | June 9, 1852 | March 27, 1867 | 14 years 10 months | Very irregular (left school). |
| England | June 18, 1852 | November 5, 1867 | 15 years 5 months | Regular (left school). |
| Scotland | April 28, 1853 | January 4, 1868 | 14 years 8 months | Regular. |
| India | January 7, 1853 | December 28, 1867 | 15 years all but a week | Slightly irregular. |
| India | December 5, 1854 | January 12, 1868 | 14 years 5 weeks | Regular. |
| India | August 12, 1852 | February 1, 1868 | 15 years 5 months | Regular (left school). |
| England | May 15, 1854 | March 8, 1868 | 13 years 10 months | Regular. |
| India | March 15, 1854 | April 27, 1868 | 14 years 1 month | Regular. |
| Australia | August 10, 1853 | September 28, 1868 | 15 years 1 month | Regular. |
| Ceylon | April 20, 1855 | October 3, 1868 | 13 years 5 months | Regular. |
| India | May 5, 1854 | October 11, 1868 | 14 years 5 months | Illness has occurred only once. |
| Not known .. | May 14, 1856 | December 17, 1868 | 12 years 7 months | Regular and very profuse. |
| India | August 3, 1855 | April 6, 1869 | 14 years 7 months | Regular. |
| India | May 25, 1856 | February 6, 1869 | 12 years 8 months | Regular. |
| India | March 30, 1855 | June 10, 1869 | 14 years 2 months | Regular. |
| England | December 21, 1856 | June 12, 1869 | 12 years 5 months | Regular. |
| England | November 17, 1853 | August 10, 1869 | 15 years 8 months | Regular. |

The column of remarks in the table shows how the functions were performed subsequently. This is interesting as showing how far physical and moral training under favourable circumstances affect the European female child born and brought up in India.

I have been acquainted with these girls since they were young children, and the impression I have formed is, that they are rather more precocious both in physical and mental development than girls of the same age would be in Europe. They are most carefully educated, and, as the Report shows, their physical as well as moral training is most sedulously guarded from aught that could prejudice or injure either. But the stimulating effects of an almost tropical climate assert their influence; and it is evident that the girl of 16 or 17 is two or three years in advance of a girl of that age in a European climate. It is remarkable how few deviations have occurred from the natural and regular performance in the menstrual functions in these girls. As a rule it occurs regularly and without trouble, and it is most unusual to hear any complaint made on this score.

In connection, though perhaps remotely, with this subject, I would note the occasional occurrence among the girls of a swelling of the lower extremities evidently nearly allied to the elephantoid growth seen in the limbs of the natives of Bengal—a bucnemia. It is manifestly a steady and progressive enlargement about the ankle and leg, but extending slightly up the thigh itself, generally on only one side. If there be any change in the condition, it occurs at the menstrual period, when the limb is somewhat larger than at other times. The swelling is firm, not œdematous, and very like elephantiasis, except that it is not attended with either periodic pain or excitement in the parts, but is of very slow and steady growth. One of the finest girls (aged 17) in the school is affected by it, and the left ankle is more than an

inch greater in circumference than the right, and the swelling gradually extends to the left thigh, which is somewhat larger than the right. There is no pain and very little inconvenience, except that which comes from the increased size. I have not, as yet, succeeded in making any impression on it by medical treatment, and but very slight—only of a temporary nature—by bandaging. These cases, I am happy to say, are exceedingly rare, as during the twelve years that I have known the school, there have been only two or three; they are very interesting, and their pathology requires further investigation.

My personal knowledge of the institution ranges over a period of twelve years—*i.e.*, from 1860 to 1872,—and I have been, through the kindness of the Secretary, furnished with sufficient information as to the early history of the school to show that it has been equally satisfactory. The Secretary says, “I can’t remember any sickly year with the above exception. I have known single cases of cholera, but none fatal; no outbreak of dysentery, but we have had single cases most years, but not fatal amongst the children. We lost two mistresses from death by dysentery, and one had to leave on account of that disease. I should say chronic dysentery, diarrhoea, and sluggish livers were the commonest ailments of the children. I never heard of diphtheria in the school. One of my earliest recollections of illness in the school was a very severe fever of the nature of typhus, I believe (which caused great anxiety), in a girl of 10, who became very delirious and lost her speech for weeks, but ultimately recovered, and no one else took the fever. My personal recollection of the European Female Orphan Asylum goes back to 1850. The only epidemic I remember besides measles and hooping-cough—one or other of which has visited the Asylum mildly every two or three years—was chicken-pock; in what year I can’t

now recall, but it must have been pretty general through the school, for I remember the chapel was filled with beds as an additional hospital, and there was some anxiety, from the idea that it was modified small-pox, but no deaths occurred." The following letters from Dr. Webb and Dr. Jackson confirm this:—

Letter from Dr. Allan Webb to the Secretary of the European Female Orphan Asylum—1852.

"Having had medical charge of the European Female Orphan Asylum during the years 1849, 1850, and 1851, I have had abundant opportunity of judging of its general healthiness, and comparing it with other educational institutions for children in Calcutta. It must be, to all connected with this admirable institution, most gratifying to learn that the children are so healthy; that there is no institution in Calcutta surpassing it. I doubt if there be any in India more free from disease; and this happy result is attained—it must not be lost sight of—in children exclusively European in the climate of Bengal.

"But this testimony to the health of the girls generally is not limited to immunity from disease only, but comprehends that robust capacity for work and play which marks the well-being of a child. For this great blessing under Providence the children are indebted to the intimate personal supervision of the Lady Managers themselves in all that appertains to diet, exercise, and the neatness, cleanliness, and order which are inseparable from the salubrity of a girls' school; the fine open grounds and large airy upper-room dormitories being very important adjuncts.

"The school has not been exempt from disease. There

was a good deal of sickness in the earlier part of 1850, when small-pox and measles were raging in Calcutta, but the diseases were of a mild type in this institution; whilst of cholera I do not remember whether or not there was a single case, yet this is generally as common as it is fatal. The children were indeed wonderfully exempt from bowel complaints.

“I am, &c.,

(Signed) “ALLAN WEBB, M.D.,

“Presidency Surgeon.”

*Letter from Dr. J. Jackson to the Secretary of the
European Female Orphan Asylum—1853.*

“I have great pleasure in sending you a short notice of the state of the health of the children in the Orphan Asylum during the last year, and it is a great satisfaction to be able to state that they have been altogether free from any of the ailments which commonly are observed in schools, and that during the whole of the past year, from the month of February, when I commenced my charge, there has scarcely been a sick child in hospital.

“This is attributable, no doubt, in some measure to the children all being of European extraction, but more especially is it due to the kind and judicious management which is bestowed upon them, to the regularity of habits, goodness of their diet, and the great attention paid to cleanliness and ventilation; and I consider it impossible to find an equal number of children in a better state, or more healthy condition, in any similar institution.

“I am, &c., (Signed) J. JACKSON.”

Reference to the later reports shows what is much to be regretted,—that notwithstanding its usefulness, this institution has rather fallen off in numbers of late years; that, whereas in 1853 there were eighty inmates, the number has decreased to sixty-five in 1872. Of course this is partly accounted for by the existence of other institutions; but, considering the increasing want and the advantages of this institution, it is matter of regret that there should be any falling off at all.

How much the value of infant life is affected by climate and the circumstances under which it is placed, may be seen by comparing the statistics of death of European children in England and soldiers' children in the Bengal Presidency, for which I am indebted to Dr. Townsend, Sanitary Commissioner of the Central Provinces of India, and by the statements which I have extracted from the last Indian paper (of March):—In 1871 there were nearly 11,000 soldiers' children in India, of whom 425, or about 5 per cent., were sick every day, while 794, or upwards of 7 per cent., died. The mortality, therefore, of children is thrice that of adults. Judging from the experience of 1871, the risk of life in the Bengal and Bombay Presidencies in each 100 European children is stated as follows:—thirty-three die under 6 months, twenty-two die between 6 months and 1 year, nineteen die between 1 year and 18 months, eleven die between 18 months and 2 years, two die between 2 years and 3 years, one and a-half die between 3 years and 4 years, and one between 4 years and 15 years. At this rate it is remarked, out of 100 babes, scarcely eleven would reach maturity.

For example in 1000:—

| | England, the mean of twenty-nine years. | Bengal Presidency, 1870, by Report. |
|-------------------------|--|--|
| Under 5 years | 67·58 | 148·10 |
| 5 ,, to 10 | 8·80 | 17·73 |
| 10 ,, to 15 | 4·98 | 11·51 |

—or more than double. Now, that this mortality is due to some extent to preventible causes, and not only to climate, I think is tolerably clear, if compared with the death-rate of the European Female Orphan Asylum, where a similar class of children under better conditions gave such very different results. I am perfectly aware that statistics are only reliable in very large numbers, and that they have been said to be capable of proving almost anything; but I know that the life of the European children in barracks in India is not so safely guarded against evil as might be, and that, despite all the care and attention they receive, they are exposed to influences that tell more against life and health than is the case with children placed as those I have described in the European Female Orphan Asylum.

Miss Nightingale says justly, “Children are, as it is well known, the very touchstone—the live tests—of sanitary conditions, or sadly, but too often, the dying and dead tests of *insanitary* conditions.”

That infant life and the preservation of health is peculiarly influenced by the hygienic conditions under which it exists, is proved by such facts as those I have narrated in reference to the European Female Orphan Asylum, and I would here remark that it has been shown to be equally so in England.

I am indebted to Mr. E. Chadwick, C.B., a sanitarian of European fame, for the following remarks on the subject in connection with the half-time school-drill review held on July 25, under the auspices of H.R.H. the Prince of Wales and the Society of Arts:—

“MORAL RESULTS.

“The great body of the children reviewed are orphans or deserted children. Under the old system of Poor-law

administration, the children of this class, brought up in the workhouse long-time school, in contact with aged and vicious paupers, were turned out at 13 or 14, bodily and mentally inapt for steady industry, and not above one out of three got into a place of self-supporting industry. Full 60 per cent. went to 'the bad,' on the streets as mendicants or thieves, the girls as low prostitutes, and they furnished the largest contingents to the population of the prison. These moral failures were attended by pecuniary waste, for all were supported by the ratepayers, either as mendicants or thieves, or as expensive prisoners. But now, under the improved mixed bodily and mental training of these half-time schools, the known failures and waste do not exceed 3 per cent. The great mass of the boys brought under review may be beheld with confident satisfaction as victims rescued from 'the bad,' and preserved for the good, as honest, self-supporting producers, and worthy members of the community. But although much of this success will be due to the bodily and industrial aptitudes imparted, and the work of the drill-master displayed, yet much of it will be due to the ministrations of the school chaplains, not alone in religious instruction, but in secular care and service, seeing that they get fitting places (especially girls), visiting them there, advising them, and corresponding, and acting *in loco parentis* to all the fatherless and the motherless.

" SANITARY RESULTS.

" It has been shown, as respects the common schools, where filthy-skinned and dirty-clothed children are often crowded together in ill-ventilated rooms, in miserable conditions, they are the common centres of children's epidemics. The old workhouse schools were subject to murderous epidemics. But now, by the application of rudimentary sanitary science, they are made normal examples of what

may be done by it. Of this, one of the schools from whence the children were sent to the first review may be cited as an example. Some years ago, the death-rate was 10 and 11 per 1,000. The drainage and ventilation were improved, and it was then brought down to about 8 in the 1,000. Next, more complete personal ablution and a swimming-bath were established, and the death-rate was reduced to about 4 in the 1,000. All the district schools, the elder of whose children will be reviewed, are to some extent children's hospitals, and many children are taken in only to die or linger as hapless cripples for life. But—with the exception of some remains of ophthalmia—by better ventilation of space, by careful skin-cleanliness, and by bodily exercise, the 'children's diseases of spontaneous origin may be said to be banished, and the death-rates have been reduced to about 3 in the 1,000, or less than one-third of the death-rates prevalent amongst children of the middle and well-to-do classes. With such a general death-rate, producible by sanitary science, there would be upwards of 10,000 children saved annually in the metropolis. Without such sanitary precautions, new schools may be only extended centres of children's epidemics.' ”

I think it will be admitted that no more delicate test could have been afforded on the question of the state of infant European health, and the chances of life in the climate of the plains of India, than this almost continuous history of a little colony of about seventy European children—of all ages from one to eighteen years, educated and trained in Calcutta and never leaving the place—for a period of more than half a century. The answer it furnishes to the question is more favourable and satisfactory than might be imagined by those who have seen the evil effects of a tropical climate on infant life, for it shows that with care and attention much may be done that might be deemed impossible. The statistics of

these children would, I know, compare favourably with those of any school in the world; and so far it is very satisfactory, for it demonstrates most clearly that with care and proper training a European child may live, grow, be educated, and even thrive in the plains of Bengal. This must be a consolation to those parents who are unable to meet the cost of sending their children to Europe, or even to the hills, and who otherwise must have the misery of feeling that their children were sacrificed to the inevitable hardship of having to remain in the plains. Having said so much, I have something to say on the other aspect of the question, for the matter requires careful consideration from both.

I have no desire to prove too much, as I certainly should appear to attempt to do were I to advocate the theory that Calcutta or any other part of the plains of India is a *desirable* locality for the training and nurture of European children; such, indeed, would be a theory as dangerous as false. For although the exceptionally favourable circumstances of the European Female Orphan Asylum prove that the European child may thrive, yet it is certain that without favouring influences it will not; and the statistics of infant life in the British Army in India, as I have also shown, prove not only that such is the case, but that the obstacles to success in the rearing of children are very great.

Moreover, the mere question of health up to a certain age, and the acquisition of knowledge, are not the only subjects requisite in the proper training of a child. It has long been known to the English in India that children may be kept in that country up to five, six, or seven years of age without any deterioration, physical or moral, and in the higher classes of life with probably as little, if not less, danger to life than in England; for most assuredly in some respects—as, for example, scarlatina, measles, hooping-cough, thoracic complaints, and even dentition,—they suffer less in India

than in England. But after that age, unless a few hot seasons spent in the hills should enable parents to keep their children in India until a somewhat later age, to do so is always a doubtful proceeding. The child must be sent to England, or it will deteriorate physically and morally—physically, because it will grow up slight, weedy, and delicate, over-precocious it may be, and with a general constitutional feebleness not perhaps so easily defined as recognised, a something expressed not only in appearance, but in the very intonation of the voice; morally, because he learns from his surroundings much that is undesirable, and has a tendency to become deceitful and vain, indisposed to study, and to a great extent unfitted to do so,—in short, with a general tendency to deterioration, which is much to be deprecated, and can only be avoided by removal to the more bracing and healthy (moral and physical) atmosphere of Europe.

Now, for many reasons, I think the notion is correct—that it is right that European children born in India should be brought up in Europe. But, as I have before remarked, as it must so often happen that the parents are unable to meet the cost of doing this, it is satisfactory to know that the climate of the plains of India is not of necessity fatal, as I think the history of the European Female Orphan Asylum incontestably proves, whilst it suggests the reflection how much more might be effected. I have no doubt that all that can be done in Calcutta under peculiarly favourable circumstances could be, and is, done better in the hill stations, and I have seen European children who have been born and brought up in these localities, who in physical health were not inferior to those who had been reared in Europe; and of such no doubt the numbers will continue to increase, for, as I have said, the Europeans who are unable to send their children home are becoming more numerous. Such schools, I am happy to say, are already existing, and their numbers will probably

extend, and I have no doubt will be much appreciated,—for the hill stations of India promise to become a permanent home to many of the class of planters, landowners, and even retired commissioned and non-commissioned officers. Such stations, notwithstanding their excellent climate, are, I think, too few and far between and too isolated to become the seats of real colonization; and though they may and will be the home of many Europeans, I believe they will never be such in a permanent sense.

I feel certain also that Europeans residing in India who wish to do full justice to their children, will, although it involve separation for years, continue to send them to Europe even in preference to the hills. But it is satisfactory to know that, for those to whom this is impossible, their children can be reared in the hills; and to others still more hindered by the pressure of impecuniosity than even in Calcutta or the plains, their children may with care grow up and become fitted for life in India—at all events for one generation. I have seen the third generation of Europeans in Calcutta born and brought up there. Such are rare, but examples are not wanting. Though neither in physical nor mental properties was there anything to suggest marked degeneration, yet there is that which would make one look with great doubt on the prospects of a race so produced.

It is a fact that some of the life assurance offices charge 10 per cent. more on the life of a European born and brought up in the plains of India. They attach the same value in fact to his life as to that of the Eurasian. It would be difficult, perhaps, to justify this on statistical grounds, but it shows, at least, how strong the feeling on the subject is in India; and I cannot help saying that generally I think they are right.

I have endeavoured to show by what I have said that although the mortality among European children in India

is, as a rule, very high, yet that under judicious management and proper hygienic conditions more favourable results may be obtained;—not that the European child can thrive and be reared as well as in the hill stations of India or in Europe, but that life and a very fair amount of health is possible even in Calcutta under *favourable circumstances*, and that as the numbers are increasing who must expect to bring up their children in India, they need not despair even though their lot be cast in Calcutta.

If anything I have said or could say had thrown a light on the subject, or would encourage those who have already done so much, and others who, with the power, are only wanting the opportunity of doing more in aiding in so good a cause as the protection of the child-life of their poorer fellow-countrymen whose lot has been cast in India, I should feel satisfied that this brief relation of my own experience on the subject has not been without result; and that it may stand as its own apology for these tedious details.



