<table>
<thead>
<tr>
<th>Record No.</th>
<th>CSS 2000/19</th>
<th>Place of Publication: Calcutta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>1872</td>
<td></td>
</tr>
<tr>
<td>Language</td>
<td>English</td>
<td></td>
</tr>
<tr>
<td>Collection</td>
<td>Indranath Majumder</td>
<td></td>
</tr>
<tr>
<td>Publisher</td>
<td>School-book Press, 32/1 Beadon Street</td>
<td></td>
</tr>
<tr>
<td>Author/ Editor</td>
<td>Sircar, Bhooobun Mohun</td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>13x21cms.</td>
<td></td>
</tr>
<tr>
<td>Condition</td>
<td>Brittle</td>
<td></td>
</tr>
<tr>
<td>Title</td>
<td>Dengue and its Treatment</td>
<td>Being the substance of a lecture delivered at a meeting of the National Society, Held on the June 9, 1872.</td>
</tr>
</tbody>
</table>
DENGUE AND ITS TREATMENT

BEING

THE SUBSTANCE OF A LECTURE

DELIVERED AT

A MEETING OF THE NATIONAL SOCIETY,

HELD ON THE JUNE 8, 1872.

BY

SHOORBUN MOHUN SIRCAR,
Licentiate in Medicine and Surgery.

CALCUTTA:
PRINTED BY R. N. DUTY, SCHOOLBOOK PRESS.
207, Bengali Street.
1872.

INSECT DAMAGE
The substance of the following pages on dengue was read before the National Society, at a meeting held on the 9th June last. It is more out of a sense of duty and obligation, than of any notion of my own importance, that I was induced to undertake the onerous task, of giving an account of the present epidemic, which is just passing over Calcutta and the adjoining villages, and rapidly spreading in all directions throughout India.

Though fully aware of my inability to do justice to the subject, an anxiety to discharge a "debt immense" to the profession, and an humble desire to inform my countrymen of the symptoms and progress of the disease, and the mode of treatment calculated to afford relief, have been the sole objects of my present endeavours. When these pages were written for the society, I had not the remotest idea of its publication. Should, however, the published results of my experience serve to be, of any practical utility to my countrymen, and should they be considered by my co-labourers to furnish an exact history of the epidemic in its present form, especially among the native population of Calcutta, I shall feel myself amply repaid.

I am afraid, there may be remarks and observations embodied in these pages, to which some of my medical brethren may not subscribe. But I am open to correction.

CALCUTTA, CHOREGAN, July 1, 1872. B. M. S.
DENGUE AND ITS TREATMENT.

MR. PRESIDENT AND GENTLEMEN,—

The subject, on which we have met together this evening, is one of great practical interest, a proper to the topic of the day, and which has absorbed the attention of all classes of people from the end of the country to the other. The disease is rapidly spreading without sparing either sex, age, or complexion. The infant and the aged, the weak and the robust, the rich and the poor, the male and the female, the dark and the fair-skinned, have been all alike subject to its attack. From reports lately received from Rangoon and St. Aras, it appears, that dengue does not spare even the lower animals. Most of the cattle in these places have fallen victims to it.

From the reports of isolated cases among the Europeans, it seems, the disease made its appearance in Calcutta in the beginning of the cold season, but broke out in the form of an epidemic, with the advent of the hot weather. The May number of the Indian Medical Gazette contains a very plausible account of the circumstances under which the disease made its way into this country.

"It appears, that the Indian Foreign Department received a report from Assam, as far back as August, to the effect, that an epidemic fever was prevalent..."
DENGUE AND ITS TREATMENT

Among the European troops, and that it had extended into the interior. A further communication was received by Government on the subject, dated the 26th August, in which it was stated, that the epidemic continues among both Europeans and Native inhabitants; probably 30 per cent of the population have already been attacked. Indeed, few of the inhabitants have escaped an attack; and on the 24th of October, news reached the Government of India "from the Madras Political Agency (from the 18th to the 29th of September 1871) stating, that, at the town of Mutrah, a species of epidemic fever, apparently similar to that of Aden and Zanzibar has been prevalent, but it is now disappearing." This is the first account we have of dengue fever, now working its way gradually over the whole of Hindustan. We may form some idea of the way it reached India, from the following narrative, communicated by Surgeon Major Fletcher, Garrison Surgeon, Cannanore, to the Madras Medical Journal: It seems, that the steam ship "Dalhousie" was at Aden during the latter months of the year, and on her return voyage to Bombay, dengue broke out among the crew. Evidently the disease had been contracted at Aden. The disease was confined to the lascars, the European portion of the crew escaping. The vessel was cleansed and painted, but not disinfected, as the authorities at Bombay did not consider the disease contagious. On the 28th of December, a draft of 35 guns of the Royal Artillery from England and some volunteers were put on board the "Dalhousie" at Bombay, and sailed at once for Cannanore, where they arrived on the 2nd January. On this voyage Captain Hewett and all the other officers of the ship, with one exception, were attacked with dengue, and also the European part of the crew. The troops landed on the day of arrival, and there was no case of sickness among them; but they had hardly disembarked, before several men were suddenly seized with dengue, and by the 15th of January, nearly the whole of the detachment had been reported sick, four men only having escaped. They were at once isolated and kept in strict quarantine, and so far as we know, the disease has not spread, only two of the residents of the station having been infected; the one was the General Commanding, and it is remarkable, that the Assistant Surgeon in charge of the detachment of troops on board the "Dalhousie," called on the General on the day after his arrival. This medical officer was himself seized with dengue two days subsequently to his visit to the General, and a gentleman with whom he was residing also contracted the disease.

This evidently shows that the disease is contagious, and carried from one man to another by direct communication. The circumstances of its spreading from one neighbourhood to another, and the fact of most of the members of a family catching it one by one, would lead us to believe, that the disease spreads both by contagion, as well as through the medium of the air we breathe. The disease is evidently extraneous, having been brought to this country from foreign shores, and it does not seem to have been generated in Calcutta from local causes. However, there is a difference of opinion among medical men, as to the contagious nature of the disease.

* On perusing the account given in the Madras Medical Gazette, of the way in which the disease made its*
DENGUE AND ITS TREATMENT.

Dengue was introduced into this country, one cannot set too high an
importance on the observance of strict quarantine laws to prevent the spread of epidemics.

The following quotation from the above Gazette will fully corroborate my assertion —

"This story of dengue at Aden, its spreading to the crew of a vessel in the port, and being then conveyed to Bombay, and thence to Cannanore, is a good illustration of the mode by which contagious diseases are permitted to extend themselves over this country. It must be difficult, with the number of small native trading vessels, in the coast of Africa and Arabia to India, to enforce quarantine laws, nevertheless, those who have suffered from the raging pains of dengue would have blessed the Government, who could have protected them from the inconvenience and misery they have undergone, arising from a disease which is clearly communicable from man to man, and which was evidently brought from the coast of Africa into this country."

In their Nomenclature of Diseases, the Royal College of Physicians have adopted the same peculiar name dengue, which was given to the disease by the negroes. The word "dengue" has a Spanish origin, being a modification of the word "dandy."

An American author gives a very plausible solution of the Spanish corruption — "This disease," he says, "when it first appeared in the British West India Islands was called the dandy-fever, from stiffness and constraint which it gave to the limbs and body. The Spaniards of the neighbouring Islands mistook the term dandy for their word dengue, denoting prostration, (stiffness of members) which might also call

express stiffness, and hence the term dengue became & 9; have the name of the disease." We are indebted to the writings of physicians who practised in this country, like Drs. Mellis, Kennedy, Cavel, Twining and Mouna, for the earliest history of the disease in India. A similar kind of fever visited Calcutta once, in 1824-25, during the hot and rainy months, and is said to have attacked almost every one both native and European.

This was known among the natives of Calcutta about forty-eight years ago by the name of Magnie Jor, and is still well remembered and described by persons above fifty-five years of age.

Another similar epidemic, though differing from this in many respects, has been noticed by Dr. Edward Goodrow, which broke out in Calcutta in 1835, and was popularly styled as Goodrow's Red Fever.

The following account, which occurs in the American Cyclopedia, will give a very good idea of the nature, course, and progress of the disease since its first outbreak.

"Dengue called also Dingee, Dungo, Dandy, Bouquet Fever, Bucket Fever, Breakbone Fever, &c., is a peculiar febrile epidemic, which at varying periods has prevailed in the East and West Indies, and the southern and middle States of the United States. Its first known appearance was in 1780, when it broke out in Philadelphia suddenly in autumn, and raged for two or three months. Both sexes and all ages were affected by it; and in the districts where it occurred, hardly any one was exempt from its attack. It was named by a few people. Dr. Rush states, the breakbone fever. The next appearance was in Calcutta in 1824-25. In 1826,
it seems to have occupied, in a form at Savannah and perhaps elsewhere. In the autumn of 1827 it appeared in the West Indies, occurring, as before as a universal epidemic. In St Thomas the negroes gave it the name of the dandy fever, from the stiff gait and appearance of those affected by it. When it appeared in Cuba, this name in undergoing the Spanish pronunciation was changed into dago duma which it has since retained. It appeared again at Savannah in 1827, and in the autumn of 1828 raged through most of the southern cities. It disappeared in the winter. A few cases were seen in 1831. In 1844, it appeared at Mobile and in 1848 at Natchez; in 1850, it again appeared over the southern States and presented the same characteristics as in the previous epidemics. Dr. Atikin in the first volume of Reynolds's System of Medicine, has given a detailed account of the fever; but his definition does not correspond with the present epidemic nor with those of 1824-25. He defines the disease to be "a febrile affection, sui generis, commencing suddenly, and associated from the commencement with severe pains in the large and small joints. About the third day, a peculiar cutaneous eruption or efflorescence appears upon the palms of the hands, rapidly spreads over the body, and rarely continues beyond twenty-four hours. A distinct remission succeeds, but relapses are numerous, and the disease may thus persist about two months, marked by prostration and cachexia, its course being characterized by intervals of remission, and the excoriation marked by unctions or neuralgic-like phenomena."

Dr. Atikin gives the following synorm of the disease:

**DENGUE AND ITS TREATMENT.**

**Symptoms.**—Scarlatina Rheumatica, Cock; Eanthorrhea Morbus Arbostrina, Cock; Dandy Fever, Natives of West Indies; Dengue Bouquet; Bocket; Epidemic Inflammatory Fever of Calcutta, Molla; Epidemic Rheumatic Fever of India; Ochotnia, Natives of East Indies; Three-day Fever, Natives of East Indies; Rheumatic Fever with Gouty irritation and Eruption, Parleage; Eruptive Arthritic Fever; Eruptive Rheumatic Fever; Plantar; Erythematous Arthritic; Girdle, on account of the stiff holding of the neck; Anomalous Disease, Stedman; Peculiar Epidemic Fever; Colorado, on account of the red spots; Eanthorrhea Arthritis, Miff-necked fever; Broken-wing Fever, and Break-bone Fever.

**Invasion and Progress.**—The attack is very sudden in the majority of cases; persons in good health get the attack at any time without any premonitory symptoms. Very occasionally, however, the attack is preceded by slight febrile symptoms and general uneasiness for days together. The description given by Dr. E. Charles, of the sudden nature of the attack is graphic, and I am induced to repeat his words—"A merchant goes to the opera, and during the performance is obliged to leave the house. A lady at her devotions in church is seized, while kneeling during a short prayer. Two young women jump into a swimming bath; they both are in their element and experience much enjoyment; they leave the bath, and both of them go directly to bed in the terrors of dengue; another lady goes into her own bath-room quite well, and after bathing cannot dress again; the disease is upon her. A young delinquent falls under the chastisement of his father, and is carried to bed with dengue."
DESGUE AND ITS TREATMENT.

Sudden attacks of similar nature are every day met with. The fever is preceded by a feeling of languor and lassitude, and followed by more or less chilliness all over the body. The disease is in some cases ushered in with shivering, not amounting to actual rigor. In some cases, this chilliness was so intense as to simulate the rash of scurvy. This initial chill, which appears almost simultaneously with the fever, is often absent or slightly marked; but when it does occur, it is quite characteristic of dengue, and serves to distinguish it from the other eruptive fevers. On pressing the skin with the finger, the redness disappears and immediately returns on removing the pressure. In one case, instead of this rash, I met with a papular eruption in small red pimpls, scattered all over the body, especially on the trunk, appearing along with the fever. The face becomes red, hot and shining, as if besmeared with oil. The eyelids become swollen with red edges, and the conjunctive red and shining.

The pyrexia or the hot stage of the fever is not only a constant symptom, but is similar in nature almost in all cases of dengue. The temperature gradually rises and the surface of the body becomes intensely hot and dry. The patient complains of restlessness, burning of the body, thirst, headache, though not a constant symptom but very troublesome when present; sleeplessness, intolerance of light and legs of temper; some are fretful, others talkative, speaking nonsense at random; some again are quite listless, as if comatose. Delirium is rare in adults; but delirium, convulsions, and even coma are occasionally met with in children and infants. Children during the period of dentition, are most susceptible to convulsions, when attacked with dengue. In severe cases, this complication brings on grave symptoms, and sometimes proves fatal. Perspiration is often a constant symptom, occurring several times during the hot stage, either profuse or sufficient to make the skin simply moist. The temperature is reduced for a time, but after a short interval, it reappears with greater intensity. The fever cannot be called remittent, in the proper sense, of the word, but marked periods of exacerbation are observable at indefinite times. The hot stage continues for three days or 48 hours, though the symptoms begin to abate after 48 hours. On the 3rd day, the skin becomes cool, and the fever goes off, and the patient feels much more comfortable. The pulse is full, but in comparison to the other alarming symptoms, not so rapid as in other fevers. It becomes weak and feeble, after the subsidence of the fever.

The fever sets in with more or less Pains in the Joints, both large and small, and this symptom is so constant and well marked, that it is quite characteristic of this peculiar kind of eruptive fever. In a very few cases, this rheumatoid affection is absent. In some cases, the pains are confined to the joints on one side of the body, either the left or the right, but more frequently the left. The larger joints, especi-
ally the knees, are more frequently affected with greater severity. When the smaller joints are affec-
ted, the fingers and toes are stiff, and the patients
can hardly take hold of things, or place their feet
on the ground. Occasionally, the soles of the foot
become very tender. The pains in the joints are
very severe and most distressing. The patients can
hardly move their limbs without extreme suffering.
They feel as if their limbs were broken. Persons of
rheumatic diathesis and with weak joints, suffer much
more from the pain attendant on this fever, and the
weak joints are more painful than the sounder ones.
Sprained or dislocated joints are similarly more trou-
blesome during an attack of dengue. Sometimes the
joints become swollen and put on pressure. In four
or five cases, I met with inflammatory swelling of the
joints, leading to suppuration, and relieved by operation.
Along with the joints, the muscles of the limbs are also
affected. They become tender and painful on pressure.
Colic pains, and pains within the chest are occasionally
complained of. In one case, there was severe pain of the
diaphragm, which made a strong healthy man roll on the floor for hours together, in extreme help-
lessness. The pains abate gradually but continue for
long, after the patient is better in other respects.
Catarhal implications of the mucous membrane of
the nose, throat, and bronchi are rare in dengue; very
few cases of bronchial catarrh and sore throat have occurred
in this epidemic, and one or two cases have fatally
terminated by the latter complication."

Pehal Bhag Singh, Jorav Nalarah, in his practice, has remarked about
the reading of this paper, not with two cases of dengue patients terminating
fatally within twenty-four hours.

Dengue and its treatment.

In another troublesome complication, Diarrhea some-
times sets in with the fever, or appears on the second
or third day. Numerous bilious stools are frequently
passed, which by inducing constant movements, aggra-
rate the pain already so severe. In some cases the
stools are watery, and symptoms of cholera are de-
veloped in the course of the disease. Occasionally the
evacuations are bloody.

Vomiting is another troublesome symptom, which
either sets in with the fever, or closely follows it, and continues for three or four days, until the fe-
brile stage subsides; sometimes blood is vomited, but
this is very rare. Frequently the febrile stage is
attended with occasional nausea, owing to extreme biliousness.

Loss of appetite, inaptness for food, and extreme bitter taste in the mouth, are invariably complained of.
The edges of the gums are red and swollen, the mucous mem-
brane of the oral cavity thickened, and a peculiar viscid secretion accumulates in the mouth, emitting a
mucous disagreeable smell.

The appearance of the tongue is almost character-
istic of the disease. It is covered with a thick white
fur with red tip and edges, and some bright red pa-
pillae anteriorly. The tongue is usually moist, the
coloured and the papillae disappear with the febrile
stage, but the white thick coat may persist for some
time, especially in cases of discolored bowels, and in
such, where there is a tendency to relapse.

The urine is generally high-colored and scanty, as
in other fevers. Some observers have found it to be
pyrogen and light-colored. The urine may be clear
and abundant in some cases for the first twenty-four

DENGUE AND ITS TREATMENT.

three, but latterly it generally becomes scanty and high-colored.

Uterine prostration of strength is a constant symptom complained of in dengue. People who have suffered from it, generally state, (and I do fully subscribe to their statements) that they have often suffered from fevers and many other serious maladies, but have never felt such extreme helplessness as in this.

Abortion among females who are ancients, is sometimes a very serious complication, and this unfortunate occurrence takes place, either during the pyrexia, or during convalescence.

Epistaxis, though not a constant symptom, is sometimes met with in this disease. I have seen a few cases of bleeding from the nose in the course of my practice, but have heard of many others from my brother practitioners.

Salivation though rare in dengue is extremely distressing. I have met with only one case of profuse salivation, which lasted for three days after the subsidence of the febrile stage. Redness, swelling, and tenderness of the gums are however often met with.

On the fourth day, with the subsidence of the febrile stage, a second eruption makes its appearance, called the terminal rash; sometimes it appears on the fifth day, and even so late as the seventh. This peculiarity of the eruptive period developing itself when there is no pyrexia, serves to distinguish this disease from the other eruptive fevers. The rash generally appears first on the neck, then on the face, chest, trunk, and gradually spreads over the body; the eruption is generally like measles in appearance, to which it bears such a close resemblance, that elderly women would hardly be convinced of its being anything else. When the disease first broke out, many of us mistook it for measles from the nature of the eruptions.

In dengue, the eruptions are not distinctly crescentic in shape, nor so diffuse and closely set as in measles. Sometimes, but very rarely, vesicular eruptions like bullae break out all over the body, much to the inconvenience of the patients. They burst and leave bad ulcers. I have seen five or six such cases, and all in children under three years. In the majority of cases, fever re-appears with the eruptions, but it is not so strong as the first fever. This rash is a constant symptom, appearing almost in all cases; sometimes it escapes detection, owing to its slight and evanescent character. This rash takes from three to eight days to disappear. In well marked cases, minute hear-like scales come off the body, as in the desquamation of measles, leaving an ugly mottled appearance of the skin, which remains for many days after the disappearance of the rash. The epidermis or the cuticle has a tendency to come off after an attack of dengue. In one of my patients, I found the whole cuticle covering the face, palms of the hands, and soles of the feet, to come off, en masse, leaving the parts red and tender. In many cases, however, small patches of the cuticle come off from the palms and soles, leaving an irregular worm-eaten surface. From what I have seen of this epidemic, I am led to surmise, that in cases attended with severe pains of the joints, slight or no eruptions make their appearance; and when the pains are slight or absent, eruptions are developed. This however does not hold good in all cases.

One attack seems to be protective against another.
though relapses are not uncommon. The fact of persons above fifty-five years of age, having generally escaped the present epidemic, will probably be explained, by their having been subject to it in 1824-25, which previous attack may have protected them from any of this occasion. Irregularities of diet and previous maladies might tend to bring on relapses, but these ought to be reckoned as exceptional cases; I know of persons having had three or four relapses within a month.

* Sequelae.— Utter prostration and general debility are the principal complaints after an attack of dengue. Inaptitude for work, both mental and physical, is observed almost in all cases; sometimes the prostration is so great as to bring on weakness of sight and deafness. Dizziness and haziness of vision, and occasionally mucocele volitantes are complained of. Pains of a rheumatic or neuralgic character, and lameness of joints, are very common after the attack. The acuteness of the first pains subsides on the fourth or fifth day, leaving behind the after pains, which though not so severe, are very annoying and intractable. These pains are often persistent and obstinately continue for weeks and months together. People generally despond, and lose all hopes of getting rid of the pains, as they continue for a long time without abatement. People with scorbutic, rheumatic or gouty pains, suffer more severely from these pains. Pain lingers in sprained and habitual weak joints longer than in sound ones. Fresh cicatrizes of wounds and ulcers become red and tender, and sometimes burst into new ulcers after an attack. The pains are not so acutely felt while at rest, but the suffering is great; when attempts are made to rise or move the limbs. The sufferer, sadly lamenting his condition within himself, vainly expecting to meet with much sympathy from his friends, "as he looks pretty well in other respects. These pains are erratic in their nature, shifting from one joint to another. Pains in the chest and back are sometimes very troublesome.

Occasionally, the joints are swollen and the limbs edematous. I have met with a case of general anaesthesia of the whole body but which gradually disappeared without any treatment.

Inflammatory swelling with suppuration is sometimes met with. I have had three cases of suppuration of swellings round the ankle joints, one of pelvic abscess and another of unusually large diffuse abscess in the sacral region. Several cases of abscess in the arms and other parts of the body are met with especially in children after an attack of dengue. The bowels are usually not disordered after the attack. Ophthalmia, and eruptions round the edges of the eyelids are sometimes very troublesome.

Similarity of the present to the former epidemics of dengue.—There is a close resemblance between this and the epidemic of 1824-25, and what prevailed in the West Indies. The suddenness of the attack, the nature and duration of the fever, the rheumatic affection and the rash, are the symptoms common in these epidemics.

The epidemic of 1823, which Dr. Grooeve described as Bed fever, differs from the present one in many respects. In the former, the rash was scarneral, and the pains in the joints and muscles were almost entirely absent; there was extreme redness of the mucous membrane of the oral cavity; whereas,
DENIQUE AND ITS TREATMENT.

in the present epidemic, the characteristic features, are the scaly or rubeola nature of the rash, the extreme painful affections in the joints and muscles; and the want of redness in the oral mucous membrane.

Non-occurrence of dengue with measles, scarlatina and rheumatism.—In measles, the attack is generally accompanied with catarrhal symptoms, and the fever is often increased, when the eruptions begin to develop; there is no rheumatic affection of the joints; the rash is more diffuse, and the patches erosive and more closely set; diaphoresis is almost a constant sequel. In dengue, the catarrhal symptoms are entirely absent, the eruptive period is singularly devoid of fever; the rheumatic affection of the joints is characteristic; the rash, though scaly, is not so diffuse or in circular patches; and disorder of the bowels is a rare symptom after the attack. In scarlatina, the rash is of a different nature, and it appears during intense pyrexia; much redness and inflammation of the oral mucous membrane and the fauces, absence of rheumatic affection of the joints, albumen in the urine, and the fatal nature of the disease, are characteristic of scarlatina. In the early stage of the fever, the temperature rapidly rises to a maximum in both the diseases, but in scarlatina, the hot stage is prolonged for days, even as in dengue, it subsides in three days. In rheumatism, only the large joints are affected, whereas in dengue, both the large and small joints are implicated; besides, the rash which is characteristic of dengue, is never found in rheumatism.

The characteristic symptoms of dengue may be thus summed up:

The abruptness of the attack, the distressing pains in the large and small joints and the muscles, the weazy rash, and its appearance in the absence of fever; the three-day duration of the pyrexia, utter prostration of strength, and the favourable termination in general.

Prognosis.—is generally favourable. The disease, though alarming and extremely distressing, is destitute of danger to life; cases of death are rare, and this was also the characteristic in former epidemics. To adults in tolerably good health, the disease is rarely fatal, but it occasionally brings on grave symptoms, and even proves fatal to infants and children, especially during detention. My impression is, that the disease was less in virulence in the beginning of the epidemic, but lately, it has assumed a more serious aspect, and has even been dangerous to life in some cases. I have seen four cases ending fatally within twenty-four hours, but have in none had the opportunity of making proper observations or studying their exact nature.

Treatmen—The most interesting aspect of the disease is its treatment. It is a peculiar disease, very alarming in its symptoms, and uninterruptedly runs a certain proscribed course, at times attended with serious complications. No medicine can avert its course or has any influence in modifying the type of the disease, if it happens to be a serious one. In my experience, the less we interfere, the sooner and the better, the patient comes round. In the first hot stage, cooling drinks, as leed water, lemonade or sodawater, cocoa-nut water, lemon syrups &c. are very agreeable to the patient; cold applications on the head, relieve the headache, and mitigate the sufferings to some
DENUE AND ITS TREATMENT.

extent; thin arrowroot or sago, with or without milk, should be freely given as nourishment. In especial exceptional cases, with marked symptoms of extreme biliiousness, and fullness of the bowels, mild doses of gentle purgatives might be administered with benefit, but much caution should be observed in the selection of the cases. In no case routine treatment should be resorted to, as is done in ordinary fevers. In cases of relapse, and where malaria is mixed up with dengue, a few doses of quinine might prove efficacious. The complications when urgent must be treated according to their nature and severity.

I have found the expectant mode of treatment to be the best in cases of dengue; we should never be alarmed by the symptoms, nor be over-zealous and hasty in administering medicines, in the hope of relieving the symptoms, or mitigating the sufferings; but should always patiently watch the progress of the disease, with more confidence in nature, than in the efficacy of our healing art. I have often remarked, that patients, in addition to their intolerable sufferings, are sometimes put to further troubles by our officiousness. Belladonna has been lauded by many practitioners, as very efficacious in diminishing the sufferings in dengue. I am sorry to tell you, that having given a fair trial of the drug, I have not been enabled to realize its efficacy in dengue. Among the practitioners, who advocate the use of belladonna, there is much difference of opinion, as to its real mode of action; some say, it has the power to relieve the severe pains, but has no effect on the headache; some again, are of opinion, "that it acts beneficially in relieving or moderating the intense headache," and that, "it does not appear to have any effect on the muscular and articular pains, but it puts the patient to sleep, and thus tides over many painful hours; it has no effect in shortening the fever," others again believe, that it diminishes the fever and relieves the head and brain symptoms.

Some practitioners recommend the use of Bromide of Potassium and Conium in convulsions in dengue. I can say nothing against them, not having used them in dengue. Convulsions in children, are often dependent on the irritation of testing, and when this complication occurs in dengue, the gums should be freely banded, and the child kept in a quiet cool room, lightly covered, and cold lotions applied on the head. Though convulsions in children are very alarming, we need not apprehend much danger during an attack of dengue. Having seen fatal results in cases drugged in the ordinary way, I am not very sanguine, as to the value of therapeutic agents in these cases. We are often consulted to relieve the after-pains, which trouble the patients for long. I seldom prescribe any medicine as the pains generally pass off without much medication. Various liniments, containing opium, belladonna, chloroform, ammoni, eucalyptus oil, and turpentine especially, are prescribed with more or less benefit. My impression is, that if any advantage is derived by the application of these liniments, it is attributable to the friction caused by the rubbing of the pains; and to the fact, that patients with blind hopes of cure, continue the friction for days and weeks together, and the pains become of their nature, having run a more certain course for a certain period, gradually subsiding.
irrespective of the liniments, to which the cure is attributed.

I wish to impress on the mind of every one, that early recourse to habitual diet and cold ablutions is likely to bring on relapses, and make the convalescence more prolonged and tedious. Many from mistaken notions, take their habitual diet and bathe in cold water on the fourth or fifth day, soon after the subsidence of the hot stage of the fever; generally cutaneous eruptions come out in such cases on the same or the following day attended with fever, and the pains and other symptoms are aggravated; so the usual duration of the disease is from eight to ten days, every precaution should be taken to keep the patients on light nourishing diet, and to prevent them from having recourse to cold bathing within this period.

My impression is, that dengue hardly requires any treatment, and nature is quite competent to complete the cure single-handed. Nature holds the helm of the disease in her own hands, and cautiously and patiently steers its course along the stream of time, and successfully overcoming its various complications, that now and then come in its way, so many shoals and sandbanks, at last clears for it a safe anchor in the haven of health. Dengue is a good field for all sorts of practitioners to reap the credit of their respective drugs. We must be too ungrateful not to allow nature, her due share of credit, which she justly deserves in the management of this disease.

In conclusion, I have to remark, that having suffered myself severely from dengue, and slightly bathed with sirocal cure more than fifteen hundred cases in this epidemic, I am led to believe, that beyond simply watching the patient, we are not required much to do in cases of dengue. There are however, exceptional cases attended with serious complications, in which, we are induced to interfere, more out of confidence in the efficacy of our healing art, than in the working of nature, and we are often compelled to adopt such a course, to gratify the universal desire of people for medication. With regard to the after-pains, they seem to baffle all our treatment, and nothing but time and patience can cure them. It would be more wise on our part, to confess our inability to cure the pain than to gain the discredit of failure, after feeding our patients with hopes of cure, and thereby putting them to unnecessary trouble and expense.

Relapses are found to be more common now than in the beginning of the epidemic, not probably owing to the damp weather. My impression is, that relapses are owing more to lack of care on the part of the patients themselves than to the nature of the disease per se. People generally have recourse to their usual diet and cold bathing, so soon they get rid of the fever, and many from their irregular habits, modes of living, and vocations are obliged to expose themselves to the vicissitudes of the weather and habitually over-work themselves, which tend to weaken their system and bring on relapses, which are not fresh attacks of dengue, as many are led to believe, but are merely the continuations of the first attack. Persons who have suffered from dengue must be very careful to protect themselves from sudden changes of temperature, to observe strict attention to diet, to abstain from all, stimulating...
In toxicating drinks, and to avoid overwork, both physical and intellectual. In some cases, the patient becomes very weak and anemic and drag a tedious convalescence from constant relapses; in such cases, vegetable bitter tonics, with quinine, iron, port wine, strychnine &c., can be prescribed with advantage.

In cases of acute inflammation of the joints, attended with redness, swelling, and the most agonizing pains, I have found colinter-irritation with weak solutions of nitrate of silver, to have much effect in reducing the inflammation and preventing it to run on to suppuration.