Echoes from the Past.

ON THE TOPOGRAPHY OF MEERUTT.

By Assistant-Surgeon MURRAY.

(Continued from p. 609.)

The following observations are intended to show the peculiarities in the treatment of the diseases, in this part of India. In hot damp stations, a similar mode of treatment would not be equally successful. I joined this Division in November 1833, and since then, have several times been detached with Europeans marching in this part of the country, and absent in the hills on sick certificate. In consequence of the sickness of the Surgeon of the Brigade, the sick have been generally under my charge since October, previous to that period I attended half the European, with the Native sick. The treatment recorded is what has generally been found most successful at this station. I have added the result of the cases that came under my charge when detached, when the result tends to confirm any mode of treatment not generally employed.

Apoplexy.—This disease differs in no respect in its symptoms, or pathology, from the apoplexy of Europe. The cause is generally exposure to the direct rays of the sun—the sanguineous is most common.

The treatment is copious depletion, with strong mercurial, or croton purgatives, followed by local depletion, and counter-irritation, applying nux vomica to the blistered surface, and inducing mercurial action.

There have been nine cases amongst the Europeans, five of which have proved fatal, and one successful case in a native.

Cholera.—This disease shows all the characteristic symptoms, with all the varieties found in other parts of India. The attacks of the Europeans are analogous to those I saw in Paris in 1832, when it carried off upwards of a thousand a day.

I have not observed any change of structure in the vital organs invariably present, and those most frequently found might have been influenced by the remedies. The blood is unnatural, but whether this arises from the addition or retention of noxious ingredients, or from a combination of both, or from loss of some essential part—or the cause of this change—I know not.
I have seen most modes of treatment that have been suggested tried unsuccessfully—and many experiments made that never were published. Before the supervention of the collapsed stage, v.s., with large doses of calomel and opium, followed up by castor oil, blister to the epigastrium, with hot frictions of the extremities, is most successful, but occasionally totally ineffective. The disease occasionally yields, after the collapsed stage has commenced, whilst these remedies, or stimulants, or hot vapour baths are employed, but the only remedy that I have invariably seen exert an influence on the disease has been a saline solution. In 1833 I first employed this remedy in collapsed blue cases, by transfusing, through the veins in the arm, from three to five pints of a solution, containing one drachm of salt, and one scruple of carbonate of soda, to the pint of warm water, heat 110° F. In all reaction was induced, when various opposite modes of treatment were employed; in all purging returned with collapse, and death followed. It was given by the mouth, but it induced vomiting, and produced no benefit. This disease again came under my notice in 1834, when with a detachment of His Majesty's 11th Dragoons. The symptoms, and the treatment and its effects were analogous to what I have mentioned. From considering the decided, though temporary action of the saline solution, when transfused through the veins, together with its inefficacy when swallowed, I resolved to try it, in the form of enema, administered hot, and at short intervals. The following extract is from a report to Dr. Burk, Inspector General of Hospitals, in November 1834.

"In Marshall's case (of Cholera), the usual treatment, viz., calomel and opium, was pursued but without success; at 6 p.m. six hours after admission, the pulse was not perceptible at the wrist, the skin cold, blue and clammy, the countenance collapsed, and the voice gone; I thought the case hopeless, but as I had in several cases, on a former occasion, found decided, though temporary, benefit in this stage of the disease from the transfusion of a saline fluid into the veins, I ordered the following to be administered; as an enema, every half hour.

R: Muriatur Sodae... 5ss.
Carbonatis Sodae... 5j.
Aqua Calidae (120° F.)... 1b.

At 3 p.m. he was asleep; the pulse perceptible at the wrist. He had received two enemata. He got three more during night, at intervals, when he awoke. He had slept pretty well. The pulse was distinct, and the skin warm. The countenance more natural,
and the voice partially restored. The enemata were repeated every hour till noon, when the countenance and voice were natural, the pulse distinct, and skin warm; some brown matter brought away with the enemata; mercurial purgatives were then employed, and bilious stools procured, and he gradually regained strength, under the use of bitter laxatives. The effect of the saline fluid, administered in this manner, is not so rapid, as when passed directly into the circulation. In these, the change to the florid appearance of health, and return of the pulse, with the cessation of the spasm, was simultaneous with the transfusion. The temperature of the water I consider of importance. The order (in absence of a thermometer) was, "to be given as hot as could be borne, by the hand, without inconvenience."

Since that period I have tried this remedy in several cases, both European and native, varying the strength of the solution, and the frequency of its repetition, according to the violence of the symptoms, and the effect of the remedy. I have only lost one patient since, from this disease, a native, in whom the pulse had disappeared from the wrist. After two enemata, the pulse returned, and the vomiting and cramps ceased. I could not get a satisfactory account after this period. I believe the enemata were omitted, and he sunk.

The following case shows the advanced stage of the disease, from which this remedy has produced a cure. The reaction under the use of the saline solution—the collapse returning on its being omitted, and reaction following its being resumed, clearly connect them, as cause and effect. It occurred on a march, from Cawnpore, with the 3rd Troop 1st Brigade Horse Artillery in 1835. April 16th, Lalloo, syce, aged 50, was seized with cholera at 10 a.m. I saw him at 1 p.m.—Has had several watery stools; is collapsed, no pulse at wrist, or temples; eyes glazed and fixed; cannot speak, extremities cold.

B: Mur. Sodae ... ... 3j.
Carb. Sodae ... ... 3j.
Aq. Calidoe (120° F.) ... 10j. solv.

1 p.m.—flat enema omni semihora injiciendum.
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3 p.m. — Slight pulse at temples, a little warmth about the neck, speaks in a whisper, no vomiting nor cramps.

Cont: Enemata omni hora.

6 p.m. — Pulse perceptible, very quick at the wrist; arms and head warm; perspiring; countenance more natural.

Cont. Enemata 2da quaque hora.

9 p.m. — Pulse full and quick; skin warm; feels very comfortable; voice more natural.

Cont. Enemata.

17th, 6 a.m. — The enemata were omitted, during the night, on the march. The extremities are now cold. Pulse very weak and quick, no return of vomiting, or cramps; voice broken.

Rept. Enemata omni hora.

9 a.m. — Pulse quick and full; voice more natural; skin warm on the trunk and head.

Subm. Hydr. gr. v. st. sumend.
Ol: Ricini. j. meridie.

6 p.m. — Several dark feculent stools; has slight headache. Pulse quick and hard; skin hot.

Rept. Subm. Hydr.

He was slightly feverish for several days; bitter laxatives completed the cure.

Dysentery.—The symptoms of this disease are similar to those usually described, by writers on Tropical diseases, and to those which I described, in the Transactions of the Medical and Physical Society, vol. vi. p. 101. I am gratified in finding the opinion, I have advanced of this disease, being occasionally of an eruptive nature, supported by that of Mr. Twining, in the 2nd edition of his work on the diseases of Bengal, published nearly a year after that paper was discussed in the Society, of which he was Secretary; the probable connexion between ulceration of the colon and hepatic abscess, 2d edition, vol. i, p. 232; Note, will also be found in that paper, though he has forgot to mention these two circumstances. But, “de mortuis nil nisi bonum.”

The disease is most common, during the hot and rainy seasons. The general causes are, sleeping in a current of air, or behind a tatteet — eating unripe fruit, or drinking cold water, when much heated, and exhausted — I have seen no cases here, that I could trace to contagion, though many of the cases, that occurred in the detachment of recruits proceeding from Calcutta to Cawnpore in 1833, evidently arose from that cause.

In the treatment of this disease, the chief reliance is placed on
v.s. The patient is bled, from a large orifice, in the erect posture, to syncope, and this is repeated twelve hours afterwards, should there be no improvement in the nature of the evacuations, and again under similar circumstances, after another interval of twelve hours. I have never required to order a fourth bleeding. Twelve hours after decided improvement has taken place, leeches are applied over the part of the colon most affected, and repeated at similar intervals, as long as any active inflammation is present—as indicated by the nature of the stools—tormina or tenesmus. The internal treatment consists of an ounce of castor oil, containing from five to twenty-five drops of laudanum, given on admission, with two of the following pills, every two or three hours, according to the urgency of the symptoms:

R Pulv. Ipecacuanhae
Ext. coloeyntidis Comp.
Ext. gentianeae ad 9 i. m.

Ft. massa, in pil. xii dividenda.

The interval is increased, and the dose diminished, as the disease yields, and the stomach becomes irritable. In cases complicated with affections of the liver, one grain of calomel or blue pill is added to each pill, after the more acute symptoms subside. Bitter laxatives complete the cure. It is essentially necessary to the success of this mode of treatment—that no solid food, and only a very little liquid be taken, when active inflammation is present. During the first, and second days, merely a little tea is allowed—afterwards an ounce of sago, made with water, is given three times a day—the diet is gradually increased, as convalescence advances.

The above mode of treatment is generally sufficient for all cases that have not been three days ill before admission. After this period, the effects of the inflammation have to be treated, after the inflammation is subdued by the above-mentioned means, these are thickening, or more generally ulceration of the coats of the colon. In many cases, persisting in these means, for a longer period is sufficient, but when the ulcers become indolent, as indicated by frequent whitish mucous stools, with little tormina or tenesmus, and dull pain on pressure, with fullness over part of the colon—a blister is applied, and half a grain of sulphate of copper substituted for the ipecacuan—and the following powder given, every second night:

R Tart: Antimon: ... ... ... gr. j.
Subm: Hydr: ... ... ... gr. v. m.

when the tenesmus is distressing, an enema of

Lot: Acetat: Plumbi ... ... ... 5ii.
Tinct: Opii ... ... ... 5ii.
given at bed time, gives relief. In one or two protracted cases, the
following powder, every three hours, has been useful:

B Pulv: Opii. ... ... ... gr. ½
Acetat : Plumbi ... ... ... gr. ii.

I have not seen any advantage, from giving free purgatives every
morning, as recommended by many authors. The castor oil with
laudanum, after the bleeding, freely evacuates the bowels, no food
is allowed that could leave any existing faecal matter, and the
small quantity of colocynth in each pill removes the secretions.
When the cæcum and iliocele valve are affected, vomiting is very
troublesome, in such cases, advantage is derived from the applica­
tion of a blister, before the active depletion has ceased. When
hepatic obstruction exists—mercurial action is excited; I have only
employed this last remedy in two cases.

Diarrhoea, when not colliquative or dependent on chronic
enlargement of the liver or spleen, yields readily to analogous—
though milder treatment.

There have been, amongst the Europeans, 31 cases of diarrhoea,
and 102 of dysentery, of which three have proved fatal. I have
had about fifty other cases unconnected with this Brigade, only
one of which died—this termination was produced by cholera, the
day after admission. Amongst the natives there have been sixteen
cases of diarrhoea, and twelve cases of dysentery, one of each of
which proved fatal.

Delirium Tremens is a common disease, and though not attribut­
able to any peculiarity in this branch, is still partly dependent on
Military service. It appears after an excessive debauch, or suddenly
ceasing the habitual use of too much spirits—most Military offences
are committed, when under the influence of liquor—the most fre­
quent punishment is confinement to the guard or conjee house,
where the food is bread and water, and where spirits are strictly
prohibited; such are the circumstances under which this disease
is to be anticipated, and such is the history of most of the cases.
It is usually guarded off, in the barracks, by gradually discontinuing
the stimulants, and such is indicated, as the prophylactic treatment
—but as giving the usual stimulant would diminish the punishment,
it ought to be combined with some bitter, as gentian or cheretta,
and as constipation is a frequent concomitant, the addition of senna
would be advantageous. I never saw a native labouring under
delirium tremens.

In the treatment of this disease, I have found depletion, and
counter-irritation assist the action of the opiates, in a very marked
degree—bleeding to fainting in the young and plethoric, or leeches to the nape of the neck in old broken-down subjects, with strong mercurial purgatives are employed on admission, with two drachms of laudanum or four grains of opium, every three hours during the night. Next day, should sleep not have been induced, a scruple of calomel and one grain of tartar emetic is given in the morning, and two drachms of compound powder of jalap at noon, or an antimonial purgative, in small doses, during the day, repeating the opiate at night. Should this not have induced sleep, the calomel is repeated next morning, with the jalap at noon, and a blister is applied to the nape of the neck, and the opiate repeated at night. There are few cases, in which sleep is not induced before next morning; then a few stimulant purgatives complete the cure. Should the third night pass restless and furious without sleep, four grains of calomel and one of opium are given, every three hours, during the day, and at night a caustic blister to the neck, with the strong opiates repeated. I have seen the patient sink into a sound sleep ten minutes after the application of this blister, before any additional opiate had been given. This mode of treatment is continued till sleep be induced, which takes place generally on the first, and very rarely later than the second day. The mouth is always found affected by the mercury, when the patients waken. Stimulant laxatives finish the cure—the mouth sometimes becomes very sore.

The worst cases appear in broken-down confirmed old drunkards, who have not been many weeks discharged, till they return with aggravated symptoms. In these cases the stomach is very irritable, the pulse quick, weak and irregular, and the secretions very much deranged. In these cases a blister is applied to the epigastrium, the bowels freely opened by purgative enemata, and occasionally the opiates are given in enemata. The insensibility of the system to the action of opiates is remarkable. One patient retained an ounce and half a drachm of laudanum (given in four enemata of three drachm doses, at intervals of three hours) for some time without producing any sensible effect—he afterwards recovered.

The irritability of the stomach in many cases depends on the state of the brain; in some, from the tenderness or pain on pressure over the epigastrium, it is evidently connected with gastritis. In these, depletion, with purgative enemata, and effervescing draughts containing laudanum, and a blister to the epigastrium remove the irritability, and generally induce sleep. Cases, complicated with hypertrophy of the heart, are most violent, and complications with disease of the lungs most dangerous.
There have been sixty-eight cases admitted, of which four have proved fatal. Three of these confirmed old drunkards, one of whom had extensive cavernous ulceration in the lungs; another had the cortical part of both kidneys nearly all destroyed, combined with great enlargement of the liver; the other had the liver very much enlarged, with the cicatrices of several old abscesses. The fourth patient drowned himself, the day after admission. The case is subjoined, as very important, in showing the morbid appearances, in the first stage of this disease.

Pat. O'Connor, aged 29, Gunner, 1 Company 3d Battalion—convalescent from intermittent fever; on his way from Mhow to Landour, has several times suffered from delirium tremens, during which he is reported to have been exceedingly violent; has been drinking hard for several days. He attempted to cut his throat at 3 p.m. and was brought to Hospital at 5 p.m. on the 2d March 1836—he is restless, has not slept for four nights—no pain, bowels costive, p. 76, T. clean, S. cool.

B Pulv: Ipecac. ... ... ... 3i.
Tart: Antimon: ... ... ... gr. ii.

Ft. pulvis at: sumendus.

B Subm: Hydr: ... ... ... gr. x.
Ext: Colocynth: Comp: ... ... ... 3i.

Ft. massa in pil. iv. divid: hora somni sumendas.

Pulv: Jalap: Comp: ... ... 3ii. cras mane.

3d, Bowels freely opened, was restless, did not sleep, is quiet, and says he is quite well; p. 76, T. clean, S. cool.

B Tinct: Senna ... ... ... 3i.
Infus: Cherette ... ... ... 3i. m.

Ft. haustus statim sumendus, et meridie repeleundus—spoon diet.

Vesper. Continued well, and cheerful during the day; at half-past five, slipt from his guard, jumped into the Hospital well, sunk immediately, and was dragged up, half an hour afterwards—dead.

Seceto Cadaveris, 14 hours after death. Body not emaciated—frothy fluid issuing from the mouth, and nostrils—the pendant parts of the body livid, the upper pale; limbs rigid; blood dark, liquid.

Head.—Venous congestion on the surface, and more bloody points, than natural, in the substance of the brain, which was of the usual firmness. Two ounces and a half of serous fluid, under the arachnoid, and in the lateral ventricles.

Thorax.—Lungs emphysematous; did not collapse when the thorax was opened, frothy fluid in the bronchia, and through the lungs, which were heavier than natural—heart empty, with considerable hypertrophy of the left ventricle.
Abdomen.—Liver and spleen considerably enlarged, structure natural—there was a florid flush over the intestines; and they felt doughy; stomach much distended with food and water—mucous coat very vascular, and much thickened. Gall bladder small, covered by a false membrane, and adhering to the colon, it contained a small quantity of light yellow bile.

Remarks.—The previous attacks had commenced in a similar manner. From the mildness of the symptoms, I tried to ward off the attack—opiates would have been given at night.

Fever.—Continued fever is very rare—the few cases, that occur, appear in the hot season, and arise from exposure to the sun. The symptoms are headache, pain in the loins, and limbs, with hot dry skin, and quick hard pulse.

The treatment is purely antiphlogistic, viz., v.s., leeches, antimonials, and purgatives.

There is no distinct line of demarcation between the intermittent and remittent fevers, the former occasionally assuming the latter type, and vice versa; and either, in their progress becoming continued. The most common form, during the hot and cold seasons, is an inflammatory quotidian, commencing with rigors, and followed by sweating. The rigors, as the disease advances, become less distinct, the sweating more partial, and the remission less perfect, whilst the hot stage becomes longer, and at last constant. It commences occasionally as a tertian, and passes through a similar course, becoming constant after the third or fourth paroxysm, delirium or symptoms of some organic lesion are then developed, if not previously evident. Headache, pain in the loins, and thirst are the symptoms most commonly complained of. The bowels are costive, with occasional nausea. Tongue furred, pulse quick, and hard. Skin dry, conveying a harsh, tingling, sensation to the touch. This dryness occasionally remains, while this is present, convalescence is not established.

The treatment is generally purely antiphlogistic. On admission the patient is bled to fainting, and gets a purgative of calomel and jalap, with the following draught every three hours.

\[ \text{B Tart: Antimon: ... gr. j.} \\
\text{Infus: Senna: ... } \frac{3}{4} \text{ ij. m.} \]

At night, if much local pain or hardness of pulse remain, v. s. is repeated, and the following powder given:—

\[ \text{B Tart: Antimon: ... gr. j.} \\
\text{Subm: Hydr: ... gr. x m.} \]
but should there be much improvement, leeches are applied instead of the v. s. and the antimonial mixture continued.

On the following morning, according to the progress of the symptoms, v. s. or leeches are employed, and the antimonial mixture continued during the day, and leeches and the calomel powder at night, should the symptoms not be very much diminished; but in the great majority of cases, continuing the antimonial mixture is sufficient to remove all the symptoms. It is afterwards given at longer intervals, and the cure is completed by bitter laxatives.

The diet is confined to sago, as long as dryness of the skin remains, then milk and bread allowed, and the diet gradually increased.

Occasionally the headache continues with quick pulse, dry skin, and restlessness or delirium after the third night, then the local depletion is continued, with five grains of calomel every three hours, using a purgative, if the bowels be not freely opened, and at night repeating the leeches or applying a blister, and giving the accompanying powder:—

\[
\begin{align*}
\text{β Tart. Antimon…} & \quad \text{gr. ii.} \\
\text{Subm. Hydr.} & \quad \text{3j. m.}
\end{align*}
\]

omitting the antimony, should the stomach be very irritable, the calomel is continued next day, till mercurial action be induced, when the symptoms generally yield, and laxatives finish the cure. Sulphate of quinine is found beneficial in accelerating convalescence; though it is generally pernicious, if given early, when dryness of the skin remains. When the fever assumes a distinct tertian type, the sulphate of quinine is an invaluable remedy, and rarely fails in producing a cure, after the bowels are freely opened, and the secretions become natural. It is found most efficacious, when given uncombined with other medicine, in divided doses, the intervals so calculated, that one dose shall be given half an hour before the usual period of attack.

In a few instances, generally towards the end of the rains, the disease assumes a typhoid remittent type, the chief characteristics of which are rapid prostration of strength, quick, weak pulse; partial, clammy sweats, and low muttering delirium. This rarely appears in the cold or hot seasons, when the above-mentioned treatment is early had recourse to. When the disease assumes this form, calomel and tartarate of antimony are given during the exacerbation, and sulphate of quinine, when a distinct remission is procured—counter-irritation is employed, and the bowels kept freely open. In cases, where immediate danger was anticipated,
calomel combined with quinine was given, during the partial remission, if the head were cool—even though there were headache, and delirium, during the exacerbation. It appears, in these cases, to render the system susceptible of mercurial influence, and when ptyalism is excited, recovery ensues. I have given the quinine successfully under these circumstances, when from the dull headache, dilated pupil, and giddiness on assuming the erect posture, I inferred that effusion had taken place on the brain. It is a powerful, active remedy, even when scruple doses of calomel appear inert—and its effects must be closely watched. I persist in its use, even though it increase the headache—if the pulse become slower, and the head remain cool. When the pulse becomes strong, and the head hot, the quinine is omitted, and the calomel continued with purgatives, according to the state of the bowels; it is resumed, on the remission re-appearing—and ptyalism may then be anticipated. When there was great prostration of strength, with coldness of the extremities, a favourable result has been assisted by a combination of quinine, port wine and cheretta—quinine is of great use in the convalescence of these cases—and a change of air is generally necessary to re-establish health. In cases of this description, the closest attention is necessary to the development of old, or the supervention of new symptoms—these may require local depletion—whilst general stimulant treatment is pursued—the local complications will generally indicate the treatment, during convalescence.

The use of very large quantities of mercury occasionally produces no constitutional effect, till some days, or even weeks, after it has been discontinued, and convalescence has been established, then the gums become swollen, and shrink from the darkened teeth. Excessive salivation, with ulceration of the gums, tongue and cheeks, occasionally supervenes towards the end of the rainy season. This accident is generally connected with enlargement of the spleen; but I have seen severe salivation, when it was not apparently enlarged, from a few grains of calomel—in one case, nineteen grains, and in another sixteen grains of blue pill. Sulphur in repeated full doses was given in these cases, and in none did sloughing of the cheek nor necrosis of the jaw ensue; though I had two patients during the season, under my charge, to whom these accidents happened.

There have been two hundred and thirty-four European cases of fever, of which seven have proved fatal; and two hundred and forty-nine native admissions, of which fifteen have died.
Since the commencement of the last cold season, the natives have suffered from a very dangerous remittent fever, with yellowness of the skin, and conjunctiva; they seldom complained of local pains. The most prominent symptoms, at the commencement, were suffused eyes, slight headache, and great prostration of strength, with early delirium during the hot stage; the remissions at first well marked, became indistinct after the second day, and yellowness of the conjunctiva, great prostration of strength, sordes on the teeth, quick feeble pulse, low muttering delirium, and coldness of the extremities followed.

The emaciated, ghastly appearance of the patients on admission, after the third or fourth day of the attack, made me doubt their history of the disease, till it received confirmation from several cases that occurred, amongst the attendants and patients in the hospital. It was evidently contagious; one man attending on his friend caught the disease, and lay four days comatose—his brother caught it while attending on him and died—so that, it evidently was not rendered milder by transmission. The treatment was leeches to the nape of the neck, a mercurial purgative followed by an antimonial solution—sulphate of quinine was given, when a distinct remission was obtained; they were generally admitted after the second day, and had delirium on the first accession of the hot stage—and after the second accession they remained dull, rather comatose, with yellowness of the conjunctiva, and sordes on the teeth. They then sunk into a state of low muttering delirium, with coldness of the extremities; blisters were applied to the nape of the neck, and quinine given alone, when the remission was perfect, and combined with calomel when imperfect. In several cases where the collapse was great, powdered capsicum and quinine were given, till reaction took place. The treatment was then regulated by the symptoms that appeared. The bowels were kept open by enemata or mild laxatives. Free evacuation was avoided, as it induced very great prostration of strength. I attributed the death of one patient, who was beginning to rally from this advanced stage, to the moderate action of an ounce of castor oil. Hickup was a troublesome symptom in some of the cases that used the capsicum; it was relieved, by effervescing draughts, and asafoetida with a blister to the epigastrium. The gums were affected, but free ptyalism was not induced in any case. An inordinate flow of urine was the first favourable symptom, in many of the cases. The convalescence was tedious. A change of air merely to the lines was found very beneficial, in the con-
valeiscence of some cases—the following case shows clearly the early morbid appearances. In all that died there was serous effusion in the brain.

Lalloo, syce, 1st Troop, has been ill with fever for five days, is now delirious, with great tenderness in both hypochondria, conjunctiva yellow, pulse quick, skin hot.

App: Hirud: ... ... xviii. epigastrico.

R Tart: Antimon: ... ... gr. i.

Subm: Hydr: ... ... gr. iii. m. ft. pulv.: tertia quaque hora, repetendus.

He died on the accession of the hot stage, thirteen hours after admission.

Sect: cadaveris.—There was a copious, red, serous effusion under the arachnoid, and at the base of the brain. The pia mater vascular, with numerous bloody points in the substance of the brain. The thoracic viscera were healthy, the blood dark and liquid; the liver was enlarged, dark, and friable; the spleen much enlarged. There were no other marked morbid appearances.

This disease has become much milder, and more tractable, since the hot season commenced.

Hepatitis is a very common and dangerous disease; independent of the usual influence of the climate, the disease is connected with the very hot state of the barracks, and in some instances, with injuries received on duty. It appears most frequently after the rains; but it is found at all seasons. During the practice season in the cold weather, it has the strongest tendency to terminate in abscess; pain in the right hypochondrum, increased by pressure or full inspiration, and uneasiness in the right shoulder are the usual characteristic symptoms. The pulse is quick and hard, but the skin is rarely hot and dry. The sounds elicited by percussion are of the greatest importance in ascertaining the size of the liver, and in assisting in the diagnosis between inflammation of the surface, and that of its structure, and in the progress of some hepatic abscesses.

In the treatment, the chief reliance is placed in v.s. carried to syncope on admission, and repeated at intervals of twelve hours, till the acute symptoms yield. It is rare to repeat it more than three times, but in one case it was repeated four times to syncope, or till the blood ceased to flow. This, in dangerous cases, I consider the only true criterion of the quantity, as indicated by the constitution, requisite to subdue the inflammation, and v.s. to syncope is invariably my order, when a vital organ is acutely inflamed. The effect of a bleeding to 50 or 60 ounces is most satisfactory, in
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subduing alarmingly dangerous symptoms, and I never saw any unfavourable consequences result. The largest quantity that I ever abstracted at one bleeding, was on admission from a plethoric young man, with acute hepatic symptoms, where the liver extended three inches, beyond the ribs, in the epigastrium. Seventy-two ounces were abstracted before fainting was induced—next day the liver was reduced two inches, and he was convalescent in ten, and he might have been discharged, in a few days, had he not got an acute attack of rheumatism in the wrists and ankles, from lying in the current of a tatte; these symptoms yielded readily, he was discharged on the 28th day. I bled an old Major in 1835, who had acute symptoms of determination of blood to the head, to 64 ounces before syncope was induced, since then he has enjoyed better health than for years previously. In general the total quantity of blood abstracted is less, the acute symptoms yield more readily, and the convalescence is more rapid in dangerous cases, when the first bleeding exceeds forty ounces, than when it is under that quantity. In those cases where fainting was induced, before six or eight ounces are abstracted, no benefit was derived from the operation, and instead of being repeated a large number of leeches were applied with advantage.

Whilst acute inflammation is present, nausea is kept up, during the day, by frequent doses of antimonial purgatives, and at night a scruple of calomel and one grain of tartrate of antimony are exhibited with a purgative in the morning, should the bowels not be freely opened. When the active inflammation is subdued, leeches are applied to the side, and two of the following pills given three times a day, till ptyalism be excited, tenderness of the gums is not enough.

\text{R} \quad \text{Subm: Hydr:}
\text{Pil: Hydr:}
\text{Ext: Colocynth: Comp: \text{a} \text{a} \text{i} \text{m.}}
\text{Pt. mass: in pil. xii divid: sumat. ii. ter. in dies.}

Ptyalism has generally commenced by the fourth or fifth day, after which, there is seldom much uneasiness in the side. The gums are kept tender, for a period proportioned to the previous obstinacy of the symptom; the bowels are then kept open by simple laxatives, with an occasional dose of blue pill.

During the active treatment, merely a little tea in small quantities is allowed, and until the gums are getting well, only an ounce of sago three times a day. After this milk and bread are allowed, and the diet slowly increased.
Blisters are seldom applied with advantage, except there be obstinate pain depending on inflammation, extending to the surface.

In the diagnosis of hepatic abscess, much confidence cannot be placed in any single symptom, nor often in any combination of symptoms, during the examination of one day, or even occasionally of several days. All appreciable symptoms are sometimes for days totally wanting, and frequently merely such slight symptoms are present as are generally found in cases that do not terminate in abscess. Abscess is more frequently formed, and re-absorbed, or evacuated, than is generally supposed. In some cases, the pus remains encysted for several years. This opinion is formed, from an examination of the previous history, compared with the post-mortem appearance of patients frequently in hospital, with symptoms analogous to those which proved fatal, and from the appearance of cicatrices on the liver. This advantage of tracing the symptoms connected with morbid appearances of old standing, can seldom be found except in regimental practice. Protracted convalescence with quick pulse, and the occurrence of uneasiness or pain on slight irregularities of diet, or the exhibition of improper medicine, form the foundation of my diagnosis. As the abscess increases, many auxiliary symptoms appear, depending on its situation. Whilst still in the centre of the liver, diarrhoea, and increased size are generally found, with difficulty of exciting ptyalism. If to these be added the supervention of dry cough, with increase of pain on turning on the left side—or pain in the stomach, with vomiting—or acute or dragging pain on flatus or fæces passing the arch of the colon—the diagnosis of hepatic abscess is pretty clear.

It is frequently fatal without bursting, and always so when bursting into the peritoneum—one case that was in hospital, last cold season, may be an exception. This case, J. Grogan, Gunner 2d Company 2d Battalion, had long protracted convalescence from fever, with enlargement of the liver, followed by fixed acute pain in the epigastrium, and vomiting, these were his symptoms, on his re-admission, under my charge, on November 28, 1836—that night, when vomiting, he felt something give way—this was followed by burning pain in the epigastrium, spreading over the abdomen, tormenting thirst, great oppression of breathing, pulse 144, vomiting constant, he got frequent doses of opium combined on the 30th with calomel, and he rallied; but as his bowels were costive, he got a purgative, on December 1, which produced several very dark,
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watery stools, but caused a return of the pain in the abdomen, and the vomiting—on the 2d the oppression of breathing was very great, countenance sunk, skin cold, clammy, pulse 142—he got a glass of port wine, every two hours, till he rallied—and the bowels were kept open, by enemata till the 8th—he was discharged well, on January 4, 1837.

The constant motion, and irritation from coughing, generally causes a fatal termination, when the abscess bursts through the lungs. In one case, that proved fatal in February last, the abscess in the liver had healed, but a large one had formed, between the communication with the bronchia and the diaphragm, which caused death.

Bursting into the colon is most favourable; in one case the puriform discharge ceased, twenty days after the abscess burst, and he convalesced rapidly—I have suspected evacuation in this manner, in several cases, but the diagnosis was not without doubt.

An early operation, for the evacuation of the abscess, would be beneficial in many cases, as it is not very painful, and if carefully performed, not likely to increase the danger of the case.

The decision of the question, whether an abscess can, or cannot be re-absorbed, is very important in a practical point of view, as one of two opposite modes of treatment must then be selected, either to give tonics to make the abscess point, and to support the strength, so that when it bursts, the discharge may not exhaust the weakened constitution—or to continue efforts, for its re-absorption, which are of an antiphlogistic nature. I adopt the latter, till the abscess is pointing, then support nature, and alleviate distressing symptoms, till it burst, and afterwards give tonic medicines, and more generous diet, with a little blue pill occasionally, the constant motion during a march is very unfavourable to cases of hepatic abscess.

There have been two cases of hepatitis amongst the natives of the brigade, and I have now a third case under treatment; the first was caused by a blow, abscess followed, and he died. From the appearance of cicatrices radiating from the abscess, the liver must have been extensively lacerated by the injury. In the other two cases, the symptoms were very analogous to those in Europeans and they yielded—though very slowly—to local depletion, and mercurial action. They were of some days standing, and had used inert remedies previous to admission.

Small-pox has been very prevalent during the last cold season; it has appeared under all the circumstances that are supposed to
guard against its attacks, viz., in those who have had the disease naturally, and from inoculation, in those who had been vaccinated, and in those who had resisted vaccination, some weeks previously, and in one child under two months of age. Many had neither been vaccinated, nor inoculated. The eruptive-fever was slight in some, and not much modified in others, who had been vaccinated or inoculated—in these the eruption was generally scanty, though in two cases it was confluent on the face; several cases in one family, and many isolated cases occurred, there was nothing peculiar in the treatment.

There were thirteen cases amongst the Europeans, one of which proved fatal, and ten amongst the natives, all of which recovered.

Venereal.—There are a great number of cases of these diseases, which may in part be attributed to the want of a lock hospital; the prostitutes are carefully examined once a week, and tickets given to the healthy; but as the sick are treated as out-patients, they may, and frequently do disseminate their diseases.

Gonorrhœa is treated by antimonial laxatives, with leeches to the perineum, and spoon diet, till the active inflammation is subdued; then cubebs given, or sulphate of zinc injections used, with more generous diet. There have been sixty-seven European, and two native cases.

Ulcers are very common; they are generally inflamed on admission, and treated antiphlogistically with antimonial laxatives, and spoon diet. In a few cases v.s.; and in many, where there were buboes, leeches were employed, and when the sores became indolent, mercury was given to affect the system; this was seldom requisite. The local treatment depended on the appearance of the sores, at first poultices, then black wash, and occasionally calomel in powder.

There have been one hundred and thirteen European and twenty-three native cases, of secondary symptoms. In patients who had the primary disease, before arriving at Meerut, I believe several of these sores were induced by the intentional application of irritants, they have become less frequent since several suspicious cases were treated with an antimonial-assafœtida mixture; these are the only cases that I have suspected of being simulated.

An excellent opportunity is afforded, in the Horse Artillery, of contrasting the local and constitutional effects of injuries, in the Europeans and natives. There are about four hundred of the former, and fifteen hundred of the latter, under medical charge, and similar accidents are frequently admitted at the same time,
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in young robust men apparently under similar circumstances, in every respect. In natives the pain, swelling, and redness are less marked, and the constitutional disturbance very frequently imperceptible, always much less developed than in Europeans, in whom similar inflammation produces high symptomatic fever. Bruised injuries, such as bites, very readily proceed to sphacelation in natives, and the loss of substance is slowly repaired; the sores are very apt to become indolent. From the slight constitutional disturbance induced, natives recover from much greater disorganization, or extensive wounds than Europeans. This may in part be accounted for, independently of the sympathetic affection, either alone proving fatal or producing great prostration of strength, by the consequent inflammation not being so great, and therefore not producing such extensive additional local disorganization. On this account, on natives, surgical operations are performed with comparatively little danger, and some may be performed that are considered too dangerous to be attempted on Europeans.

The effect of remedies is analogous in both; but most powerful in natives, particularly that of purgatives and emetics, when free action causes a proportionately great prostration of strength. Great attention must be paid to this, in the advanced stages of severe fevers. The energy of the treatment required for natives bears a similar proportion to that required for the French, which the treatment required for the French does to that required for the English. The following cases may serve to illustrate what has been here advanced.

A syce was admitted on June 8, 1834, with extravasation of urine, from stricture of the urethra causing hard, inelastic swelling of the scrotum and pubes, round the root of the penis; the parts were cool and not very painful, p. 80, T. clean and S. cool. A flexible catheter without the stilette was passed into the bladder and retained — twenty leeches were applied, and a purgative given.

5th. Parts more tender—no fever. Twelve leeches were applied, with fomentations.

10th. A small opening formed at the left side of the scrotum, through which a large quantity of pus and urine escaped. There was crepitation over the pubes, at the right side of the root of the penis. A free incision allowed the escape of a quantity of air and pus.

A catheter was retained in the bladder till the 24th, no urine escaped by the wound after the 16th. A catheter was occasionally
Assistant-Surgeon Murray

passed for some days, and he was discharged well in the beginning of July. In 1835 he was admitted with an ulcer on his leg, he had never suffered any inconvenience in passing his urine since his discharge.

Another syce in 1835 had the penis pulled out from the root of the bulb and ascending rami of the ischium, by a horse—and another in 1837, had the left side of the scrotum, and the left testicle torn away, also by a horse—and in neither was there any constitutional disturbance.

A. B., aged 35, Gunner H. A., admitted on June 10, 1834, complaining of a painful dark swelling, about the size of half a hen’s egg, situated at the root of the penis. It appeared last night, after he felt something give way in coitus—he passes his urine freely, general health good—leeches were applied, with cold lotions and a purgative given. It remained rather painful till the 15th, when after some difficulty in passing his urine, it became extravasated round the tumor, which enlarged and became very painful with fever, p. 96 sharp, T. white, S. hot—twenty leeches were applied, and antimonials given; they were repeated next day, as no improvement had taken place on the 17th, the swelling was freely laid open, urine escaped from the wound for several weeks, and he remained long very weak; he was discharged well on September 13. During a march to Agra in October, difficulty in passing his urine returned, followed by the wound re-opening, and he again came under my charge in June, 1835, with the urethra at the anterior part of the wound completely closed, I was attempting to re-open the passage by caustic, when sickness obliged me to go to the hills. A syce was admitted on June 8, 1835, complaining of having received a kick from a horse on the right knee, the wound was an inch and a half long, communicating through a longitudinal fracture of the patella, with the inner joint. A quantity of blood and air was pressed out of the joint, there was not much pain, but he was bled as a precautionary measure, the edges of the wound were brought together by adhesive straps, and the muriate of ammonia lotion applied, the leg was put on an inclined plane; there was slight pain in the liver, for several days, for which leeches were applied, but no constitutional disturbance. The Patella apparently united, and he was discharged quite well, on August 10.

Natives generally have an aversion to entering Hospital. Those not obliged to attend regular regimental duty seldom apply for advice till their diseases are far advanced. Many natives unconnected with the Brigade apply for assistance, under similar
circumstances, when their Hakeems have failed to cure them; they do not like vaccination; here small-pox is a common disease. A few scrophulous and calculous cases occasionally appear; I have removed four calculi, three of them with success, and one fatal from haemorrhage, when straining at stool, three weeks after the operation: this happened during the rains, he had suffered from remittent fever before, and it returned some days after the operation. Leprosy is a common disease amongst the poorer classes. The Mudar (Asclepias gigantea) appears to arrest its progress, and heal the sores, but the cure is merely temporary. It commences like the Paraplegia Adultorum of Earle, with loss of sensation, and motion of the extremities. In most cases irritating the ulnar nerve at the elbow, causes a painful tingling to the end of the fingers, as in cases where the Paraplegia depends on an affection of the medulla spinalis. Under this impression, I have applied blisters to the nape of the neck and apparently with advantage; but as the patients were not connected with the Brigade, I could not trace their future history. Dracunculus is not an indigenous disease; but I have seen it in native merchants, who travel much; one worm moved, for several seconds, after it was extracted.

Cataract is very common; I have couched here, and in the hills, almost fifty eyes, most with success. I saw a number of cases of deafness, in the hills, caused by cerum accumulated in the meatus externus. Most were cured by its removal; one boy, about 12 years of age, had been deaf and dumb from birth. I removed a plug of dark, hard wax from each ear, and he heard with the right. The slight constitutional disturbance excited by extensive disease, on the surface of the body, in natives must be born in mind, when a similar extent of constitutional disturbance is excited by internal disease. As I have had an opportunity of observing the effects of change of climate to the hills, on the officers and men of this Brigade, and as I twice went to the hills on sick certificate, where I attended many of the sick, I may be allowed to offer a few observations on that subject. During the cold season the climate is very cold and invigorating, and during the hot season cool, pleasant and healthy; during these two seasons it is equal, if not superior to any European climate for most of the diseases of this country. During the rainy season, it is damp, chilly and unhealthy. Most of the recent serious cases remain stationary or fall off during this season, while many old Remittent, Rheumatic, or Dyspeptic cases have
relapses. Though unhealthy, in comparison with the other seasons in the hills, or with a European climate, still it is much superior for all remittent, and dysenteric cases, to the hot damp climate of the plains, during that season.

The greatest advantage is derived in debility, arising from acute attacks, in men lately arrived in the country. A residence during the hot and rainy seasons, generally restores them to their original vigour, which is confirmed by the next cold season in the plains. But in extensive organic disease of long standing, and in dangerous attacks of old residents, the above period is insufficient to produce a permanent renovation, in the weakened constitution. In many of these cases the bracing cold season has been of the utmost advantage.

Including the whole season, the climate of Landour or Simlah is superior, in no case of disease, to that of various parts of Europe, and it is inferior, in several of the common diseases of this country. The high elevation, and the great power of the direct rays of the sun render it inferior, in some pulmonary, and cerebral diseases, and the periodical rains in rheumatism, and extensive, long standing, organic disease, induced by remittent fever; dyspeptic patients, particularly old residents in India, suffer much from torpor of the abdominal viscera, during this period.

The periodical rains, the only unfavourable season, in the hills, for Indian diseases, may be avoided by crossing the snowy range to Kinour, where, by residing during the rainy season, at Soognum or Naiko (villages 23 and 25 marches from Simlah), a climate may be enjoyed drier, and cooler, than an English summer; so little rain or moisture falls that the soil is incapable of supporting vegetation. The country is formed of a succession of steep, brown, barren stony mountains, without a tree, and with scarcely a trace of vegetation, except along the channels of the torrents formed by melting snow, on comparatively level ledges; near these the inhabitants, by hard, and incessant toil, form level beds, which by irrigation afford a scanty subsistence. This dry, cool climate is more favourable to some of the Indian diseases, than any transmarine climate, with which I am acquainted. This opinion is founded on the decided benefit derived here, in many diseases, during the hot winds. It is, as has been already mentioned, dry as well as cool, and on this depends its beneficial effects, as heat combined with moisture, in this country, as in all other tropical climates is unhealthy.

At Naiko the beneficial effects of the dryness are not diminished
by the debility induced by great heat, neither are they counteracted by a hot damp season following, as in the plains. This opinion is supported, by the inhabitants not being subject to those diseases peculiar to such climates; and in part confirmed by the result of my own, and a few other cases, that have tried it. I would not recommend the invalid remaining there, during the winter, as the country is much under snow, and the necessaries of life are expensive, and procured with difficulty. He should leave Simlah, in the beginning of June, and return in the beginning of October.

NOTE ON THE FOREGOING REPORT BY MR. SUPERINTENDING SURGEON PLAYFAIR.

The remarks of Dr. Murray, are correct to a certain extent, as they concern the climate of the hills; in some points however I am scarcely prepared to concur with him.

He says, that during the rainy season, it is "damp and unhealthy," and also "chilly." The climate is damp, so is almost every place during this season, but chilly it is not, the temperature is too high, too mild, much too equable, to produce chilliness. It is not "unhealthy." It does not affect the sound, and only in a very few instances the diseased. As a proof of this, the sick list does not increase, on the contrary, the amendment continues progressive throughout that season. The equability of the temperature, although combined with moisture, is favorable to pulmonic, and even more favorable for rheumatic cases, than the variable and changeable climate of Britain. It is decidedly more favorable in strumous affections, than that of Europe, and more so, in such pulmonic affections, as incipient phthisis, and asthma. During the first year's residence in the mountains, those who have suffered from severe intermittent fever, with enlarged liver and spleen, have generally, at the commencement of the Rains, a few febrile paroxysms, which however yield without difficulty, and it is not found, in their second season, that the same cause produces the same effect. Patients similarly situated, on their landing in England, suffer in the same manner, on their first exposure to damp and moisture, and the climate of the Hills is greatly superior to that of Europe, inasmuch, as most obstinate diseases contracted in Arracan, and elsewhere, have not resisted the influence of two seasons; whereas the soldiers from the Walcheren expedition, even in the climate of Britain, hardly ever recovered, so far as to escape an attack of intermittent, if exposed to cold and moisture. Almost
every case of intermittent fever in the Edinburgh Infirmary used to commence with these words. "An old Soldier; was in the unfortunate expedition to Walcheren; has ever since on exposure to damp and moisture been subject to attacks of ague;" this too, in men, who had resided in Britain, ever since that expedition! I naturally come to the conclusion, that the climate in the Himalyah mountains cannot be considered as unhealthy in the rainy season, although it may not be deemed equally sanitary, as at other seasons of the year. It would be well worth the trouble to ascertain, in the comparative result of practice in an hospital in Britain (Chatham for example), where men are received for diseases contracted in the West Indies, and I may be allowed to express my doubts, whether it would prove equally favorable even with the advantage, which the patients in the latter have of a previous sea voyage. The above remarks are confirmed by the experience of one of the most zealous members of the profession, and whose experience has been most extensive. I allude to Dr. Robertson, who has had medical charge of the Sanitarium, for a number of years.

NOTE.—Dr. Murray, Assistant Surgeon, was John Murray, M.A. Mar. Coll. Abd. 1828, M.D.Edin. 1831, who became Inspector-General of Hospitals, I.M.S (Bengal), and from 1865 to 1871 occupied the position now known as Director-General, Indian Medical Service.

Mr. Superintending Surgeon Playfair was George Playfair, who retired as an Inspector-General of Hospitals, H.E.L.C.S. (Bengal), March 1, 1848. He was the father of Sir Lyon Playfair, some time Professor of Chemistry in the University of Edinburgh, afterwards M.P., who was created a Peer (Baron Playfair, of St. Andrews) in 1892, and grandfather of Brigadier-General Lord Playfair, C.V.O., late Royal Artillery.