other means of treatment must be resorted to. He was very pleased to hear the instance mentioned by Dr. Weatherly, where many patients who had suffered from conditions involving much sleeplessness, were enabled to sleep by the provision of very simple measures. He was also greatly interested in Dr. White's narration of how he cured chronic noisiness by general moral measures. One might go on, bit by bit, and get any number of illustrations as to the means by which the disorder of sleeplessness might be removed, not by simply treating the symptom of sleeplessness, but by treating the bodily condition, and relieving that on which the fault depended. With regard to the treatment of acute mania by narcotics, of which Dr. Blandford spoke, his (Dr. Rayner's) experience would certainly be that acute mania could be treated, as Dr. White had said, better without narcotics. He knew that opium had been regarded as very curative in cases of melancholia. He had tried it himself in his earlier days, again and again, but was not so impressed with the result as Dr. White was. He had found the Turkish bath and similar appeals to the skin were more successful than the giving of opium. The speakers seemed to be fairly in agreement with him as to the conditions in which narcotics should be given. In his opinion these conditions were very limited, and he would urge that every case and its circumstances should be carefully considered.

Notes on some Cases of Morphinomania. By ROBERT JONES, M.D.Lond., B.S., F.R.C.S.Eng.[1]

IT is a well-known fact that the practice of many physicians and some alienists includes the treatment of persons who have brought themselves to the verge of mental or moral ruin by an indulgence in the use of opium or morphia, the result too commonly of medical advice. This is probably the most common origin of the morphia habit, which was called Morphinomania by Charcot, and Morphinism by Levinstein. Other methods by which the habit becomes established are either through friends or persons in the same house imitating the habit of another, and from curiosity or experiment adopting it and succumbing to its sway. Others have tried it on the recommendation or suggestion of friends, and finding they could not do without it have become victims.

How extensive this habit may be is difficult to determine, as it is probable that only the repentant sinner visits the consulting room and seeks for help to overcome the thraldom. It is suspected, and not without reason, that a large class of men and women of all social grades, ages, and civil states has yielded to its sway.

Extension.—Drury,[2] in an interesting paper before the Academy of Medicine in Ireland, gives a full account of the

extended use of morphia and opium in individuals and in races, and he traces this from China westwards into Europe and America. I must refer the reader interested in these questions to his paper.

Sex and occupation.—It is stated that doctors (8) and women are more often victims than others, and although my experience is limited to the class received into a county asylum, one was a medical man, one a journalist, one a pianoforte maker, and one a coachman, and four (50 per cent.) were women; two were journalists, one single and one married, but living apart from her husband, and two were nurses married. My patients, eight in number, were thus divided equally as to sex. Four (three males and one female) contracted the habit from and through the advice of their unsuspecting medical attendants.

Form taken.—Two out of four males practised the hypodermic use of morphia, a third took morphia by the mouth and subcutaneously, the fourth drank opium, and had continued the practice for four years before admission, taking then four ounces of laudanum as a dose (about five grains of morphia). This would have increased had his means allowed it, and it was the craving for more that caused him to be brought under treatment; for he could not sleep, he became nervous, irritable, a depression with suicidal feelings overpowered him, and he had no energy to work even after the utmost mental effort. Of the four females, one took morphia by the mouth for many years. She was a nurse at an asylum where she served for over twenty years, during most of the time taking morphia, and finally retired upon a pension. The habit was so secret that she was not suspected of it. After this she was admitted under my care. She improved, and was discharged recovered, but was subsequently readmitted, and died from the exhaustion of melancholia and senile phthisis. Another took morphia in the form of chlorodyne, a third took it subcutaneously and by the mouth; and in the fourth, owing to marked and unusual reserve, the method of administration could not be ascertained.

Quantity.—One male patient took 20 grs. of acetate of morphia daily, which was afterwards increased to 50 grs. subcutaneously; in another the quantity was not ascertained, but both arms and his abdomen were much scarred on admission from injection with the needle. A third stated he injected 4 grs. at a time, and this was repeated several times a day.

When received as a patient into Bethlem Hospital prior to his admission into Claybury, Dr. Stoddart informs me that while he was in the waiting room of the hospital before being received he swallowed a packet of morphia, and not knowing how much it contained, the stomach was washed out at once. Some clue as to the quantity was revealed by the fact that 30 grs. more were found upon him, and seventeen more papers of powder labelled 2 drms. The fourth male, as stated, habitually drank 4 oz. of laudanum for a dose. Of the four women, one took 4 to 6 grs. as a dose, two drank morphia, and another chlorodyne, but the quantity was not ascertained. Further particulars as to the varying quantities of opium and morphia taken by different individuals in historical and other records are given in Dr. Drury's paper already referred to.

Form of insanity.—The depressed form of insanity was the common accompaniment in these cases of morphia *habitués;* three males were melancholy, and one maniacal; two females were melancholy, one was suffering from delusional insanity, and one from mania.

Symptom complex.—The symptoms of morphia taking are easier detected than diagnosed, that is to say, it is a matter of suspicion and vigilance on the part of friends rather than a submission and seeking for assistance by the victim. There is a moral obliquity as to his conduct and veracity which is most barefaced, and when the craving is once established this acts as an overwhelming and dominating want, which at all and every cost must be gratified. Although morphia is eliminated by the kidneys, it is not readily, easily, nor certainly discovered in the urine, which adds to the difficulty of diagnosis. The diagnosis of the habit by means of the sphygmograph, *i.e.* plateau, is fully discussed in Jennings' paper.

During the administration of morphia and opium a pleasure is imparted to the user, which is like a stimulating vital force. This pleasure, which is genuine and is exciting, is followed by the most painful and characteristic symptoms, a restlessness and a longing which only another dose can appease. Following each dose there recurs a vital and intellectual exuberance which, compared to the gross and moral enjoyment of alcohol, is a divine luxury. This general excitement of morphia is difficult to clothe in words; De Quincey and others have attempted it, but it can best be imagined from the world of

dreams. It annihilates the *tædium vitæ*, brightens up the dormant faculties, and awakes any energy the frame is capable of.

This effect of morphia becomes a fascination, and the strongest zeal, fervour, or effort of the will fails to resist it; a passionate anticipation and yearning for this euphoria has become an all-powerful craving, and the victim realises that gradually and unknowingly he has become inextricably involved.

The only remedy is to increase the dose and shorten the interval, after which a renewed craving of longer duration succeeds a shorter one of excitation and stimulation, until the general condition becomes one of fatuous listlessness, ending in a general wasting emaciation and death. No social grade and no age is a bar to the insidiousness of this habit. As to the craving, the wretchedness, misery, poverty, and despair entailed in its gratification often lead to suicidal impulses, and this was the case in five (three males, 2 females) out of my eight cases. In his own words, one patient (Case 1), referring to this craving, stated he was ready to have his hand cut off, or would thrust it into a furnace if he could only have one injection of morphia to relieve him, as he was at the time suffering the "torments of hell." On admission he had two hypodermic needles extracted from under the skin of the right arm and the left leg. He was drawn, haggard, sallow, and thin; his teeth were bad—a very common feature in the morphia *habitué*. He was suffering severe distress, and was exceedingly restless and sleepless, and he could only speak with much effort. Upon his recovery, he wrote saying that after starting the use of the drug it would be useless for him to dilate upon the futility of attempting to break with it, as "the man to perform such a deed had yet to be born."

Another patient (Case 8), describing the effect upon herself, stated she revelled in sleep full of the most delightful dreams, compared to which "fairy-land" was the merest prose. After 6 grs. of morphia, which she would take in a little champagne, she saw things "exactly as I wanted to, and could do any amount of work." Finding morphia becoming a habit with her, she determined to make a stand against it, and for some time did so successfully.

The general character in morphia-takers changes completely, anxiety and distrust and depression are depicted in their pallid

and pasty faces. They are restless (the marked restlessness amounting to an imperious tendency to movement was well marked in Cases 1 and 2, who could hardly be kept in bed during the period of craving), shifty, irritable, and unsociable. There is impotence of will, fitfulness, deception, and lying, inability to keep engagements, loss of concentration and application to work, neglect, ruin of home and family, and as in all inebriates a general enfeebled mental capacity, for which the only suitable place is the lunatic asylum.

Prognosis.—This must depend upon the age, form of opium or extract, and quantity taken, as also of the prognosis in mental diseases generally—in so far as heredity, previous attacks, form, and duration of insanity are concerned. In asylums the prospect of recovery depends much upon those in charge of the patient's treatment—for if all forms of opium are withheld, and liberal nourishment is pushed, the prognosis is favourable. I have had no experience in the "home" treatment or the voluntary submission in their own homes of individuals habituated to the drug, but I can well surmise that the treatment of persons who in their own homes or other people's did not themselves desire or intend to assist in a cure would be absolutely futile, and even impossible. With power in the hands of a physician, and where he can know that his instructions are carried out, as in asylums, a cure is possible and probable. The length of residence in such cases will probably on an average be under four months. Exhaustion has to be guarded against, especially cardiac syncope and alvine flux, or gastro-enteric catarrh, as many morphinomaniacs are very susceptible to diarrhœa and vomiting, more especially during the seven days or so of critical abstinence. Sleeplessness and restlessness are unfavourable symptoms, so are syncopal attacks and collapse (especially when the drug is suddenly withdrawn).

In my eight cases, of the four males three recovered; one relapsed, but subsequently again recovered; and one, a medical man, died from gummata of the brain; four females recovered, but three relapsed, one of whom subsequently recovered, one died of melancholia with phthisis, and one is still in residence. The average residence of the recovered cases was about four months.

Treatment.—1. This resolves itself into (*a*) preventive and (*b*)

actual. As to the former, which relates to such legislative enactments as the Medicine Stamp Act and the Sale of Poisons Act, the intention is to make it more difficult for the rank and file to obtain access to drugs and special stimulants, thus also deterring the morphia *habitués* from gratifying too easily their morbid craving. Too much stress cannot be laid here upon the great importance of our duty as medical men in using sedative medicines for the relief of pain. A full apprehension of our serious responsibility cannot be too strongly impressed and urged upon us, as carelessness on our part has too often led to the most grievous results; for most of these sad cases can truly trace their downfall to the fascination exercised upon them by the use, under medical advice, of this subtle and dangerous remedy. I would almost go so far as to say that no medical man should ever use the hypodermic morphia syringe for any female patient suffering from neuralgia, sciatica, or hysteria, and no medical man should lightly put the means of indulgence before or within the reach of any patient.

2. Dr. Sharkey (*Nineteenth Century*, September, 1887) called attention to the great danger in respect to the morphia habit which occurred from the prescriptions of medical men, and he drew a terrible picture of the extension of hypodermic injections of morphia among certain classes of the community, who employed a "regular arsenal of injecting instruments,"—the syringe and bottles of women in the well-to-do classes addicted to the habit being jewelled to conceal their true significance.

Legal measures of control over the sale of morphia with the view of controlling druggists have occupied more of the attention of French physicians than of the medical profession on this side of the Channel, and druggists, when forbidden to sell morphia without entering the same in a book for the sale of poisons, or in prescriptions, too often set up for sale certain "specialities" of their own containing this drug.

The question has often arisen whether the morphia habit should be looked upon as a pleasure-giving vice, or as a disease over which the victim was powerless to act, and whether such an indulgence should be treated by punitive methods (*Lancet*, 1900, vol. ii, p. 1219), or sympathised with as an affliction caused by some tyranny beyond the control or the power

of the will. I am inclined to think that a considerable amount of emotion and pity is wasted over the victims of self-indulgence of all sorts in these days, and if the old doctrine of Calvin, viz. "the expulsive power of a new affection," were more freely introduced as a motive to action, the manhood of our race would doubtless considerably improve; as many of these are, I fear, of the class of Kipling's pleasure-loving and selfish "muddied oafs." No amount of therapeutics or legislation will make a man good, a drunkard sober, or a morphinomaniac abstemious, unless he is allowed some credit for such will-power as he has, or is assisted or compelled to use this for his own moral reclamation; and to speak of the morphia habit as a disease, and nothing more, is misguided benevolence and mawkish sentiment. Many of these cases are fit and suitable for long detention in inebriate homes. No doubt there are some in whom a long indulgence has developed and confirmed a habit which cannot be withstood, but this is by no means always the case; and where the craving has become a master-passion which is hated, and over which the power of the will is unable to offer resistance, and the mind has become diseased, these are cases which justify asylum care and control, and it is to these that I direct attention. Much is still wanting in the way of preventive measures to restrain the drug inebriate—whether his *penchant* be for morphia, chloroform, cocaine, or ether—from getting at his poison; and it would be hard only to punish the druggist for the lying, deceitful, and often forged statements of these self-indulgent persons who themselves escape unpunished.

The second point involves not only the consideration of the patient's surroundings, *i. e.* whether treatment should be voluntary, either in his own home, or in a "general home" where similar cases reside, or whether compulsory treatment by detention in special institutions be the most favourable to effect relief; but also the special treatment necessary for the acute suffering involved through a compulsory abstention from morphia. Judging from experience in one of my patients (Case 1) who had voluntarily retired into an inebriate institution on three occasions, relapsing after each discharge, I am not in favour of treating several of such cases together in a home not under special control, *i. e.* not under the direct care of a medical attendant, for I believe that to

associate such cases together is bad, as they talk of their ailments, plot and practise deception, and utter vigorous falsehoods in support of their cunning. I am of opinion that recovery is impossible in general homes into which some morphia cases enter through the importunity of friends, unless they themselves and not their friends alone are willing to assist in their own cure. Even when the morphia-taker is most willing and anxious to be cured, but where he still directs treatment, the cure fails. Coleridge hired men to prevent his getting opium, and dismissed them for doing their duty. It is for such reasons as these that I believe no treatment in one's own home can afford permanent relief. I consider that the best and most successful treatment of these advanced and long-continued cases is that which can be carried out only by compulsory detention in special institutions or asylums, for such can prevent all introduction of morphia, and they are bright, cheerful, comfortable, and have special local or Government inspection. Special hospitals for this class exist in Germany (Berlin), and also in America (Brooklyn). In such as these, with attentive, kind, sympathetic, but firm and tactful dealing, the terrible battle of demorphinisation—as Charcot termed it—can be fought out; and a serious ordeal it proves, as only those who have witnessed can know. In the treatment of all the eight cases recorded in this paper a complete and abrupt withdrawal of morphia was effected—after the teaching of Obersteiner and Levinstein. This method, to which the terms sudden and brusque have been applied, has a train of symptoms —"Abstinenz-Symptome"—in its course which may give rise to much anxiety to the physician, as well as acute suffering and even torture to the victim. Ball has recorded death as the result of this brusque and complete withdrawal, and it is recommended not to employ the method in cases of heart failure, heart disease, general debility, or in pregnant women. It is rare for this stage to be endured with silent fortitude, a restless and most abject despair is more common. In two male patients (Cases 1 and 2) the abrupt withdrawal caused acute sleeplessness with restless delirium and suicidal threatenings. Case 1 was ready to endure any torture in return for a morphia injection. As an alternative sedative 20 grs. of chloral and 30 grs. of bromide of potassium were administered. Case 2 had serious vomiting with diarrhœa, which threatened to prove

fatal. These symptoms were much relieved by the administration of Pot. Bicarb. in 20-gr. doses, accompanied with Tinct. Hyoscyam. ɱxv, and later, Tinct. Nucis Vom. ɱv and Spt. Ammon. Aromat. ɱxv. It is stated that during the period of morphia injection the alkaloid, as it is secreted by the gastric and intestinal glands, acts as a sedative, paralysing the glands and diminishing their secretion, and that the glands oversecrete when the morphia is withdrawn, giving rise to vomiting and diarrhœa. It is also stated that the acid of the gastric glands is secreted more freely than the peptic material, and that alkaline remedies (chemical demorphinisation) tend rapidly to improve the gastro-intestinal irritation. Case 2 was certainly much relieved by the potash salt. Case 3, who drank the tincture of opium, and who had commenced to take it for the relief of neuralgia, was successfully treated with quinine grs. iij and the tincture of gelsemium ɱxv in combination. The cardiac failure and collapse (which Jennings states is indicated by a plateau in the sphygmographic tracing shown here from his work), and which occurred in Case 8, was much relieved by Ammon. Bromid. gr. xxx and Tinct. Strophanthi ɱx. A special toxic derivative of morphine called by Marmé oxydimorphine, and which a further injection of morphine relieves and neutralises, has been stated to be the cause of this collapse. In all my cases an abundance of an easily assimilable fluid dietary was frequently given—milk, concentrated beef tea, tropon, leguminose, plasmon, with small and occasional doses of whisky or brandy, and the bed treatment kept up for some time. The proportion of recoveries was 75 per cent. males, and 50 per cent. females, but the number of my cases is too small to build thereon any theory based upon treatment.

I have no experience of the treatment of cardiac syncope from the morphia habit by special alkaloids such as sparteine, digitalin, or nitro-glycerine tabloids, containing nitrite of amyl and capsicum, as advocated by Jennings, who further recommends the use of heroin—an opiate derivative—and meconarceine, or valerianate of ammonia (used by Coleridge), and the alkaline bicarbonates—the latter used in the process of what has already been called "chemical demorphinisation." Napelline has been recommended by Pichon and Rodet, but the experience of Mattison, of Brooklyn, does not support this. To procure sleep the latter recommends the bromides, codeia, and cannabis

indica. Clifford Allbutt recommends the use of caffeine in the treatment of cardiac collapse. Of the use of atropine and strychnine subcutaneously together with the inhalation of oxygen, as has been recommended for the treatment of an overdose of morphia (*Lancet*, 1898, vol. ii, pp. 545, 1219, 1392, 1900, vol. ii, p. 1727), I have personally no experience as remedies for the treatment of morphinomania.

I am fully aware of the recommendations of Erlenmeyer, who introduced the "rapid" method of treatment, diminishing the doses in from six to twelve days according to the amount habitually taken by the patient, and so effecting a reduction of the drug with less of the constitutional disturbances than occur with the "sudden" method. For this reason Clifford Allbutt, who was formerly an advocate of the sudden or brusque method, now gives his support to the more tapering. Erlenmeyer himself, with experience of both, states that the sudden method is preferred by patients who have tried the two, and he compares his own to biting bit by bit a dog's tail. Apart from lengthening the period of distress, any method which sanctions in practice by the medical attendant the use of the hypodermic syringe tends in my opinion to condone the offence, if not to encourage the evil. It is, however, an advantage in cases of serious bodily disease to avoid shock and this method, recognising the advantage of sleep, directs that the larger injection should be administered towards evening.

A third method—the gradual or slow suppression carried out by Braithwaite, and recommended with modifications by Jennings, who has contributed valuable work to this study—has been advocated. It extends the cure for many weeks; the injections in progressively diminished doses are administered often, with other sedatives if necessary in substitution. To demonstrate this method a bottleful of morphia injection is prepared, and after the first syringeful is used the bottle is filled with water. Injections are continued indefinitely, and water repeatedly replaces what has been taken out until only an infinitesimal dose of morphia remains, which can, it is stated, be discontinued without discomfort.

Jennings' method (*Lancet*, April, 1901) is to practise the gradual but voluntary suppression of morphia under constant surveillance, but without restraint, and with tact and encouragement towards the patient; he has claimed much success from

his treatment. He divides the period of reduction into three stages. (1) From the commencement of reduction until 2 grs. daily are administered subcutaneously. This quantity he considers to be the minimum vital requirement whatever dose of morphia has previously been taken. (2) From the time 2 grs. are administered subcutaneously (the greater part of this being towards night to favour sleep); further quantities of morphia are given by the mouth or rectum, progressive reduction of the subcutaneous injection still proceeding, and (3) the final progressive diminution ending in complete withdrawal. He claims for the change in administration—morphia by the mouth or rectum instead of subcutaneously—a curative effect in regard to the craving; but he directs a rational attention to sleep, to procure which galvanism to the head is used, interest and occupation are encouraged, and the hot-air bath as a tonic, a sedative, and an eliminating agent is specially recommended. Personally I am of opinion that there is only the choice between the sudden and brusque method of Levinstein and the gradual or tapering method—also called the rapid method—of Erlenmeyer; and considering the terrible bondage involved in the morphia habit, and the overwhelming sway it holds over those under its thraldom, I am of opinion that victory should be snatched with the suddenness of the zealous reformer, and it is for these reasons that I consider the resolute and absolute withdrawal as entirely the best. In this I am supported by an authority which will commend itself heartily to this Association. Dr. Savage, whose experience is extensive and sound from a great number of morphinomaniacs, states that after the patients are placed in a reliable home, such as the house of a medical man—where, he states, there can be no possible access to the drug by bribery or other opportunity—for a day or two they are allowed the drug in the customary dose, but it is suddenly and absolutely knocked off at once. If there is very serious delirious excitement Dr. Savage has used chloroform, whilst waiting for 40—60 grains of sulphonal to take effect, and he has also tried MacLeod's method of large doses (one drachm hourly up to one ounce for three days) of bromide of potassium, relying as a great sheet-anchor upon the plentiful and generous administration of concentrated foods. It must not be forgotten that the "Abstinenz-Symptome" mean risk,

and caution is required not only from the inherent danger of this stage, but also from the suicidal promptings common to many of these sufferers, who are creatures of impulse, and dislike ordering their lives with method and regularity. As to relapses, I am of opinion that these are less likely to occur when the withdrawal has been bold and sudden. The patient is less likely to feel the break of a habit by the abrupt method than by the discomfort of decreasing doses of the drug, as during the whole period of decrease there would be inducements to repeat the morphia. It is better, if this be possible, that he should not obtain for the accustomed one the substitution of another stimulus. He is better without the (1) narcotic (2) or stimulant, alternative sedatives, as the surrogates of morphia have in some cases induced the practice and use of a new narcotic. If, however, the restlessness together with insomnia continue, bromide and chloral may be given as the least harmful. It is not easy to ascertain whether relapses are due to the cravings only or to the irresistible impulse—an overwhelming physical yearning—which prompts the best intentioned to succumb to its fascination. I here present sphygmographic tracings (Figs. 1, 2, 3) of the pulse of a morphia *habitué* taken by Jennings, and tracings (Figs. 4, 5) taken

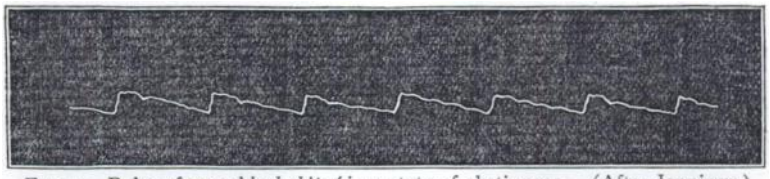

FIG. 1.—Pulse of morphia *habitué* in a state of abstinence. (After Jennings.)

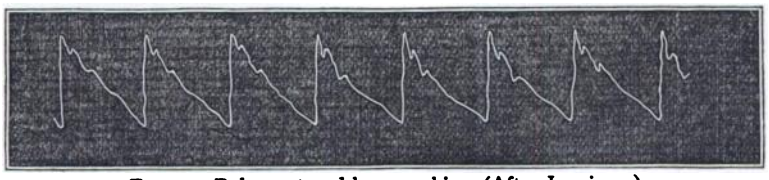

FIG. 2.—Pulse restored by morphia. (After Jennings.)

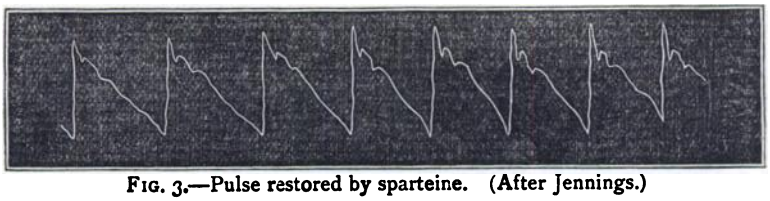

FIG. 3.—Pulse restored by sparteine. (After Jennings.)

by myself in a case where a craving for alcohol existed.

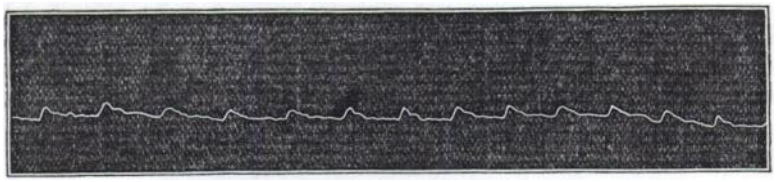

FIG. 4.—May P—. Alcoholic neuritis, May 19th, 1902, 3.15 p.m.

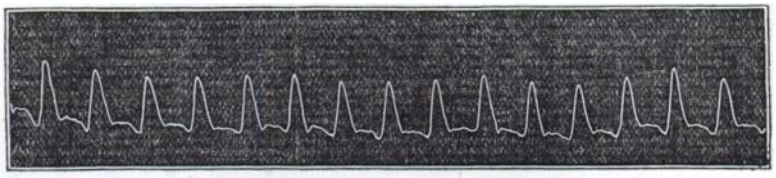

FIG. 5.—May P—. Alcoholic neuritis, May 19th, 1902, 3.30 p.m., fifteen minutes after half an ounce of brandy.

These tracings afford an interesting comparison. Our one great aim should be to re-educate the dormant will, supply abundant and generous nourishment, diminish discomfort, avoid fatigue, and counteract habits of solitude by a well-occupied and full home life, free from any stimulating temptation. This treatment should be extended for a period beyond that during which I have kept my patients under surveillance, and at least a year of tutelage is urged as an after-cure whenever practicable. The cases upon which my experience is based are the following:

CASE 1.—H. H—, æt. 39, height 5 ft. 10 in., weight 8 st. 2 lbs., married, a journalist, was admitted suffering from acute depression with suicidal tendency. He was restless and fidgety, and had no self-control. He was irritable, and showed frequent ebullitions of temper. He was sallow, wretched, and emaciated on admission, and muscularly much impaired. His pulse, 88, was easily compressible, eyes blue, pupils reacted to both light and accommodation, he was — 8 myopic, but the fundus was normal. His knee-jerks were absent, teeth very defective, urine 1015, acid, no albumen.

His previous history was that at twenty-five years of age he edited a paper. He drank to excess, and took morphia for three years before admission. The habit commenced after his mother's death, which is stated to have occurred through morphia, taken upon medical advice. The same doctor who communicated the habit to his mother communicated it also to him. He found great relief to attacks of asthma from

morphia. His conduct became erratic and uncontrollable, he suffered from insomnia, neglected his business, and left his wife at home. He had, on three occasions, desired to be rid of the habit, and voluntarily entered a "retreat," but each time he relapsed. Before admission he was in the habit of taking twenty grains of morphia daily, and on his admission two hypodermic needles were extracted from under the skin in right arm and the left leg. He craved intensely for morphia, and stated he was ready to have his hand cut off, or would thrust it into a furnace, if only he could receive one injection of morphia. His father was intemperate from alcohol, and afterwards became insane; his mother was phthisical.

Two weeks after admission he began to improve mentally and physically. In two months he was brighter, eager for outdoor occupation, and went out on the farm. Three months after admission he was temporarily laid up with a slight attack of asthma, but he was quite cheerful, and had no wish for morphia. After four months he was discharged recovered.

Two and a half years later he was readmitted in a dirty, neglected, miserable state; he was often excited and noisy, refusing all food, which had to be given to him forcibly; he was exceedingly restless, sleepless, and in severe distress. He had lived apart from his wife again before readmission, and he had threatened suicide. He was drawn, haggard, thin, and sallow. He could only answer questions after some time, and by using a strong effort. He craved for morphia, to relieve "the torments of hell" which he suffered. His body presented numerous small pigmented scars, from the use of the syringe; his forearms and thighs were also in the same state. He stated he had injected fifty grains of morphia daily under his skin. Soon after admission he suffered severely from diarrhœa and vomiting. Chloral and bromides were given for sleeplessness, and he was fed freely. No morphia was allowed.

Three weeks after admission he began to improve, and in six weeks he was useful about the ward. He had occasional but slight attacks of asthma, which yielded to ordinary treatment. In three months his improvement was maintained, he had gained much weight (9 st. 8 lbs.), and in four months he was discharged recovered.

After his recovery he wrote that he was deeply grateful for the extreme kindness and considerate attention he had received. Referring to his past use of the drug, he wrote that it was unnecessary for him to enlarge upon the futility of his efforts to break with it, as the man to perform such a deed was yet to be born.

CASE 2.—E. C. B—, æt. 43, married, a coachman, was admitted suffering from hypochondriacal delusions in regard to his health. He was suicidal. He thought he was being mercurially poisoned, and had hallucinations of taste and smell, and was "fast dying." The bodily condition on admission was greatly impaired. He was a brown-haired, blue-eyed man, with unequal pupils, right larger than left, the sight of right eye impaired, and there was no reaction to light. His teeth were decayed. His pulse was 80 and regular. He looked ill and dyspeptic, his appetite was bad, he complained of "heartburn," and his bowels

were irregular. The skin of both arms and abdomen was much scarred from hypodermic injection of morphia, which was first given to him by his doctor for the relief of pain, and he had practised this for twelve months before admission; he had been very sleepless and ill most of this time. His family had a history of "fits" and paralysis, and he had a sister who was alcoholic. For some time after admission he suffered great discomfort and distress, owing to very severe attacks of gastro-enteritis, which threatened at one time to prove serious. He complained much of various aches and pains, but no morphia was allowed to him. Bicarbonate of potassium grs. xx, with tincture of hyoscyamus ℥xij, gave him much relief, and this was followed by tincture of nux vomica ℥v, and Spt. Ammon. Co. ℥xv.

He remained very melancholy for three months, with much depression when the gastric attacks occurred; after this time he began to mend gradually for four months, then he was sent out on a month's trial, and afterwards discharged recovered.

CASE 3.—A. E—, æt. 43, married, a pianoforte maker, height 5 ft. 6 in., weight 8 st. 7 lbs. Admitted suffering from depression with suicidal tendencies, had aural and visual hallucinations, which confused and irritated him; was self-neglectful in habits. He felt he had no energy nor desire to work, and with the utmost mental effort he could not work; he felt overpowered by depression, and two months before admission lost his occupation and the means to buy the drug, in consequence of which he lost heart, became very depressed, and wandered about half dead. He could not sleep, became very nervous, irritable, and suffered from a most intense sinking and craving sensation. His pulse was 120, and the heart-sounds were accentuated. Pupils were equal, and both reacted to light and accommodation. His tongue was furred, his bowels constipated, and his teeth were bad, many being missing. Urine 1020, acid, no albumen. Four years before admission he commenced taking chlorodyne for toothache; this he found too expensive, and he changed to laudanum, in small doses at first, until these increased to 4 oz.

He had a sister insane, and confined in an asylum for seven years. All opium was disallowed, but he was freely nourished; quinine grs. iij and tincture of gelseminum were given for the neuralgia, and in two to three weeks after admission mental improvement began; in one month he stated he felt a new man, and was very grateful for his cure. In two months his improvement continued, he was sent out on trial, and after three months' residence was discharged recovered.

CASE 4.—J. H. R—, æt. 33, single, a medical man, height 5 ft. 9½ in., weight 10 st. 7 lbs., was admitted in a most violent, impulsive, inattentive, and incoherent condition. It took five men to take him to his ward. He dashed to break windows, and had to be kept in a padded room. He was not an epileptic, and never had fits. His certificate stated he had visual illusions, he had glimpses of the "happy land." He was noisy, excited, and destructive, voices urged him to fight, etc. He had dark brown hair, hazel-brown eyes, his reflexes were increased, and he was of fair muscular development. His pulse was

96, tension normal, his tongue furred and unsteady, and his bowels constipated.

His previous history, from his mother, recorded that he had slept badly and had taken morphia to relieve headache. He had been until recently, and for some period, a patient in Bethlem Hospital, and his illness had been coming on for thirteen months. Dr. Stoddart kindly forwarded me the history that, whilst in the reception room, waiting for admission, he swallowed a packet of morphia, and not knowing how much was contained in it, the stomach was at once washed out. Thirty grains more were found upon him, and seventeen more packets of powder, each labelled "Two drachms." The patient said he used only to take four grains at a time, and probably his statement was absolutely and deliberately untrue. Whilst at Bethlem his morphia was suddenly and completely discontinued, but alternative sedatives, such as chloral, sulphonal, and hyoscine, were administered, the last, however, having to be discontinued, as it excited him.

Three months after admission he had a seizure, but there was no localised paralysis. He rapidly became demented, could not understand anything, and became exceedingly feeble. After six weeks he had another seizure and died. Post-mortem examination revealed syphilitic gummata in the brain.

CASE 5.—Esther H—, æt. 56, married, a nurse, was admitted with grey hair, hazel eyes, pupils irregular but equal, reacting to both light and accommodation. Her knee reflexes were somewhat increased; her grip was fair, but she was poorly nourished. Mentally she was melancholy and suicidal on admission, explicitly desirous of ending her life, and to "sleep it away." She was self-accusing, and imagined she had committed a great crime. She had the idea she would be kept, for her wickedness, to end her life in the asylum, and she was always reading the Bible.

Her previous history records she was a nurse in a public asylum for the insane, where she served twenty years, and obtained a pension. She is stated to have slept badly, and to have drunk morphia for it for many years. She was allowed chloral and bromide as night sedatives, but no morphia, for which she generally sighed and begged and craved.

Two weeks after admission she began to improve, and in three months was brighter and able to help in the ward. After seven months she was discharged recovered.

Eight months afterwards she had relapsed, was acutely depressed, self-accusing, and actively suicidal. There was, however, no history of morphia taking in connection with this mental relapse. She remained a patient in the asylum for six years, having become chronically insane, and she died of pneumonia with senile phthisis, aged sixty-three. There was marked brain atrophy upon post-mortem examination.

CASE 6.—Mary E. K—, æt. 47, married, stated she used to be a nurse; admitted in a restless, incoherent, suspicious mental condition, having delusions that the police had organised a conspiracy against her, and also having sexual delusions. On admission she presented many of the symptoms of the climacteric. She had had irregular floodings for

the past six years, she was subject to bad headaches, and talked freely of persons with improper intentions being in league with the police against her. She was suspicious, had aural hallucinations, and believed people accused her of immorality. She had equal pupils, both reacting normally, but the knee-jerks were absent: her teeth were bad. She was intemperate, but not a heavy drinker. She had taken morphia, which began in chlorodyne.

In two weeks she began to improve, in four weeks she was brighter, intelligent, and useful, taking an interest in her surroundings, and in two months she was discharged recovered.

Three months later she was readmitted with a furred, tremulous tongue. She was much excited and persecuted. She was very deficient in self-control, being alternately sullen and passionate. She threatened violence if contradicted or thwarted, and she talked ramblingly and excitedly of vengeance, property, and money. It could not be ascertained that she had again taken morphia, but she had yielded to alcoholic intemperance. In two weeks she was more stable, in four weeks she had lost all her delusions, and was sent out on trial, and discharged recovered two months after readmission.

CASE 7.—Margaret McF—, æt. 30, single, a journalist, of American nationality, with black hair, dark brown eyes, height 5 ft. 6½ in., weight 9 st. 10 lbs., and of rather prepossessing appearance and striking manner, was brought into the asylum, having been found wandering by the police. She was wretchedly clad in a *quasi*-respectable way, and was evidently in want.

She was suffering from egotistical plots, suspicious of mysterious persecution by the police, talking and writing freely, but communicating no information about herself, her previous history, or habits in her voluminous correspondence. Her mental condition was that of delusional insanity. She admitted taking morphia for sleeplessness, but in what quantity, or how, she refused to state. She was constantly muttering to herself, and would readily speak about conspiracies, but little real facts could be elicited, any questions, leading or indirect, being met with reserve and parry.

She was under care for nine months with but little change. She was then transferred to another London asylum, from whence she was shortly discharged recovered.

CASE 8.—Agnes R—, æt. 43, married, described as a journalist, also a lady dentist. She was admitted in a depressed, confused, exceedingly nervous, sensitive, and fidgety condition, with suicidal tendencies. She was very restless and egotistical, talking "fast and big." She complained much of lumbar pain and occipital headache, for which she had taken morphia. Her pulse was 84, soft and regular. Here eyes were grey, her pupils irregular, the right reacting less freely to light than the left.

She had been advised in the first instance to try opium cigarettes, but the result was unsatisfactory, nausea and headache resulting. She subsequently took morphia in the form of draughts, and found that it relieved her insomnia. The quantity was afterwards increased to 4 grs. for a dose,

after which she states she enjoyed sleep full of delightful dreams, compared to which fairy-land was the merest prose. She increased the dose to 6 grs., and often took this in champagne, the result being, to use her own words (in a letter written after mental convalescence), that she saw things exactly as she wanted to.

She had had a previous attack of insanity, and was treated in a private asylum.

No morphia or opium was allowed, but she had Ammon. Bromid. in half-drachm doses, together with Tinct. Strophanthi ℥x for cardiac failure, for which she had complained, and which greatly relieved her.

In three weeks she had greatly improved, and in three months she was sent out on trial, being discharged recovered after four months' residence.

Nearly seven years after her discharge she was readmitted again in a melancholy mental condition. She had some exaltation, was emotional and restless, at times excited, and had delusions of electricity. She had an idea she could write plays for production by the leading actors, and spent much of her time plotting and writing these. On her readmission there was some suspicion of general paresis; her pupils were equal, but they reacted slowly and sluggishly to light. After one year she was sent out on trial, but was dull and depressed, and had to return. After two years she remains in the asylum in much the same state.

(1) Prepared for the General Meeting of the Medico-Psychological Association held in London, May 21st, 1902.—(2) H. C. Drury, *Dublin Journal of Medical Science*, May, 1899.—(3) *Medical Temperance Review*, October, 1900, stated that from 6 to 10 per cent. of all medical men suffered from opium and allied drug habits. It is hoped, however, that this is an exaggerated view of the vice.

The Evolution of Delusions in some Cases of Melancholia.

By LIONEL WEATHERLY, M.D.

DO not expect anything new from this paper. Do not imagine that I am going to bring forward any startling theory concerning the origin of delusion, or make any attempt to unravel the mysteries of the cerebral pathology of any one class of delusion.

I am simply about to give you a short history of some of my experiences of the delusions of many melancholiacs, and draw from this experience the ever-needed lesson of the necessity for early treatment if a quick recovery is to be hoped for in these cases.