The following observations on the comparative value of certain treatments of intermittent fever were made on admissions to Hospital which took place between June 1st, 1876 and 1st February 1877.

They formed 4 classes:

1. The first were seventy-five cases, which were admitted successively, and heated without any specific but at haphazard. Some with moderate doses of sulphate of quinine, or merely colored water.

The succeeding fifty-five cases were heated with caustic soda or nitrate of soda, 320 of the former in 15 minutes, and the latter administered three daily. These formed a second class.

The third class were thirteen cases treated at the commencement with 2 teaspoonful doses of the oil of eucalyptus globulus 3 times a day, and followed by large doses of sulphate of quinine when the attacks were not arrested.

The fourth class consisted of eight cases treated with large doses of sulphate of quinine, from 20 to 25 grains, with the present knowledge of intermittent (intermittent) fevers. The treatment was necessarily empirical. The cases too occurring in a military hospital were also open to considerable doubt, as there can be no question that men occasionally present themselves stating that they have been suffering from fever, merely to gain admission to Hospital, and thus to shirk...
Possibly some nilsome duty. In addition, the need to take into account the general bodily health of each man admitted, his age, the number of previous attacks, and the speed of recovery. One principally with malaria, the lead to recurrence of the fever is certainly prone and can be when the spleen is weak, sick, or spastic. For all cases, especially cases of the cold stage, or a marked increase in stage being the exception, not the rule. So at any enlargement, notable enlargement of the liver or spleen.

To guard against miasmatism as much as possible each man's temperature was taken on admission and subsequently three times each day. But that does present any great injustice, however, as many cases being admitted with normal temperatures had no attack of fever, whilst others admitted with equal high temperature had repeated and severe attacks. The only possible way was to collect a fairly large number of cases, and get at a reliable result by the average. For this print, we refer to the hope of rendering the conclusions as far as possible, the temperature and state of the climate being one, and diet being the other.

With reference to the 1st point, the compared table of the average temperature of the air during the months of observation with the body fall and admissions seems to bear out the prevalent idea that the malarial poison (whether that may be) is more general when the soil is drying quickly and giving up moisture under very powerful rays of the sun. The soil of this district is sandy, formed...
Temperature, Rainfall, and Corresponding Admissions.

<table>
<thead>
<tr>
<th></th>
<th>Average Temperature</th>
<th>Rainfall</th>
<th>Admission for one</th>
</tr>
</thead>
<tbody>
<tr>
<td>June</td>
<td>89°</td>
<td>31°</td>
<td>7</td>
</tr>
<tr>
<td>July</td>
<td>83°</td>
<td>14.14°</td>
<td>15</td>
</tr>
<tr>
<td>August</td>
<td>81°</td>
<td>14.75°</td>
<td>11</td>
</tr>
<tr>
<td>September</td>
<td>79°</td>
<td>10.43°</td>
<td>17</td>
</tr>
<tr>
<td>October</td>
<td>81°</td>
<td>-</td>
<td>73</td>
</tr>
<tr>
<td>November</td>
<td>76°</td>
<td>-</td>
<td>36</td>
</tr>
<tr>
<td>December</td>
<td>71°</td>
<td>-</td>
<td>29</td>
</tr>
<tr>
<td>January</td>
<td>70°</td>
<td>-</td>
<td>26</td>
</tr>
</tbody>
</table>
from an agitated black hale, as many parts lying over a clayey soil beneath. But, though the admission were most erroneous during October, when the heat had ceased and the earth's heat began powerful, there was no evidence to show that the natural poison itself was any more violent or more active in individual cases than at other times of the year, with regard to the second point, diets, not much weight was given to this head. Upwards of fifty cases had the diet been taken, and an average from 10 of these selected at random, and set aside over 40 days. The diet in the cases where it was permitted was measured before cooking and added. The remainder the supernumerary gained by the latter was used in forming a comparative estimate. Having a comparative estimate, latitude must necessarily be allowed in these observations, the question being no more than a relative one however. There can be no question, presumably, that nourishment is one of the most essential points in diseases where there is little change: yet in these instances the food did not seem to be in itself sufficient quantities, or of the proper quality to mark decided results. In all the cases, certainly in the average of the cases the diet were very low; and did not reach the minimum laid down by Parker for an adult undergoing 90 hours of labor and merely necessary to support life. Yet it was singular that amongst the largest latest internal disease, the largest amount of food consumed was followed, on the one-
- evening, day by the greatest amount (high net temperature) of fever.

The average diet gave from 80-90 grs of nitrogen as the amount consumed daily, with about 20-50 grs of carbon.

The highest would represent from 145-182 grs of nitrogen with from 4200 to 4150 grs of carbon.

The largest diet, giving two turtle pies, was,

1. Rice 11 ounces
2. Bread 10 ounces
3. Meat 10 ounces
4. Shall (Pear) 4 ounces
5. Butter 2 ounces
6. Eel 2 ounces
7. Shall (Pear) 4 ounces

Total weight 27 ounces

The smallest diet consisted of four ounces of rice, taken with water, or eight ounces of milk.

Class I. Treated, some with quinine alone, others with colored water

<table>
<thead>
<tr>
<th>Average no. of</th>
<th>Average liq. Treatment</th>
<th>Average no. of Subsequent attacks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hemoptysis</td>
<td>96.2</td>
<td>Quinine, 10-15 daily</td>
</tr>
<tr>
<td>3 (African)</td>
<td>104.7</td>
<td>Quinine 15 g, daily</td>
</tr>
<tr>
<td>18 (European)</td>
<td>101.1</td>
<td>Quinine 15 g, daily</td>
</tr>
<tr>
<td>5 (African)</td>
<td>101.8</td>
<td>Colored water</td>
</tr>
<tr>
<td>14 (African)</td>
<td>101.2</td>
<td>Colored water</td>
</tr>
<tr>
<td>2 (African)</td>
<td>101.2</td>
<td>Colored water</td>
</tr>
</tbody>
</table>

Neces of certainty, four cases healed definitely, four received quinine and had 1.7 number of subsequent attacks, whilst four were received colored water and had only 1.04 number subsequently. These may have been some doubt about his first 15
Cases among Europeans, as the temperature on admission did not indicate any febrile disturbance, allowed hopes that they had been suffering from fever, and that the quinine employed acted beneficially. The Inspector Method still shows the more favorable results.

Class 2: includes 50 cases treated with ferrous acid internally:

<table>
<thead>
<tr>
<th>Armage (heat)</th>
<th>Treatment</th>
<th>Armage no.</th>
<th>Quadrant</th>
<th>Attack(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>21.</td>
<td>101.5</td>
<td>Castile and</td>
<td>Griff</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cordic</td>
<td>Horse</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>daily</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>102.2</td>
<td>do</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>none</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>101.6 (partly)</td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>6.</td>
<td>101.4</td>
<td></td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

The total number of attacks gives an average of 1.5 to each of the 50 cases. Thus, carbonate of iron, and ferrous acid internally did not seem more useful than quinine; whilst if it had no effect whatever, it acted as little medicinally as colored water, in making the treatment an important one. This latter method still broad appears superior to quinine.

The 13 cases comprised in Class 2 were treated with ferrous sulphate. If the fever did not appear to be checked after a few days, large doses of quinine were given. The preparation used was the turpentine, and it was given usually in 2 less powerful doses, though at first in some cases only one less powerful, three daily.
Class IV cured only of 8 cases. Some admitted after the termination of the carbolic acid treatment and when the supply of Eucalypt. Throb had not arrived, the remainder after Class III had been noted.

The admission temperature rose by half an hour. The normal temperature of the cases of quinine took daily from 10 to 15 days, then there was a remission.

None of these, however, were re-admitted, whilst Class III was forming, it may be presumed that cases 12 and 13 of first-class are those in the cases quinine was successful on this occasion, as at the commencement after re-administration two were put on the Eucalypt. Throb: Treatment.

Cases 1, 6, 7, 9, 10, 11 of Class III also join in supporting the result of Class IV.

The cases of quinine together form the length of detention in hospital was usually till at least 3 of the ordinary days of the attack had passed.

In the other cases, the period varied largely. Some, having been discharged, were to resume to duty after 20 days; he remained in hospital, the temperature was noted twice daily - at 7 and 12. Throb and 6 P.M.

The point can be deduced from these cases. The first is that the malacutic poison can hardly be used advantageously, otherwise the carbolic acid treatment proves more certain to give better results. The second is that the definite cure can be done. The use of sulphate of quinine must be a large one. There must necessarily be some delay, some miscalculation, and other errors liable to creep in whilst making observations, but allowing a fair margin for these, the general result from 146 cases surely is of some weight, without preceding too much - with regard to quinine unquesitabily the most beneficial...
method of administering it, i.e., hypodermically. From the large practice of a civil surgeon (India) who had employed it in 1874, upwards of 4,000 to 5,000 times, the results were so marked that no other method was used. Since the solution was to the neutral sulphate, it was an aqueous solution in a little suspended in hot water, called, above the temprrature of the body. The heat regulated by a small lamp under the vessel holding the water in which the tohle containing the solution was swung. Amongst these large number of cases, there were no uncommonly treated cases of as much as a sore, or ulceration of the skin; the needles of the syringe always being kept very clean: and the solution kept fresh, and occasionally filtered.

This method was adopted here, with the usual benefit, until October 1875, when his cases of tetanic tetanus occurred after the use of the syringe. The account of these has published in the Lancet of May 8th, 1876. Their occurrence here was sufficient to stop the use of the hypodermic method, and to prefer a less reliable, but on less immediately effective remedy, to the alternative of such a possible termination. There can be no question that, as a general rule, private patients do not care to submit to anything of an operative form of treatment; so that the question is, how to check an ordinary attack of intermittent fever without the patient running the risk of the arm, or from the extreme, but the quite possible chance of tetanus ensuing.
lasting at least a few hours, it certainly appears that the attack has been brought about either by extreme or fatigue. Persons who had already been exposed to intermittent fever before, the really acute stage of the disease, was the fact of their being admitted to a convalescent hospital ward in the uprising venereal posture and the accompanying pain. The pain is not seen curiously at a casual point in the middle of the back, moves about, and is subject to the most intense fatigue, inducing a re-

currence of the fever. A second, again, when quinine is used, that is to say, but that one large dose is, for the most satisfactory. Among the cases under observation, it was quite remarkable that one had the entire effect, and to look at it, slight, in the extent that it has, at any rate, not been anything of note, has produced 50 per cent.

The natural use of carbolic acid, seems to have no reliable effect, nor does the use of the root: Eucalyptus: Sideritis.

During these observations, there were 2 cases of intermittent fever treated: one lasted 38 days, and the other after 41 days was cured away, almost in a defervescent state for a change of air.

A place about 40 miles off the sea. He eventually recovered the 6th cases, attended by the March heat, and the 5th of the disease. In this case I am not able to say.
the quinine hypodermically, and his condition
improved, and his temperature never attained the same height. In case II
cold baths were discontinued at the last moment, yet it appeared to be very beneficial.

One was the 1st case in which Carbo Acid internally was tried: and yet the apparently beneficial effect on the temp.

ature great things were anticipated. However after a few days the temperature again began to rise steadily. The lad was subjected to soup, broth, but the,

champagne, milk. Indeed it was the stimulating diet alone which appears to keep him alive so long; as he was reduced to a mere skeleton, complicated with bed

rashes.

In conclusion, from these 2 cases, I have been convinced, that cold baths, with the hypodermic method of

quinine quinine as a final treatment is a very useful method. At first,

three cases of typhus I could not wind to it sooner. In cases that four,
young quickly large doses of quinine, in less than to grains. In mild cases rest,
cortisone, and quiet.

H. P. Arthur
Surgeon 2nd Regt Bombay 4th J.

Patna.
but the discharge from the tube is more bloody. Evidently from the 
inner end of the tube upon the int-
ternal surface of the tube.

15th. Albumen almost absent. The ice 
had to far returned as to be heard 
at the bottom of the stairs.

16th. Wound still improving. Second
albumen still distinct. Discharge still 
bloody. No change in treatment.

17th. A tube of gutta percha is substi-
tuted for the silver one but this 
he objects to partly because of the 
greater difficulty in changing it, 
partly because it has not yet got 
accommodated to the parts.

18th. The gutta percha tube still cause,
here great discomfort, though the 
discharge is certainly less bloody.

He takes a whittle with his fingers 
on the mouth of the tube.

19th. On the 11th day after the 
operation, the tube is finally removed 
of the wound dressed with boracic 
aid ointment & strapped. He albumen 
being still distinct, the stump feels 
well, with some difficulty he is 
sitted in.

20th. The wound seems closed.

25th. The albumen being for the first 
time quite absent, he was allowed 
fish for dinner. There was a little 
albumen on the following day but it 
never reappeared. His improvement 
henceforth was uninterrupted.
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