pronounce an opinion, not having had the opportunity of following the cases themselves. The time during which the patients remained in the Hospital does not seem to have been much shorter than under other plans of treatment; but their condition during this time appears to have been more tolerable, their convalescence less protracted, and the cardiac mischief, where present, was in most cases either nearly or entirely repaired before the discharge of the patient.

We have discharged our functions as reporters in laying before the profession as complete a notice as we can collect of a series of cases which we think of much interest; but it is only by those who have themselves treated and watched the patients that such series can be authoritatively generalised; and we therefore leave our readers, to a great extent, to draw their own conclusions. We may be pardoned, however, for expressing a hope that Dr. Sibson will himself apply his large experience in this matter to the resolution of the question as to the value of opium as the principal remedy in rheumatic fever.

Original Communications.

DELIRIUM TREMENS.

By HENRY DUNCALFE, Esq., M.R.C.S., West Bromwich.

[Read before the Queen's College Medical Chirurgical Society, Birmingham.]

DURING our last session it was wisely remarked by our then President, that because a case was one of ordinary occurrence, it was not therefore the less important or practical. Truly believing in this affirmation, I bring before the society a case of delirium tremens, so well marked, and of such severity, that it serves as a good example of one form of the disease, and of a certain line of treatment necessary to be adopted, in contradistinction to an opposite form requiring a *varied* treatment, and to the characteristic symptoms indicative of which I shall hereafter draw your attention.

A retrospective view of the history of disease teaches us that cases where diagnosis has been established beyond doubt, and cases where the symptoms have been uniformly regular, have done more to elucidate the pathology of organism, and the deviation from normal action and healthy structure, than those cases in which peculiarity of form or irregularity of symptoms, have rendered it difficult where to assign the seat of disease.

A consideration of illustrative cases, such as the one I am about to detail, leads us, I believe, to the true and rational treatment of disease. The causes being so well established, the symptoms so in accordance with the disturbed organism, and the necessary treatment so fully indicated.

CASE. A gentleman, of middle age and active habits, who had suffered more or less from hæmorrhage for three years, his appearance being often sallow and cachectic, applied to me to afford him some relief for the increased hæmorrhagic discharge from the bowels. I found him on August 29th with a hot and dry skin, complaining of great loss of strength, impaired appetite, fatigue on making the slightest exertion, and using large quantities of stimulant daily to keep him up to the standard requirements of his daily duties. I prescribed for him a preparation of iron and quinine with hyoscyamus, supporting him with nutritious food as far as his appetite would allow, gradually withdrawing from him some portion of his accustomed stimulants. From such treatment he had found relief on previous occasions; and from the date of my first attendance until September 1st, he appeared to derive benefit from the care bestowed upon him. On that day, I remarked an appearance of anxiety and restlessness about him, and a suddenness in his movements; he answered sharply, and was irritable; impatient of contradiction or restraint, and determined to have his hands constantly employed; his features were hard; his eyes wild, staring, and restless; his tongue was moist and clean, slightly tremulous; the skin, which had been hot and dry, was now hot and moist; the bowels had been acted upon several times, but sparingly, and some blood had accompanied each motion. Towards night he began to have some delusions—seeing birds, monkeys, and other objects, on the walls and ceiling; but when reasoned with, or upon making a closer examination, he could correct the false impressions.

A drachm of laudanum was given to him at bed-time. During the night he was extremely restless; armed himself with a life-preserver, and defended the stairs against the approach of robbers. These nervous fears continued through the day of September 2nd; but when conversed with, he was appeased and quieted for a short time. An opiate mixture was given through the day, and at night a morphia pill. No relief followed; his restlessness increased; and he mistook his friends for foes; and he especially evinced a great antipathy to his wife. He believed everybody had conspired to rob him; and he constantly was employed in hiding imaginary moneys in imaginary safety places. As it would be tedious to give the details of each successive day, I will state in a concise form the medicine prescribed, adverting to any important change as it occurred.

September 2nd. Cinchona mixture, twelve ounces, containing four drachms of tincture of opium, one-ounce doses every two hours. At night, one grain and a half of morphia pill.

September 3rd. Cinchona mixture, containing eight drachms of tincture of opium. A four-grain morphia pill at night, and four drachms of tincture of opium, in doses of a drachm every two hours through the night.

September 4th. A draught containing three grains of morphia; twelve drachms of tincture of opium through the day and night. Before the draught he took two grains of tartarised antimony; and in two hours after it, he commenced taking one-drachm doses of laudanum. He slept irregularly for nearly three hours, and was more composed in the evening. He took food plentifully, and stimulants only in small quantities.

September 5th. A three-grain morphia draught, and a cinchona mixture, with four drachms of tincture of opium.

September 6th. A mixture containing eight drachms of tincture of opium, and three drachms of tincture of opium at night.

Through these days he remained stationary, conversed rationally at times, and slept at short intervals, generally wakening affrighted and trembling. He became gradually more excited through the two following days.

September 7th. The opiate and bark mixtures were omitted. A three-drachm tincture of opium draught at bed-time.

September 8th. A three-drachm tincture of opium draught at bed-time.

September 9th. The bowels having acted but slightly, he had two drops of croton oil in pill, also a blister at the nape of the neck; he resumed his opiate mixture, taking four drachms of the tincture during the day, and three grains of morphia in a draught at night.

September 10th. Mixture containing nine drachms of tincture of opium.

September 11th. Four-grain morphia pill. Mixture containing six drachms of opium through the day.

September 12th. Croton oil pill. Mixture of hyoscyamus, sulphuric ether, and camphor; at night, a two-grain morphia pill.

September 13th. Three-drachm tincture of opium draught; ether and hyoscyamus mixture.

September 14th. Three-drachm tincture of opium draught; ether and hyoscyamus mixture.

September 15th. Mixture repeated. A three-drachm tincture of opium draught; and half a grain of morphia every two hours, till he had taken four grains.

September 16th. Mixture repeated. A three-drachm laudanum draught.

September 17th. Bark and hyoscyamus mixture. To take solid food, and then change from home.

My note-book bears entry on Sept. 10th:—"He has not been so much disturbed by delusions as in the earlier days of the affection. His perceptions are more accurate; his aversions to those around him are the exciting causes of his illusory wanderings; his repugnance and aversion to have even his wife in the room are marked; he rages and shrieks loudly for help, tears his clothes, abuses those who touch him, refuses food, and demands to be taken from the prison in which he is incarcerated." Day following day and night succeeding night, found no change in this fierce delirium. The pulse was quick and sharp; the breathing hurried and panting; the skin hot and bathed in perspiration; the constantly increasing ramblings, restlessness, and wandering, continued almost unaltered till the 15th, when a slowly but well marked change took place. The violent gesticulations were now falling into a groping about in space for imaginary objects, and the wild delirium was merging into the low mutterings of incoherence. He was now brought to that state of exhaustion when a short time must

decide the ultimate result. Still conscious of the great utility and applicability of that one remedy on which I had throughout relied, I steadily persevered in it, till the long-wished for sleep came to the rescue; and on waking, after an almost uninterrupted sleep of thirty hours, what a change had taken place! The countenance had resumed the expression worn in health; the bathing perspirations no longer bedewed the body; the pulse, which only a few hours previously had been thready, small, and almost too rapid to count, was soft, fuller, and compressible; the urine, which had been voided in small quantities, and involuntarily, was now abundant, and passed with consciousness. The mind was clear; intelligible questions were asked and answered by him; in a word, the disease had vanished with the long sleep, leaving behind a deficiency of strength but slowly to be regained, and bad habits to be amended. My patient was well. During the fifteen days of the continuance of this attack, I administered seventy-nine drachms of laudanum, besides ten grains of solid opium, and twenty-five and a half grains of acetate of morphia, which were taken in the form of pill.

REMARKS. Whatever in this instance may have been the exciting circumstances that determined the disease, I would attribute much influence to the long-continued discharges of blood from the rectum, which more than predisposed by exhausting the nervous powers, and enfeebling the condition of the general health. To that cause, also, may, with fair probability, be assigned the protracted duration of the attack, and the slow return to health. This form of the disease no doubt had its cause in a passive congestion of the venous cerebral circulation; and no one could have witnessed the complete course without being at times struck with the close affinity to mania on the one hand, and to febrile delirium on the other, so much in accordance with the condition of the circulatory system were the symptoms more or less developed and modified. The history of the case itself—the bleedings—the slow absorption of large amounts of stimulants—the debility—the general irritability with weakened powers—the small compressible pulse—the clammy skin, and tremor—demanded at once a nutritious diet, a certain amount of stimulant drinks, and, above all, *sleep*, the one thing so necessary to recruit the exhausted powers, and to restore vigour to the brain.

Great diversity of opinions exist on the treatment of delirium tremens, some believing that the disease has a certain course, and has a fixed termination, not to be altered by remedial measures; whilst others place their entire reliance on opium; and others again on purgatives and depletory measures; while experience surely proves that disease cannot be met by any plan of treatment laid down at the beginning, but must have remedies varied according to the condition, temperament, habits and idiosyncrasies of the individuals in whom that disease may occur. During the progress of this case the opium was sometimes combined with cinchona, and sometimes with sulphuric ether and camphor. On one occasion, during a long paroxysm, attended with great violence, I found it expedient to give nauseating doses of antimony, following its effects by hourly doses of laudanum. It is very important, when administering opium with a view to procure sleep, to enjoin rest and quietude. I have seen a patient in delirium, with the system entirely impregnated with opium, die, without having derived the least benefit from its exhibition; and I am quite satisfied that in some cases where the restlessness of the patient has prevented sleep from ensuing after sufficiently large doses, I have seen the desired effect produced by tranquilising the system with tartarised antimony prior to the opium being administered: at other times by the inhalation of chloroform after it; nor do I think it should be lost sight of that, in order to fulfil the object we have in view, we should either give opium in a large dose at once, or in full doses frequently repeated. A great responsibility, I own, attaches itself to the medical attendant; and I cannot now but think if I had administered for one dose a much greater quantity of morphia or laudanum, my patient would have been more speedily relieved.

In the numbers of the *Lancet* for August 15th and 22nd will be found a very important paper by Dr. Oliver, of the Salop and Montgomery Counties Lunatic Asylum, on the Facts and Observations respecting the Principles to be kept in view in regulating the Administration of Opium. To the observations of Sydenham, "that great exhaustion of nervous power, being dependent on want of harmony between the cerebro-spinal and sympathetic centres, forms one of the three great symptoms which peculiarly require the use of opium," Dr. Oliver adds that the facts which most certainly prove the ex-

istence of this necessity are those which indicate both that the process of sanguification has been seriously impaired, or, in other words, that the quantity of blood in the system is insufficient for the general purposes of nutrition; and that some of the most essential elements of neurine are either wasted too rapidly in the wear and tear of the vital processes, or cease to be separated from the blood for the ordinary purpose of repair.

In the *Lancet* for August 15th, a case is detailed extending over seventeen days, and the stated quantities of opium and morphia during each day. On the first, nine grains of hydrochlorate of morphia were taken; second, seven grains; third, fifteen grains; fourth, fifteen grains, and twenty grains of solid opium; fifth, fifteen grains; sixth, fifteen grains; seventh, fifteen grains; eighth, eighteen grains; ninth, twelve grains; tenth, four drachms of tincture of hyoscyamus; eleventh, six grains of morphia; twelfth, three drachms of tincture of opium three times a day; thirteenth, six drachms of tincture of opium; fourteenth, three grains of morphia, and half an ounce of tincture of opium; fifteenth, six drachms of tincture of opium; sixteenth, six drachms of tincture of opium; seventeenth, half an ounce of tincture of opium, and five grains of powdered opium; about which time improvement was discoverable. Other cases are extensively dwelt upon, to which I will refer those who are interested; and at the conclusion of the paper is an extract from the letter of Mr. Joseph Allen, of the Liverpool Royal Infirmary, where a patient, suffering apparently from delirium tremens and mania, took in one day an ounce of Battley's sedative solution, two drachms of powdered opium, and eight grains of acetate of morphia; and with great benefit. The same patient, when convalescing, took every night, in two doses, four scruples of powdered opium.

Delirium tremens also makes its appearance in a form which is nearly allied to phrenitis, occurring generally in robust subjects, hard livers, and not unfrequently following a debauch. In such cases, there is from the commencement a greater exaltation of the cerebral functions; the congestion is arterial and active; and there is generally pain referred to the head. The countenance is very red, and the veins full; the eyes fiery and suffused, the globes appearing to be prominent; and patients have a very ferocious appearance. On analysing this important symptom in cerebral diseases—this wildness of expression—it will be found mainly due to a complete retraction of the upper eyelid under the orbit, thereby exposing the entire anterior surface of the sclerotic. The other ordinary evidences are of a mixed description, sometimes identical in their nature with those of the first stage of meningitis, in others having the more characteristic resemblances of true delirium tremens. The first object is to relieve the immediate symptoms; for, if neglected, a condition of congestive apoplexy may speedily ensue. Venesection, cupping, croton oil, purgatives, and tartarised antimony, are the means which meet the requirements; and I believe the best form in which to administer opium, when the congestion has been lessened, is Dover's powder, in doses of from two to three scruples.

The rapid sketch now given shows the immense importance of combating a disease according to the form it assumes, and the absurdity of the pretence of adopting a specific form of treatment, which in so many instances exposes the medical practitioner most justly to the charge of quackery and charlatanism.

ON IRITIS.

By W. J. MOORE, Esq., Assistant-Surgeon, Bombay Army; formerly Senior Resident Surgeon at the Queen's Hospital, Birmingham.

THE following cases present some characteristics which are contrary to the appearances generally following injuries of the eyes, and probably, therefore, will not be destitute of interest to many of the readers of the BRITISH MEDICAL JOURNAL.

CASE I. While I was engaged on service in Persia in the early part of the present year, an accident happened to some individuals in my medical charge, who were engaged making a battery for the defence of an important military position. To such end it was necessary to "blast" the hard soil and rock by means of gunpowder; and, a premature explosion having taken place, several persons were wounded, the case of one of whom is now briefly related.

This officer was struck on the eyes and face by numerous grains of powder, each of which were picked out with great care by the aid of a lancet. The right eye had one grain