On the cure of the morphia habit / by Oscar Jennings.

The Morphia Habit

OSCAR JENNINGS

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ON THE

CURE OF THE MORPHIA HABIT

BY

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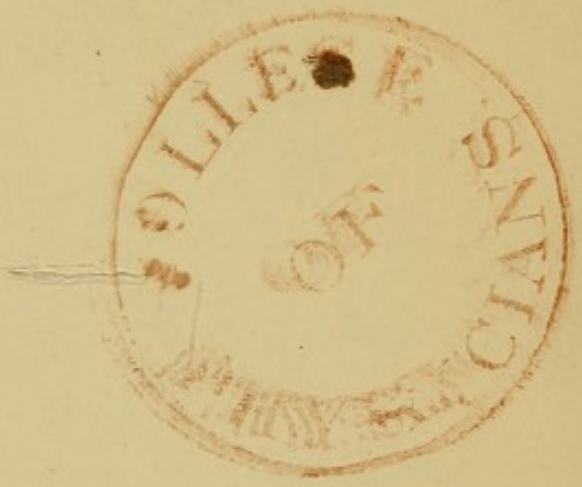

LONDON
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KING WILLIAM STREET, STRAND
1890

TO THE

KINDEST OF MOTHERS

THIS LITTLE WORK

IS

Affectionately Dedicated

BY

THE WRITER.

PREFACE.

My chief object in writing the following pages has been to compile a guide for the use of my own patients: so as to give them an idea of what is required to escape from the thraldom of morphia.

Those who have never before attempted, and failed, to wean themselves from the fatal stimulant, will perhaps think the conditions laid down tiresomely and disagreeably exacting, clashing and interfering, as they do, with all their habits and impulses. There are some, however, who have hitherto been unsuccessful only for want of proper direction, but whose constant hope by day, and dream by night, is to recover their liberty. They

have been treating themselves unwisely, but under the impression that they were doing all they could. These will be only too glad to comply with the conditions, and consider recovery cheap at the cost of such compliance.

Those who might be disposed to consider their cases as utterly beyond hope may be told that instances of recovery are upon record after an addiction of twenty years, and even when the limbs have been distended to twice their size with dropsical fluid. I have on the other hand seen recovery in a case of twelve years' standing, where the body was covered with wounds resulting from abscesses, and where the patient was in so extreme a degree of emaciation that his friends never expected to see him leave the establishment where he went to be treated.

But if we are prepared to preach hope to

everyone addicted to morphine who is not compelled to the practice by some painful and incurable disease, the conviction of the possibility of ultimate recovery should not encourage those who are as yet but on the threshold to push any further into this realm of moral darkness. Although it is quite true that in some cases, and for a short period of time, the absorption of a certain quantity of morphia is followed by a vital and intellectual exuberance, the daily euphoria is succeeded, even at the beginning, by a period of depression, and often of irritability, which affords an indication as to the kind of price that will have to be paid for the indulgence later. And again, although some *habitués* may go for long years without being apparently any the worse for the habit, in other cases the condition known as *Morphinism* quickly supervenes, and the

patient soon breaks down, physically, mentally, or morally.

Those who are taking morphia in ignorance of its danger, or under the impression that they are justified by some loose medical prescription in so doing, should remember that the habit is a most insidious one, and if they want to know exactly how they stand, they have only to attempt to do without it. Should any discomfort be experienced from its cessation, the practice must be given up at once, for if there is not already addiction, it is dangerously threatening.

I have restricted myself in the following pages to the question of treatment, and have therefore been obliged to leave many interesting points, more particularly that of its social consequences, untouched. Much as I should have liked to discuss this topic, I could

not do so without exceeding my intended limits. Novel, moreover, and even startling as my experience would appear to those who are practically unacquainted with the subject, it would be impossible to allude to certain facts and episodes—without referring to persons too well known in society—for such allusions, however closely veiled, not to be more or less transparent, and to a certain degree, therefore, a violation of professional secrecy.

I think it was Montaigne who, notwithstanding his general disbelief in medicine, advised the sick to bestow their confidence upon those who have suffered in the same way as themselves. In accordance with this idea then, I have only to add, in recommendation of the plan set forth in this little volume: *Experto crede.*

PARIS, *June, 1890.*

ON THE

CURE OF THE MORPHIA HABIT.

CHAPTER I.

SOME years since, I contributed a paper to the *Lancet*,[1] on the relief of the morphia craving by sparteine and trinitrine, demonstrating that the heart failure, which is one of the chief factors of the craving, can be practically relieved by these agents in the same way as it is by the hypodermic injection of morphia.

The demonstration did not repose upon the statements of patients, which, always biassed in questions of the kind, are more than usually fallacious when they emanate from a morphia *habitué*, and concern his treatment. It was the result of a long and careful study of the pulse, by

[1] "On the relief of the morphia craving by sparteine and nitroglycerine."—The *Lancet*, 27th June, 1887.

means of the sphygmograph, undertaken conjointly with my old teacher, Prof. Ball, and which had already formed the subject of several communications to different scientific societies.[1]

We had shown that the pulse of a morphia *habitué* in a state of privation presents a peculiar plateau, which is well seen in the following tracing, caused by a want of cardiac impulsion, together

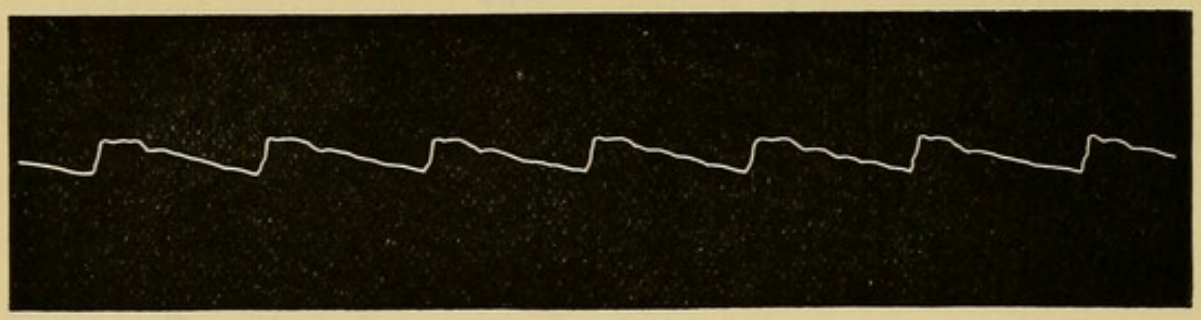

Fig. 1.—Pulse of morphia *habitué* in a state of abstinence.

with a resistance to the passage of the blood in the vessels. A hypodermic injection of morphia given at this moment re-establishes the normal state of the circulation, as is shown in the second tracing,

[1] "Des Modifications du Pouls dans la Morphinomanie," par MM. B. Ball et O. Jennings.—*Comptes rendus de l'Académie des Sciences*, 1887.

"Considérations sur le Traitement de la Morphinomanie," par MM. B. Ball et O. Jennings.—*Bulletin de l'Académie de Médicine*, 1887.

taken from the same patient as the first, at the interval of a few minutes:

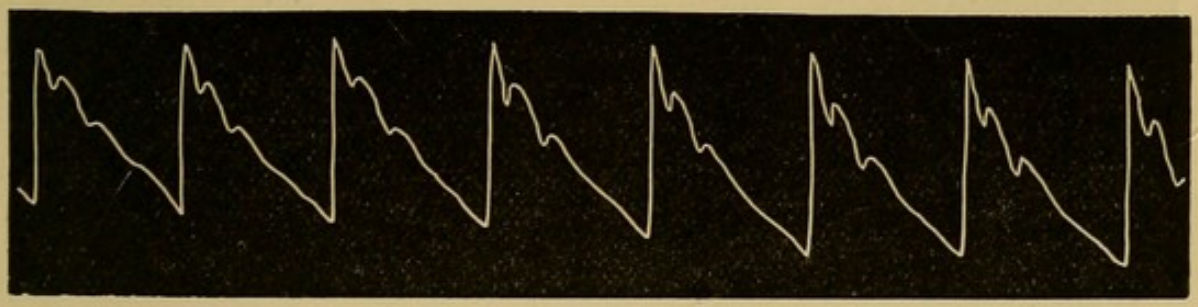

Fig. 2.—Pulse restored by morphia.

The study of these tracings suggested the use of cardiac tonics and stimulants as substitutes for the morphia during the progressive reduction, and we tried different agents of the kind, deciding finally upon sparteine, on account of the facilities it offers for hypodermic injection, and consequently of producing a rapid and evident effect; upon trinitrine, because of its congestive effect upon the head, and its calorific influence upon the body generally. The following tracings show the restoration of the pulse by these medicines:

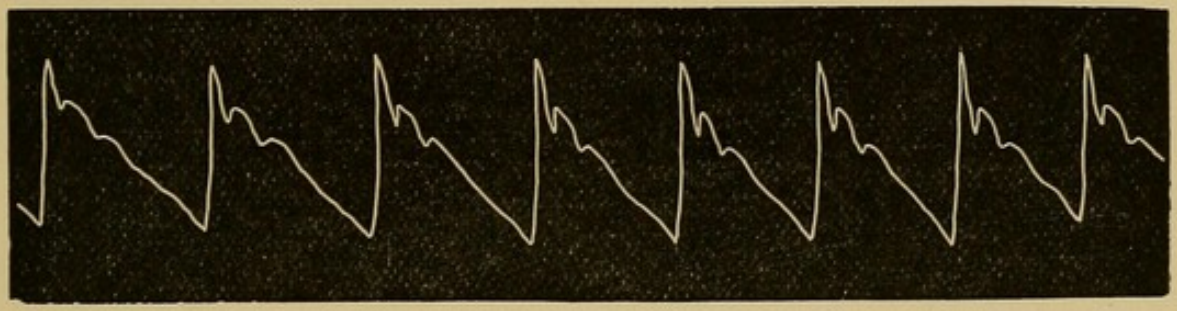

Fig. 3.—Pulse restored by sparteine.

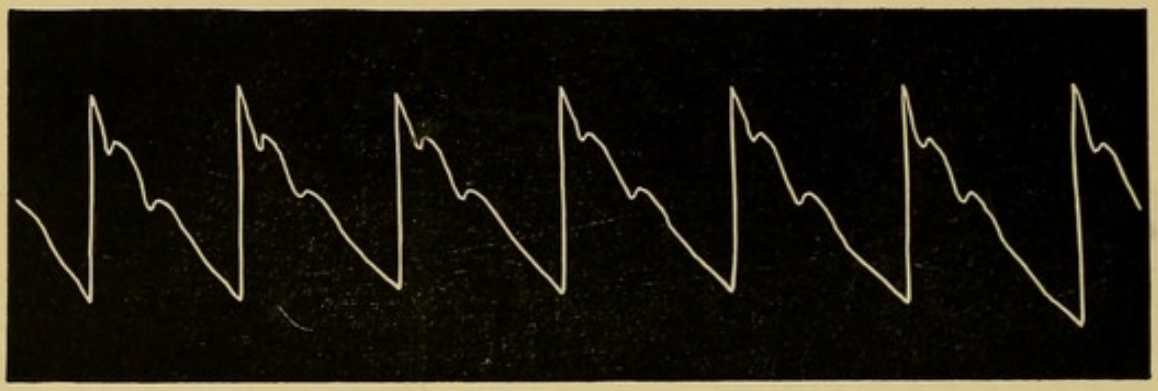

Fig. 4.—Pulse restored by trinitrine.

These observations have since been endorsed by a number of physicians, to whose testimony I shall presently refer, and I am not acquainted with any published opinions to the contrary. One American specialist only, whose competence in the matter is unquestionable, Dr. Mattison of Brooklyn, assured me verbally that he had been totally disappointed with the effect of the remedies.

Whether he has since modified his opinion or not, I do not know, but I found that the difference of opinion was caused by a misapprehension of what I had meant. Unacquainted with French, Dr. Mattison had only read my paper in the *Lancet*, which was but the sequel to a much fuller essay on the subject, previously contributed to the *Encéphale*,[1] and

[1] "Sur un nouveau Mode de Traitement de la Morphinomanie." —*Encéphale*, 1887.

reprinted afterwards with additions. He had understood that I had intended to propose sparteine and trinitrine as substitutes for morphia, and he had attempted to stop the morphia suddenly, and give them in its place. If he had read my first paper, he would have understood that my plan of treatment consists of a gradual tapering-down of the morphia hypodermically, and the administration, after a certain point has been reached, of increasing compensatory doses by the mouth or rectum. It is only at the end of the treatment that the use of these medicines will take the place of morphia. Hence the plan adopted by him of cutting off the morphia suddenly, and replacing it by sparteine and trinitrine is entirely opposed to what I advocate. Sparteine and trinitrine are not *substitutes* for morphia, and will not take its place as long as a vital necessity for it remains, but when the weaning is almost complete they relieve the morbid craving, which is the only remaining obstacle to success, to a sufficient degree to enable the patient earnestly desirous of giving up the habit to carry the treatment to a successful issue.

Notwithstanding the relief afforded by these medicines, I may say at once that the majority of morphia *habitués* who apply for treatment do not by their aid renounce the use of the drug, for the simple reason that they are not in earnest, but this is no proof whatever that they might not have done so, had they so willed. No dependence whatever can be placed upon the statements of morphia patients, and the affirmation that a substitute for morphia procures them no relief is most often a mere excuse for returning to the old drug. I am now in possession of sufficient evidence of the efficacy of my plan, and of sufficient proofs, and even confessions, that it has been no imperious craving, but a mere morbid impulse that has prompted those patients who have failed under my care to relapse, that I do not hesitate to affirm that the morphia habit may be given up without positive suffering, provided the patient will allow himself to be protected against temptation; and when he gives himself up to competent guidance, the amount of restlessness and discomfort is reduced to that experienced upon the cessation of any other stimulant.

For all this, the cure is not an easy one, for it requires on the part of the wayward patient the unswerving determination to submit to guidance in a host of little details, and on the part of the medical attendant the greatest tact and sympathy, as well as special knowledge.

Although the plan of treatment I now follow is identical in principle with that which I described in the *Lancet*, three years' further experience of morphia cases has caused me to modify my practice in different particulars. But before developing my present method, it will be as well to bring forward some evidence in favour of the original principle of treatment, as first set forth.

Two important works on Morphinomania have appeared since my last publication. I might have said three, and included Erlenmeyer's *Die Morphiumsucht*, but it is evident that Erlenmeyer had not read my most recent paper when preparing his work. In his bibliographical index, a short note of mine of no importance, written in 1878, is carefully quoted, whereas the series of papers which preceded the publication of his

volume by only a year evidently came too late to be taken into consideration.

The two works to which I refer are (1) the second edition of Professor's Ball's *Leçons sur la Morphinomanie*, a masterpiece of clinical teaching; (2) Dr. G. Pichon's important *Traité du Morphinisme*,[1] the most voluminous work on the subject in the French language.

Prof. Ball says nothing about trinitrine, but the treatment advocated in his book, and illustrated by cases, is that of the gradual substitution, under restraint, of hypodermic injections of sparteine for those of morphine. Neither the treatment, nor the conditions under which it is carried out, coincide precisely with my programme, but it is essential to remember that heart tonics are the chief therapeutic treatment advocated.

Dr. Pichon expresses himself as follows: "The pulse of the morphia *habitué* does not afford to the finger any important indication . . . but there is a registering apparatus, the sphygmograph, which compensates for this insufficiency as regards

[1] Dr. G. Pichon, *Du Morphinisme*. Paris, O. Doin, 1890.

delicacy of touch, and which analyses the slightest arterial anomalies. It is in this manner that the experiments to which we refer, and which we had the good fortune of witnessing, were made. . . . These researches were made by Dr. O. Jennings, attached to the laboratory of Prof. Ball, upon the numerous morphia *habitués* who were attending the clinique at the time. . . . Before arriving at a definite result, Dr. Jennings took a series of tracings from patients in different stages of morphinism—state of want, state of satisfaction, intermediary condition, normal condition." Dr. Pichon then gives the conclusions of the communication presented by Prof. Ball and myself at the Academy of Medicine, and adds: "*Nous avons contrôlé à plusieurs reprises ces savantes recherches. Nous avons pris un très grand nombre de tracés, et nous sommes arrivé aux mêmes résultats.*" He then points out that the sphygmographic examination of the pulse is, as I have always taught, the best way of telling whether a patient is honest or not in carrying out the prescribed reduction. If the plateau is not obtained, when the patient ought to

be in a state of want, there need be no hesitation —he takes morphia secretly. "This discovery has been the pivot," he continues, "of the physiological treatment, which appears to have given" (as we shall see at the end of the chapter) "very good results." "After numerous trials, Dr. O. Jennings found that the sphygmographic tracings, after the use of sparteine and trinitrine, gave the same results as an injection of morphine. The problem was solved physiologically and clinically. It (the treatment) often gave before us excellent results. . . . Most interesting practical consequences result from these physiological discoveries, both as regards diagnosis and treatment." Further on, after passing in review the different treatments that have been advocated, Dr. Pichon concludes: "We should prefer the physiological treatment of Jennings, based upon the action of sparteine and trinitrine. . . . We have seen that these two therapeutic agents replace absolutely the circulatory action of the morphinic euphoria, and overcome the state of want by causing the disappearance of the plateau." Details of cases

treated with success by sparteine complete the chapter.

The evidence in favour of trinitrine is no less conclusive. Dr. Mitchell, of Philadelphia, writes as follows: "I may allow myself, having this opportunity of writing to you, to say that your essay, *De la Morphinomanie*, has been on several occasions most useful to me, and the treatment by the use of trinitrine assisted me very greatly in two or three cases of morphinism that I have lately had the misfortune to see".

A French physician, whose name I am not at liberty to mention, for obvious reasons, writes to admit that he has modified his opinion, which was at first unfavourable in consequence of his having swallowed the tablets instead of slowly sucking them. "Scientific probity," says the writer, "being the first quality of the experimenter, allow me to inform you that the trial of the trinitrine tablets, according to the *modus faciendi* advised by you yesterday, has indeed been followed by the effects you anticipated—a feeling of warmth, most sensible on the face, but extending

through the whole of the body. It is true, quite true!"

Although I look as a rule with considerable suspicion upon the enthusiasms of morphia patients, I cannot refrain from quoting one letter out of the many documents of the kind that I have received about trinitrine:

"Although I have passed a hard day," says the writer, a young lady, "I have adhered strictly to your orders. I went out this morning, and when I came home had an awful *crise*, but determined not to touch the morphia until four P.M. I thought of the trinitrine which I took (three tabloids), and so immense was the relief afforded, that I feel there is nothing so useful as a substitute for morphia. Although I have not yet taken my second dose to-day, I am so relieved that I am able to write this letter to you, and to read and amuse myself with comparative comfort. I tried the tabloids, I must admit without much faith, and was amazed at their effect. I think I shall do well until over Tuesday, when I will send or call on you, but I feel that I must tell you at once the splendid effect of

the trinitrine." When this letter was written the patient was advancing rapidly towards *cachexia*, taking morphia without measure, in the intervals of her fits of remorse, when she would place herself under medical direction. I estimate that her daily ration of morphia was between six and eight grains. At her own suggestion a double solution was made containing morphia and sparteine, and this was commenced at a time when she had managed to decrease to two grains. Since then she has kept at about that amount, and now presents the appearance of perfect health.

I have said that in writing these pages it is not my intention to offer a systematic treatise upon the morphia habit, its causes and consequences, but simply to make known in all its details a plan of treatment that I have found successful as often as the patients have placed themselves unreservedly in my hands, and observed loyally all the necessary conditions. Although I have some hope that this little pamphlet may be of service to my fellow practitioners, its primary purpose is to give my own

patients a full explanation of the method upon which we are working, and a complete programme of what I take to be conditions of success.

A certain number of morphia *habitués* are argumentative, and fond of excusing their frequent infractions of obedience by declaring that something was said which had authorised them in so doing. Being, moreover, of bad faith themselves, the verbal utterances and warnings of their medical advisers are accepted by them as specious and plausible sophisms, which they may not be able to combat, but to which they do not feel obliged to give implicit credit. By writing and printing this kind of Code, the patients to whom I allude will see that what I tell them is not invented on the spur of the moment to meet the exigencies of their particular cases, but that all my recommendations are part and parcel of a regular plan of treatment.

It is no part of my task to enter into the symptoms of chronic morphia poisoning; but, as my treatment is based upon a certain conception of the nature of the morphia craving, it

will be as well to give at once my theory of its mechanism.

I suppose that the want of special stimulation, felt as the morphia craving-yearning, reduces itself physiologically to the requirement of a peculiar mode of molecular motion. The condition of ordinary *ennui* which has been described as "a sense of tedium in inactivity," having its source in a want of mental occupation, or, in other words, the want of molecular change in certain cerebral centres, is intensified into the distress that results from "the representation of a future in which such cravings will never be satisfied". This "dissatisfaction," by inaction of the nervous system, is associated with the ento-peripheral craving resulting from the diminished impulse to those organs, and more especially the heart, which subserve nerve activity. Each recurrence of the sensation is probably heightened by auto-suggestion of the means of satisfaction, and by the abeyance of the controlling power of the will over the morbid automatism of the lower centres, which are polarised, as it were, into fixed yearning for the

accustomed stimulant. From this tendency to an accustomed molecular motion on the one hand, and the enforced inaction from want of the necessary stimulant on the other, arises a condition of cellular unrest and fatigue, which has its exact counterpart in the external habitus of the patient.

The feeling of intimate restlessness is accompanied by an impossibility for the individual to remain at repose; but if he seek shelter by walking about, he is soon forced by fatigue to sit or lie down on a couch or easy chair, when no sooner has a suitable position been discovered, than the renewed restlessness compels him to be up and moving.

It is this imperious tendency to movement which shows itself also in involuntary startings, etc., that furnishes one of the chief indications of treatment. Energy resulting from the accustomed pharmacodynamic stimulus is required to give full satisfaction to the morphia *habitué*, but motion in all its modes is a sedative to the craving, providing always that it be not carried to fatigue.

Starting from this point, I treated my first case

by the application of different physical stimulations, such as faradisation, massage, dry friction, heat, galvanism, etc., towards the end of the progressive reduction, and I found that I was able to effect sufficient breaks in the monotony of the yearning to enable the patient to wait for his decreasing doses with patience. What is generally so profoundly discouraging to a morphia patient is the certainty that once the craving is felt, it will go on with increasing distress until the morphia is administered. In the case I allude to, as the doses became less frequent and less considerable, the periods of relative comfort became, as is always the case, shorter and shorter, and a strong desire for the morphia was felt hours before the time appointed for the injection. Although other medicines had been taken in the course of the reduction, at the time the physical stimulation plan was tried, the only drugs used were bromide, valerianate of ammonia, and bicarbonate of soda. The result of the experiment was entirely successful. The patient who had taken morphia for five years, and cocaine for a year and a half, latterly

in doses of over twenty grains a day of each, and who had failed, moreover, previously on two occasions on the very brink of success, managed to come triumphantly through the ordeal. Besides the different stimulations and medicines mentioned, he also made great use of the hammock, in which he would lie exposing his limbs for hours together to the broiling sun.

It was upon this theory of the substitution of another stimulus to the brain cells for the accustomed one that I was led to use trinitrine, and afterwards nitrite of amyl. Although these agents have a powerful action on the heart, it was not on this account that I selected them, and, indeed, if a medicine could be found exercising a similar action upon the blood-vessels, without stimulating the heart, it would be preferable. What the heart requires is a tonic rather than a stimulant, the action of which is always followed by a corresponding depression.

The second indication of treatment is to be found in the state of the heart which participates in the general vital stoppage, giving rise, by its

sluggish action, to some of the most distressing symptoms. The sphygmographic tracings, given above, make this very clear; and, although the plateau of morphia abstinence is not especial to this condition, being met with in other phychoses such as melancholia, neurasthenia, hysteria, and dipsomania; it is in a morphia case, as, indeed in the others mentioned, proof positive of the necessity of a heart tonic. Some physicians, more particularly those who have never used it, are sceptical as to the value of the sphygmograph; but I am sure that it has often afforded me indications for treatment which would otherwise have escaped me. In dipsomania, the unhappy subjects are too often supposed to resort to drink, in consequence of a mere morbid impulse, but if the sphygmograph were used, it would often be found that the impulse has a physical basis in the shape of heart failure, and that the "sinking" feeling pleaded in extenuation is not a pretext only.

The following tracing, which affords a good example of this condition, was taken from a lady whose menstrual period was generally associated

with a fit of drinking. She was brought to me, after the failure of numerous treatments, in the hope that I would counsel her confinement in a "home".

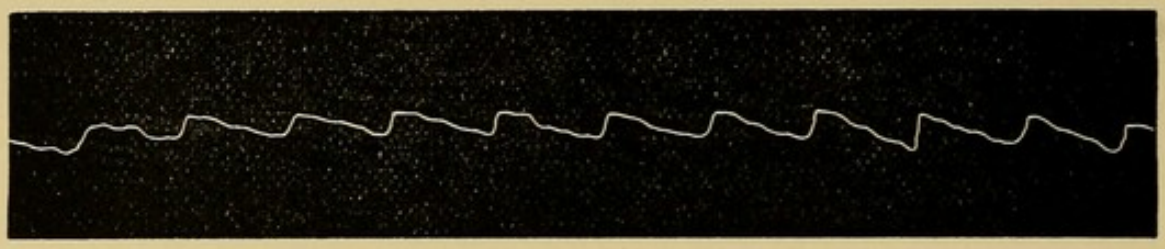

Fig. 5.—Heart weakness causing craving for alcohol.

The tracing suggested the trial of a heart tonic, and I advised a mixture of coca, hydrastis canadensis, and digitalis, and, of course, total abstinence. Eight months have elapsed ; and, although on two occasions (for an ulcerated sore throat, and for bronchitis, following influenza) port wine was given, and the bottle allowed experimentally to remain at her discretion, there has been no relapse. Such a result would be satisfactory in ordinary alcoholism ; in dipsomania, it is remarkable.

Another lady, whose complaint has been variously designated under the names of hysteria, neurasthenia, hypochondriasis, monomania with fixed idea, and whose chief symptom consists of feeling and thinking herself ill, and, in fact, of being ill, shows a similar tracing.

Here, however, there is no malaise about the heart, but one can quite understand how an insufficient circulation of blood may give rise to a

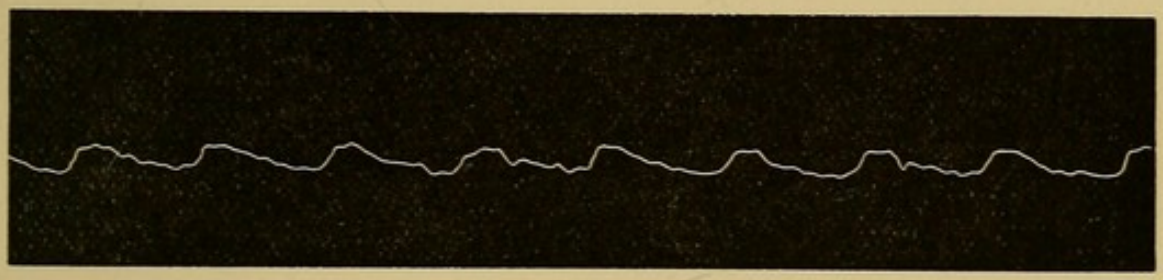

Fig. 6.—Heart weakness associated with morbid sensations.

constant "dissatisfaction of the nervous centres," and hence to a craving for sympathy and relief, too readily put down to morbid fancy.

In a case of morphia habit, the plateau affords, then, not only the best evidence of suffering, but it also indicates the means of relief. The necessity of promoting a healthy function of all the other organs, although less evident, is scarcely less important. Just as in disease of the liver, or kidneys, secondary difficulties may arise in the lungs or heart, so the overtaxing of the digestive organs may upset the restored balance, and render the treatment ineffective. Hence the necessity for the *habitué* to allow himself to be directed, even in the most trifling details.

To sum up, the want of morphia makes itself *felt* chiefly in two directions—(1) a condition of restlessness, and sometimes of pain, depending upon the want of an artificial stimulus to the brain cells, which has become, as it were, so indispensable to function that it almost represents vital force; (2) by a failure of the heart's action and a sluggishness of the circulation, caused by the want of the natural nervous influx to the heart, and also by the lessening of the *vis a fronte* through the suspension of the chemico-vital processes in the tissues. Given at the proper time, trinitrine and nitrite of amyl will relieve the one, and sparteine or any other suitable heart tonic will prevent the other to a sufficient extent to render any one of moderate firmness able to resist the craving. But for the cure of the morphia habit something more is necessary. It requires that for a sufficient space of time the patient be protected from the temptation which exists as long as he is not cured, of exceeding in morphia, not because there is any really painful craving for it, but on account of the irresistible impulse that prompts even the best intentioned to succumb to its

fascination. It requires that during a certain time he so order his life, that the decreasing doses of morphia suffice to prevent discomfort, an end that will not be attained if the patient commit any indiscretion in the shape of errors of diet or over fatigue, etc.

CHAPTER II.

BEFORE undertaking the cure of a morphia *habitué*, it stands to reason that we should first ascertain whether the attempt can be made without danger. Personally I do not think that the thing is feasible whenever the habit has been acquired for the relief of *angina pectoris*. All that can be done, and even this is very difficult, is to restrict in a prudent measure the daily ration. In 1882 I was consulted by a lady for *angina pectoris*, evidently of a purely functional type. I prescribed nitrite of amyl and it acted most satisfactorily, the attacks being invariably arrested by its use. She left Paris, and they entirely disappeared. In 1888 she was imprudent enough to resort to morphia during the prolonged illness of one of her children, in order to keep herself going at night, when she was fatigued with watching. At the end of eight months she confessed to me what she had been doing, and implored me to get her out of the trouble. Starting

from four grains a day, we went as fast as she could manage, and that the state of her heart, which had again become irritable, would allow. Sparteine and digitalis were of no avail, and nitrate of amyl had entirely lost its effect. The fluid extract of coca was useful for a time, but soon lost its action also. Striving to overcome the habit, for the sake of her husband and children, and neglecting several warnings, she was seized with a syncope whilst out shopping one day, which lasted two hours, and which, according to the physician who was called to attend her, was of a very grave character. As the attacks became more and more frequent, I proposed a consultation with another specialist, who advised a combination of iodide and bromide, and gave an unfavourable prognosis, as far as recovery from the morphia habit was concerned. The prescription turned out a failure but the prognosis was right, and the lady has since relapsed into the misuse of morphia.

A case is recorded in Prof. Ball's interesting lectures, in which the cessation of morphia was followed by death. Thanks to sparteine the habit

had been overcome without much difficulty (although under restraint) and the patient, supposed to be out of danger, had left off the heart tonic a few days previously. Curiously enough, I had myself taken some tracings of the pulse a few months before, and had been alarmed at the effect upon the circulation of a small dose of trinitrine. The amount given, two drops of a one per cent. solution, had lowered the tension to an extreme degree (see Fig. 7), and in relating the case (the

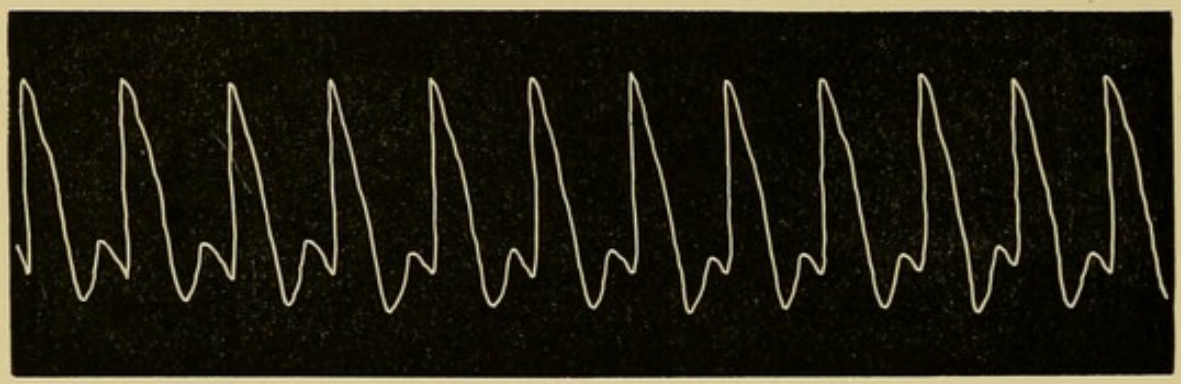

Fig. 7.—Effect of trinitrine in a case where death ultimately resulted from cardiac failure.

Lancet, June, 1887), I wrote: "The hyperdicrotism made me feel a little uneasy, although the patient, who had been in a state of restlessness and enervation, was quite comfortable, and became quite cheerful". Subsequent events showed that my uneasiness was not unfounded.

The following tracings are those of a woman who had been temporarily broken of the habit, thanks to sparteine, but under restraint. Six weeks after the cessation of the treatment, I took her pulse

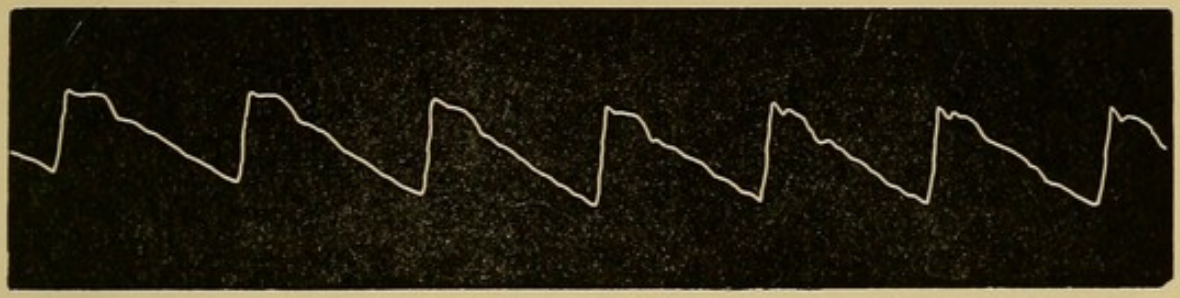

Fig. 8.—Pulse of a patient cured by restraint, indicating circulatory discomfort and the necessity of a heart tonic.

with a view to ascertain whether the habit had left any permanent injury of the vascular tonicity. The tracing indicated that the circulation was unsatisfactory, and the patient told me that she felt uncomfortable about the heart, and would certainly be obliged to resort to morphia when she recovered her liberty, unless she could brace herself up by sparteine. I suggested that she should try trinitrine instead, and placed successively four drops of the one per cent. solution on her tongue. Five minutes afterwards she felt much more composed, and the pulse showed an improvement. She

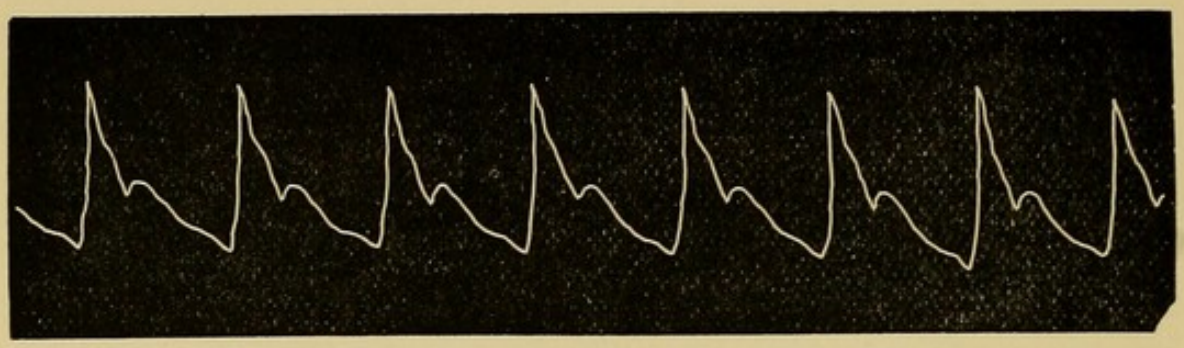

Fig. 9.—Preceding pulse restored by trinitrine—comparative comfort.

still maintained, however, that something more was needed to keep her away from morphia, so I injected two centigrammes of sparteine with the effect seen in the tracing, the patient expressing herself perfectly satisfied.

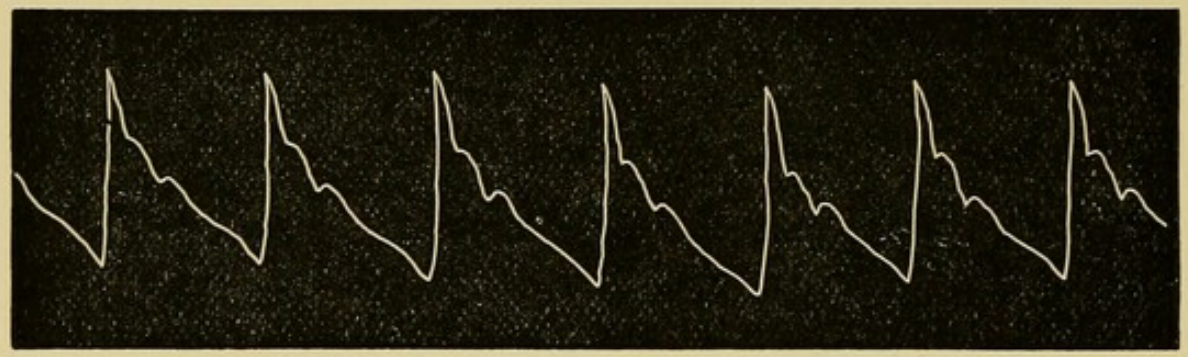

Fig. 10.—Pulse restored by sparteine—discomfort entirely overcome.

It would be equally unsafe to suppress morphia in a case of valvular disease, and it is scarcely worth while making an attempt in most incurable painful affections. I was consulted by a judge who, notwithstanding the short duration of the

habit (three years) and the moderate amount of morphia taken (three grains), was already in an advanced state of *cachexia*. In his own opinion he was suffering from rheumatism, but in reality his malady was *locomotor ataxy*. After decreasing a little he had such a terrible attack of pain that he was obliged to return to the original amount. He wrote to me to excuse his weakness, saying that he had not sufficient strength of mind to go on, but that he was ashamed to come and tell me so himself. As a matter of fact, however, he had only given way when his sufferings were past endurance, and it was certainly better to return to morphia than to commit suicide, as I have known a patient similarly situated to do.

Supposing, however, that the candidate for treatment presents no bar to recovery, the first condition of success is that he be earnestly and personally desirous of escaping from the thraldom.

I have very little confidence in those who have only yielded to the pressure of friends or parents. Not only do they lack the first condition, but they generally make a difficulty about the second, which

is to place themselves unreservedly in the hands of their medical attendants, with the understanding that they are to exact nothing and to do nothing during the course of the treatment that has not been prescribed or agreed upon. With one single exception, I have never seen a good result from treatments left in the patients' own hands.

This leads to the question of restraint. Most specialists, especially in Germany and France, are advocates of it, and for my own part I should not hesitate to recommend this measure in some exceptional cases. I should never do so, however, unless thoroughly convinced that the previous treatment had been directed by some one really competent in the matter. I have heard some otherwise sensible physicians declare that the morphia habit was mere perversity, and that the patient can throw away syringe and solution if he only choose to make a firm resolution; others are equally dogmatical in declaring it entirely incurable, and in maintaining that any time and trouble expended in this direction are entirely thrown away. It is scarcely necessary to say that I

should not take into account any previous treatment carried out under such auspices.

The chief reason against restraint, to my mind, is that our real aim is not so much the temporary suppression of the morphia, as the cure of the desire for it, and the best way of effecting this is by the re-education of the dormant will.

The patient should, however, I think, as a rule, remove himself from the medium in which he has been accustomed to play the tyrant, and submit with resignation to be rationed and supervised; but he should have the power of putting an end to his privation at any moment. I advise him to submit, not to restraint, but to restriction. He is to do what he will, but whilst under treatment he is to render an account of what he does.

Besides the reason given against asylums, there is another of greater cogency, which is that confinement seldom secures even the immediate end in view. A morphia *habitué* may, with proper guidance, give up his habit of his own free will, but so strange is his mental constitution, that after he has consented, or perhaps begged, to be placed

under restraint, he will, if his request is acceded to, at once endeavour to render restraint unavailing. He is an hysterical subject, whose proper feeling may be aroused and restored, but with whom coercion only develops the morbid symptoms in a higher degree. If he could be watched in an asylum, like a condemned prisoner suspected of wishing to commit suicide, no doubt the suppression might always be obtained; but even those who are constantly in contact with morphinists hesitate to insist upon a too rigorous surveillance with patients who voluntarily place themselves under treatment, and who can say very plausibly that they would not have been likely to give up their liberty had they not the strongest possible intention of getting well. For all that, I have seen only two patients cured in asylums, and they both relapsed within a few days of leaving the establishment, whilst I have had to do with a dozen deceivers at least, who are reported in the statistics of various places as having "left cured, but relapsed after a short time," whilst, as a matter of fact, they had supplies of morphia all the time.

In sanatoria and "homes," whether with restraint or not, there are, as a rule, too many people under treatment to allow of individual attention, and this association seldom brings about an emulation for good. A patient whose analysis of her own case is to be found in a former essay, says: "I cannot conclude these notes without declaring that, to unite all the chances of curing a morphia *habitué*, we ought as far as possible to separate him from those suffering in the same manner. I have learned at my own expense the wisdom of this measure." Such is also my opinion, for I have known several patients in special institutions tempted back into morphia by their perverted associates, just as they were on the brink of success, and this even in a model institution like Schöneberg.

I have dwelt at some length upon this question of surroundings, because the success of the treatment depends entirely upon making a good beginning. It is of no use to commence under unfavourable circumstances, in the belief that the beginning being comparatively easy, it will be

time enough to look about for a suitable place as soon as the reduction becomes irksome. To succeed, the necessary conditions must be observed from the very first, and no secondary considerations allowed to hinder them. If the patient's means do not allow of carrying out the programme, that is another thing, but no deviation from it should be tolerated for mere convenience, or for unnecessary economy. Two courses then remain open—treatment at home, and treatment in a special establishment. If treated in his own house, he must consent to remain a prisoner in it, going out in the company of a reliable person, and not receiving any letters or parcels that have not been opened in the presence of his attendants. A change of surroundings, however, is preferable, as morphia *habitués* are generally far more reasonable with strangers than with members of their own family, whom they tyrannise from force of habit. The difficulty is to find a suitable "home" where only a few patients of the kind are taken, and the fewer the better.

An excellent retreat for this purpose in Paris is

the Maison de Santé of the Frères St. Jean de Dieu, where most of my male patients have been treated. The house is open from 6 A.M. to 9 P.M., and every one is free to come and go; but I always exact a solemn promise that, until the treatment is ended or abandoned, the patient will not go outside the door. It is, of course, advantageous to be under medical supervision, but some of the Brothers here have had so much experience, that they know as well as most medical men how to conduct a treatment of the kind. Another place where they have their heart in their work is the Levick Home, and there also they are so thoroughly in earnest that very little medical intervention is required. The most inveterate case I ever met with (one of fourteen years' standing), got on capitally at this Home. The patient was on the high road to recovery, until presuming upon his excellent condition, he insisted upon relaxing the surveillance of which he was the object, in order to attend to several business matters of a worrying description. In consequence of this, he was immediately impelled to increase his dose of

morphia, and the time at his disposal being limited, he had not completely broken off the habit when he was obliged to leave the institution. The case proves that, however well a patient may be progressing, he must arrange not to have any business to transact until he is entirely cured. Sometimes business is a mere pretext to recover the liberty of returning to morphia, but even when the reason is a true one, it has nearly always in my experience brought about a relapse.

The last condition, and one which is, perhaps, even more important than any, is the adoption of a proper method, not only of administering the decreasing doses of morphia, but also of general conduct. Morphia *habitués* are essentially creatures of impulse, and nothing is more distasteful to them than to order their lives methodically and soberly. But it is absolutely necessary that they should do so. The real difficulty in the cure of the morphia habit is not to arrange the progression in such a manner as to permit of the habit being given up without suffering, but to convince the patient that if the treatment is to be

successful, it is only on condition of the greatest docility in matters of detail. Although, as I have just said, nothing is so distasteful to morphia patients as method and order, these are the absolute conditions of success, and a great step is already gained, when the patient has acquired this conviction.

Many patients will consent at once to the programme of reduction, as regards quantity, but when it comes to fixing the hours of administration, they will declare that no fixed rules can be adopted in their particular cases, because their requirements vary with circumstances ; they may be entitled to a dose of morphia when they do not need it ; and, on the other hand, be in want of the drug when they are not entitled to it. The reason is plausible, but it is better, notwithstanding, to insist upon regular hours, as method is paramount, and laxity of treatment at first invariably leads to ultimate irregularity. It may also be rejoined that, with the new methodical mode of living in other respects, which it is necessary to adopt, the requirements as regards morphia will not vary

afterwards as they did before. The patient must also understand that, as regards diet, he should take light digestible meals like any other convalescent at regular hours, and resist the morbid impulse that will often prompt him to make an extravagant meal at some unseasonable time—often in the middle of the night—washing down lobster salad or *paté de foie gras* with copious libations of brandy or dry champagne. There must be regularity as regards medicine; regularity with respect to meals; and last but not least regularity also with respect to repose.

Whether sleep comes at first or not, the light should be extinguished as soon as the last dose of the morphia has been taken, and reading in bed strictly forbidden. The pretext for reading in bed is the difficulty of sleeping, but in the morphia habit, even more than under ordinary circumstances, it is the habit of reading in bed that aggravates the insomnia. Whether the first few nights remain sleepless or not, the patient must try to woo back sleep by restoring night to its proper purpose, that of repose. It stands to reason, and I shall refer

to this principle more fully further on, that if the morphia is expended in providing the intellectual energy necessary to enable the reading of a book to be enjoyed during the night, its effect in other directions is lost, and a larger quantity than otherwise need be is required to maintain a state of comfort. Those who know nothing about morphia will often suggest to a patient in a state of want to take a book and read. But morphia patients will know I am right when I say that such a recommendation is an absurdity. For them to be able to read, it is necessary, not only to have the organs of vision and the intellectual centre, but also that organs and centre be bathed with a sufficiently strong solution of morphia. Reading in bed, then, although one of our patients' chief pleasures, must be given up, in order to make the morphia go as far as possible.

Some *habitués* acquiesce in all these requirements, but with the mental reservation of doing what they please. Such patients are often very misleading, and more than one physician has been led to believe that some particular remedy has

been of the greatest service, when, in truth, the patient has only been pretending, in order to get through the farce of treatment as soon as possible. Strange as it may seem, it is none the less true that a morphia patient will often pretend that he has been cured, rather than own to the doctor that he has cheated, or that he has been guilty of an imprudence that has thrown him back. Hence we hear, from time to time, of the extraordinary powers of some medicine, such as castoreum, avena sativa, or cannabis indica, in enabling, by the aid of a few doses, the use of morphia to be given up without difficulty.

Hence, also, from a statistical point of view, the circumspection with which the statements of cured *habitués* should be taken. A gentleman who has taken morphia without interruption for the last six years declares solemnly that he was cured by me a couple of years since, and one of the staunchest advocates of my plan is a member of the diplomatic corps whom I have not seen since I was supposed to have pulled him through, also about two years ago,

but who still continues the habit, to my certain knowledge.

There is another class with whom failure is almost certain, but for different reasons. This is the argumentative *habitué*, who knows more about morphia than any doctor living. Generally morose and suspicious, he often declares, although there is little fear of his putting his threat into execution, that if he is unsuccessful in his treatment he will commit suicide.

One day I received a pressing appeal from a gentleman of this class who had been at the Maison de St. Jean de Dieu for about a week. "I am constantly thinking about morphia, and my eyes are always on the clock, which never seemed to go so slowly. Please come to my rescue." I started off in the greatest haste, to find that he had just gone to take his coffee in a neighbouring restaurant. In the course of a few minutes he returned, and appeared not a little astonished at my annoyance in finding that he had been out. He maintained that his absence had been necessitated by the rules of the house, which did not

allow of coffee after meals. He admitted that it had been agreed between us that he was not to cross the threshold of the institution on any pretext whatever, and had I not discovered that he had done so, he would not have told me. But he argued that his absence occurring just after he had taken an injection, he was in want of no morphia at the time, and therefore did not run any risk. Here was a man, who confessed that he was constantly thinking of morphia, and who declared his intention of committing suicide should he fail to cure himself of the habit, and yet I could not bring him to understand that it was better for him to make coffee in his own room, or even to go without it entirely for a month or two, rather than to run into a temptation, which he had never before been able to withstand. I endeavoured to prove to him that the man who complains of the want of some little indulgence, is not in the frame of mind requisite for successful treatment, for if he realises at its proper price the inestimable happiness of the escape from morphia, he ought to be convinced that recovery is cheaply purchased at the cost of a

short temporary seclusion, coupled with some trifling interference with personal habits. I pointed out also that morphia patients seldom or never place themselves under our care, until they have proved by repeated trials that they are incapable of curing themselves, and it is only logical, therefore, that from the moment they do ask us to direct their treatment, they should cease to exercise any further disturbing influence. But all to no effect. The patient I speak of was argumentative and disagreeable all the time he was under my care. A large abscess having formed and requiring incision, he refused to have the slight operation performed because he did not think it was ripe for the knife, maintaining, moreover, that the patient was the best judge in such matters. The truth was that it afforded him an opportunity for injecting the solution of cocaine, that he obtained against my orders, and pretended to apply as a lotion. I completely failed to make him realise that he should have sufficient self-denial to give up any petty indulgence that might compromise his cure, and unity of purpose enough to order his whole life

to the one end of avoiding temptation. Finding one day that he had gone out by himself, on the important business of obtaining a solution of morphia, of which I was not to be told, we had a final difference of opinion, which led to my retirement from the case.

CHAPTER III.

THESE preliminaries settled, it will be as well to understand clearly what is proposed to be done. What is the extent of the ordeal, for, if no worse, it is always an ordeal of patience and regularity, and what are the properties of the vital elixir from which the votary is to be weaned? "*Me Hercle, non sedat,*" exclaimed the celebrated founder of the Brunonian school. The statement contained in this exclamation, by which Brown stands a self-acknowledged opium-eater, is neither entirely right, nor yet entirely wrong. Morphia is a sedative, even to the *habitué*, but not only or principally a sedative. Its predominating action is that of a stimulant, and this contradiction is not more flagrant than those which obtain in all its other effects, both of abuse and of abstinence. Whatever symptom may be the result of the habit, the opposite also is observed. And whatever may happen when its administration is withheld may also be the result of an excessive

dose. The word stimulant, however, but feebly expresses the action of morphia in the organisms of its tributaries. I have often heard those who are imperfectly acquainted with its effects compare the slavery to that of alcohol and tobacco, and relate instances, sometimes their own cases, to show that, as regards the latter, it only requires a firm resolution to break at once with the habit. But irritable and restless as a man accustomed to other stimulants may feel for a few days after they have been given up, it is nothing to compare with the vital stoppage resulting from the sudden or too rapid cessation of morphia. It is no exaggeration to say that the unfortunate victims of the habit, are wholly and absolutely dependent upon their accustomed stimulant; so much so that it has almost become a condition of existence. The heart will scarcely beat without it, the brain only thinks by it, and digestion is entirely dependent upon it. In a word, morphia to its unfortunate slaves is the synonym of vital force.

It might seem, then, that there is but little chance of escape from a thraldom so complete, or

that, at the very least, it must be necessary to employ restraint. Such, I know, was the practical conclusion of a discussion at one of the medical societies in London, and such is the opinion, as I have already said, of the leading alienists. A physician, quoted by Dr. Mattison, expresses himself as follows :—"Let him (the patient) quit it short, absolute and entirely. If he have the will power, trust him ; if he cheats, lock him up ; put a Hercules over him as a nurse." As it is absolutely certain that no one whose addiction is of sufficient standing to warrant the expression, "*morphia habitué*," could leave it off suddenly by an effort of the will, the herculean nurse would become a necessity. Here is a picture of the treatment by the same authority. "All substitutes are simply a prolongation of the agony he must go through. . . . The patient who quits morphia, after a long established habit, suffers from insomnia, diarrhœa, nausea, vomiting, achings all over, and debility to such a degree that it is a marvel how he lives. . . . All this suffering will last from five to ten days. No medicine will do any good, the

stomach rejects everything, even a mouthful of cold water. . . . At last, after several centuries of torture, little by little, and without medicine or substitutes, nature accomplishes the cure. This terrible treatment, I am sure, is not only the best, but the only safe one to cure, and secure the patient from relapse."

Dr. Mattison very properly protests against this "brutal, barbarous, and inhuman plan of treatment," and shows how mistaken are these statements. The most important objection to my mind is that, dreadful as are the tortures inflicted, they do not, as a matter of fact, afford any safeguard against a relapse. Of nine cases of Obersteiner, "perhaps only one, at most two," says he, "may be considered as examples of complete permanent recovery". A glance at Levinstein's book will prove that most of his patients relapsed also, notwithstanding the unwarrantable tortures to which they were subjected. The best safeguard against relapse is really the re-education of the will effected by gradual progression, and for this reason, I prefer, as I have already said, the

system of voluntary retreat and supervision, but without coercion.

Now as to the chances of recovery. During the last three years I have treated altogether thirty-two patients suffering from the morphia habit. Seventeen of these underwent no proper surveillance, the patients sometimes having a friend or attendant with them, sometimes going about alone. Several of these professed that they were cured ; but, in most instances, I had good reason to doubt it. The fifteen others agreed to a system of surveillance and retreat ; but, as a rule, as soon as the restriction became irksome, some pretext was devised to show that there was an indispensable necessity for temporarily suspending the treatment, and whether it was resumed or not, the result was a failure. Only six cases adhered strictly to the agreed programme, and these six recovered. Three at St. Jean de Dieu, of five, ten, and fourteen years' addiction respectively, each taking from three to four months. One who locked himself up with his servant whom he bribed not to allow him to cheat ; the fifth, a lady

supervised by her husband; and the sixth, a case of only a year's standing, but unique from the fact that the patient followed the treatment without deceiving his wife, who kept the medicines, although he was holding an important official position, and actively performing his duties the whole time. In the first cases, the time was unnecessarily long; but then my means of relief were more limited, and, although a certain programme, as it were, is laid down, which the patient can follow with a very little self-denial, he is allowed to have more morphia if he insists upon it, providing it is not taken secretly.

In my early cases, the object aimed at being the suppression of morphia, the patients were allowed too much latitude in other respects. Nearly every morphia *habitué* is sufficiently well acquainted with the literature of the subject to be more than a match in discussion for any one who has not a special knowledge of the subject. So it was that, when I first began to make the treatment of the morphia habit a special study, although I had the very best reasons for thinking that certain prac-

tices were imprudent, my patients were always able to quote some acknowledged authority in favour of their course of conduct. One maintained that he was helped by large doses of alcohol, an error, notwithstanding the books that endorse this opinion, for if the immediate effect is stimulating, the subsequent reaction makes a larger dose of morphia necessary, to combat the depression of the heart and vaso-motors. Another would insist upon having chloral at discretion. A third, without appetite, as a rule, would be seized with a sudden fit of boulimia, and eat a heavy indigestible meal in the middle of the night, afterwards suffering from dyspepsia, for which the proper treatment would be an emetic, but for which a morphia *habitué* always exacts an extra dose of morphia. A young lawyer, who had been getting on capitally, took it into his head that he could go faster with cocaine, and having, against my wish, procured a solution, began to inject it. After a few days, the effect upon his health and intelligence was most unsatisfactory, and he had every appearance of a man in the depressive stage of general paralysis.

As he refused to follow my advice, and to give up the cocaine, I declined to continue the responsibility of the treatment, and left him to his own devices. In the course of a fortnight he was reduced to such a state of mental and physical prostration, that he was frightened at it himself, and asked me to resume the reins of government. After a short period of good conduct, he insisted, at the suggestion of a medical man, also under my treatment in the same institution, upon taking bromidia at discretion, and very nearly killed himself with an overdose. A second suspension of medical relations led to a final surrender at discretion, and henceforth things went smoothly. At the very last moment, an attack of gastralgia very nearly compromised the result, but fortunately it was dissipated by the action of a blister, and the much dreaded insomnia of the last night being prevented by the hot air bath, the patient, an *habitué* of ten years' standing, was ultimately cured.

Having been able to speak more certainly and authoritatively, my later patients have been more

reasonable, and when the treatment has moderated the craving to a bearable extent, those who have really wished to get well have, as long as they have remained under my care, followed the reduction agreed upon, with but occasional moments of weakness.

CHAPTER IV.

THE weaning from the morphia habit may be divided into three periods. The first begins with the commencement of the reduction, and lasts until it is necessary to give some substitute for the decreasing hypodermic injections. This generally happens when the daily amount has been decreased to about two grains ; it does not much matter whether the dose at the commencement was five grains or fifty. During this period it is better to give as few succedanea as possible, reserving all our resources for real necessity. Dr. Mattison commences with large doses of bromide, and after a week or so of this preliminary sedation cuts off the morphia very rapidly ; but, as I have said before, we must be more degenerate on this side of the Atlantic, for I have never met with the same success without restraint. I have found it, however, an excellent plan to give the bromide at this time, as it calms the erethism of the heart and cerebral centres. It

is sometimes well to associate it with sparteine or digitalis.

During the second period the progressive reduction of the hypodermics is continued, but this is rendered tolerable by the administration of a certain quantity of morphia by the mouth or rectum. For every centigramme diminished by the skin, two may be allowed in its place, and the mode of administration I have found most convenient is in the form of a solution injected into the bowel by the glycerine enema syringe. I formerly used suppositories, but the solution is preferable in that it acts quicker and has a more sensible effect.

There is usually no difficulty whatever during this period—at any rate, less so than towards the end of the first period—except with those who are victims of the "mania of the syringe," where the trouble is not to give up the morphia so much as to renounce the morbid pleasure of injecting. There are patients who would use anything rather than diminish the number or volume of the injections. I have known them experiment with every drug that can be given in a liquid form, quite

reckless as to the possible consequences. One gentleman treated by me, injected pure hydrate of amylene, and followed it up with a few drops of nitrite of amyl. Another for whom I ordered a fifth of a grain doses of sparteine, repeated the injections until he felt his heart contracting painfully, a sensation which naturally caused him alarm, mingled, however, with a fearful feeling of pleasure. Such aberrations seem almost incomprehensible, and, as far as sparteine is concerned, the case I have mentioned is unique, at any rate in my experience. When cocaine is used, it frequently happens that the injections are continued until they are followed by a feeling of impending death, and yet no sooner has the sensation passed off than a horrible fascination leads to a repetition of the dose, and the patient will go on injecting until he positively does not dare to risk another drop.

With the exception of these syringe maniacs, I have never had any difficulty during the second period, and most patients are agreeably surprised at the facility with which they leave off the hypodermic injections.

I recently directed the treatment of a lady, the wife of one of our most eminent physicians, who had taken morphia for twelve years for the relief of symptoms due to a tumour of the womb, accompanied by ovarian troubles. In this case I believe that the use of morphia had been the means of maintaining health, and that without it the nervous system would have broken down long before. The occurrence of phlegmonous abscesses, together with the cessation of the pelvic symptoms in consequence of "the change of life," made her at last desirous of escaping from the slavery, a desire that was shared intensely by her husband. Notwithstanding the patient's conviction that success was almost impossible, she passed through the successive phases of the reduction, giving up the injections, and continuing the subsequent diminution until she reached one grain by the mouth. Being unwilling to consent to a temporary suspension of her social duties, she made no further progress, and now oscillates between a grain and a grain and a half of morphia, taken by the mouth. Although the health is greatly improved, I consider

the result a failure, but it shows that there is no difficulty in substituting some other mode of administration for hypodermic injection. When this is effected the difference of dose may not amount to much, but it is always an immense moral encouragement for the patient to realise that he is no longer a slave to the syringe, no longer an impulsive morphinomaniac, and that at length his case has assumed the complexion of ordinary intemperance. He now seeks relief because there is a real, vital necessity, and it is for us to find the means of overcoming it.

When the syringe is given up the third period commences, and with it the final progressive decrease of the morphia. I shall give further on a typical table, but I need hardly say that few patients follow it with regularity.

As the periods of comfort become shorter and shorter, all the different means we dispose of to prevent the craving entering into the domain of consciousness must be employed. With the exception of cardiac tonics, many of these agents, both physical and therapeutical, act by inhibition. When

an electrical current or any other form of energy is brought into the sphere of perception of the tired centre, it suspends the malaise, the mechanism of which has been explained above. The brain cells being occupied with the epi-peripheral stimulus, the ento-peripheral sensation arising from unsatisfied function is excluded from perception, for the time being, and although the former may not be efficient for healthy action, it gives to the cells the illusion of their accustomed stimulus. With this treatment the diminution can be carried on until the quantity of morphia taken is decreased to a small fraction of a grain. I have frequently seen patients get to a sixth of a grain, and even then require the greatest persuasion to make the final effort. There is always the conviction that small as may have become the last dose of morphia, it is impossible to do with none at all, and there seems to be something unbearable in the anticipation of the first night without it. As a matter of fact, the patient would be extremely restless if he had not certain means of combatting the agitation, but even at the worst his condition would be but little more

uncomfortable than that resulting from the insomnia and restlessness of severe dyspepsia, were it not for the knowledge that it could be allayed at once by a hypodermic injection. When the plan I have laid down is followed, there is, however, only one night of the kind. The second night from the last dose of morphia there may be insomnia, but there is no restless craving for morphia, and henceforth, until sleep is properly re-established, there may be wakefulness, but it is a wakefulness that is quite bearable.

The three periods into which I divide the treatment are not purely arbitrary: they correspond to a natural and convenient division. I think, also, that there are many reasons for preferring a gradual arithmetical reduction, such as I have sketched out, to the fancy arithmetical and geometrical progressions advocated by some writers.

Besides the steady reduction, another point I aim at is the restriction of the number of injections, as the quantity injected becomes daily smaller. The most simple mode of reduction would be to divide the daily ration into a suitable number of equal

parts, to be given at fixed hours ; but experience shows that it is better to reserve the largest portion for the evening, and it is often advisable to commence the day with a liberal dose. The table given further on has often been my guide, and may be taken as a fair, practical basis.

I have tried other modes of reduction, such as making each dose smaller than the preceding one, or each interval between the injections a little longer, as also the ingenious method recently recommended by Dr. Little, of Dublin, consisting of replacing each dose taken from a certain quantity of solution by an equal quantity of water. Such a plan would be an excellent one if patients could be relied upon to carry it through without any hitch, but as such is not often the case, when a temporary backsliding does occur, it is difficult to know what amount of morphia was being taken at the time, and from what point, therefore, it is necessary to start afresh. Dr. Little states that he has always found this plan successful in men and women ; but I cannot help thinking that he has allowed himself to be deceived. It must be remembered that

morphia *habitués* are a class of patients *sui generis*. With all the sympathy I feel for them, I cannot conceal the fact that they are "prevaricators" by impulse, and sometimes also through interest. They will often pretend to be cured from a morbid fear of hurting the feelings of the doctor who has unsuccessfully treated them; but I have known instances in which the comedy of treatment has been gone through to recover a situation, or to conclude a marriage; in the latter case even after an addiction of seven years. A Paris physician who treats all his hysterical cases by hypodermic injections of morphia is under the impression that he can arrest the disease so created by hypnotism and suggestion, and each case reported by him ends with the mention: "The patient states she has entirely given up the injections". I must confess that no declaration on the part of a hysterical morphinomaniac would have much weight with me and I think that a little more scepticism as regards their statements might often lead to very opposite conclusions.

Another point of some practical importance is

the preparation of the solution. Although the patients under our care are undergoing a voluntary reduction, by a strange contradiction in harmony with their hysterical temperament, they are quite unable to resist the impulse to cheat, if an opportunity for so doing occurs. It is, indeed, only this peculiar state of mind that makes the semi-constraint I advocate at all logical: otherwise it would be more rational, either to deprive morphia *habitués* of liberty entirely; or to treat them like any other class of patients, with perfect confidence. To return to the question of the solutions. When the reduction is becoming irksome, the patient will often prefer to resort to some subterfuge in order to obtain the desired respite, rather than admit honestly that he can not, or will not, continue to decrease. He will pretend, for instance, that he has spilled part of his allowance by overturning the bottle, or he will declare that he can feel that it is not of proper strength. In such a juncture argument is useless, as well as undignified, but if the pretext is allowed and the extra amount obtained, the following day the patient is less likely than

before to be satisfied with the legitimate ration, and henceforth failure is certain. With the hypodermic tabloids of Burroughs and Wellcome, it is impossible to have any contestation of the kind. I have used them extensively during the past few years without any question having ever been raised as to their accuracy of dosage; the best possible proof that they are mathematically accurate. Another great advantage is that they do away with the danger of dirty and careless dispensing, by no means uncommon on the Continent through the negligence or ignorance of incompetent assistants.

Until within the last year, I generally used to prescribe some kind of hypnotic at the last critical moment, chloral, methylal, hydrate of amylene, sulphonal, etc.; but now I rely mainly on the hot air bath, repeated if necessary, and followed when practicable by a cold douche. When a good Turkish bath is obtainable, it is all that can be desired; but in default of it, the best apparatus with which I am acquainted, is the portable Turkish bath, manufactured by Ellis & Co. of London.

For some time after the termination of the treatment I continue these baths, which are also the best means of preventing or combatting any revivescence of the craving, and it was through observing their action as preventive of relapse that I was led to use the simple hot air bath as a means of treatment.

Such then, being the general outline of the treatment, let us enter into some further detail.

One of the first indications is to make all the organs work as easily as possible, so that the gradually decreasing morphia energy may suffice to keep the human machine going with as little discomfort as possible. By this means, the miseries which, in the aggregate, make up what is felt as a craving for the accustomed stimulant, are reduced to their minimum, and the different succedanea, which would be inefficient if employed without these precautions, become efficacious. In the second place, no unnecessary demand must be made upon the energy in general, or upon that of any organ in particular, for although the organism, restored to a proper balance, may manage to get

along with the decreasing doses of morphia, we have, so to speak, nothing in hand, and the least call, either on the system in general or upon some particular organs, may excite an imperative craving for an increase of the habitual stimulant.

During the last period the patient must be literally content to vegetate. Amusements which are useful earlier in the cure, and later on, when the total suppression has been reached, should not be encouraged; that is, any amusements that require *entrain.* They will not, as is commonly supposed, enable the patient to forget the craving. They only cause the amount of morphia taken to be frittered away in unnecessary action, and if the excitement is enough to keep the patient going at first, the "go" is purchased at the expense of increased craving afterwards, and an earlier demand for morphia.

The amount of exercise also requires the most delicate regulation, and the two conditions during the third period of reduction are, that it should neither be unnecessarily active, nor taken at the expense of the morphia energy. After each dose

of morphia, a fictitious vigour returns for a time, but if this is expended in useless activity its duration is more ephemeral, and the want of the stimulant is felt earlier. It is better to economise the effect of each dose by remaining quiet as long as possible. As soon as a little restlessness is felt it may be relieved by a gentle walk, but after a time the restlessness is accompanied by a feeling of prostration, and although there is an instinctive desire to keep the legs and arms moving, the weight of the body makes exertion too tiring, and the attempt is soon given up. During this period of the reduction there are great differences in the symptoms experienced by different patients. In some there is chiefly prostration, in others restlessness predominates. A Turkish physician who was under my care at the private hospital of St. Jean de Dieu, remained in bed nearly all the time, and when he got up immediately repaired to the hammock, which allowed sufficient play to his limbs to satisfy all desire for movement, and at the same time obviated the necessity for making any exertion. When the opposite condition exists, there is no

better means of satisfying this restless thirst for locomotion without fatigue, as moderate exercise on the tricycle.* The weight of the body is entirely removed, and provided a suitable road is available, the exercise of the limbs affords the greatest relief for the restlessness without causing the fatigue that might bring about an increase of the craving. It is, of course, easy in this respect to overshoot the mark, but used in moderation the tricycle may be turned to the greatest advantage, and when the treatment is once terminated, I consider this exercise, with the Turkish bath, as the best means of soothing the restlessness that occasionally remains, and so of obviating a relapse.

* See for further details my book, *La Santé par le Tricycle*, of which an English translation by Dr. Crosse Johnston is published by Iliffe, Fleet Street.

CHAPTER V.

JUST as there should be no demand upon the general energy that can be avoided, so each organ must be spared unnecessary strain, and, when required, special treatment must be applied.

The great dynamic centre is the heart, and the management of this organ is all important. When a morphia *habitué* is in real want, the physical need is shown in the pulse, which becomes small and laboured, and presents the appearances previously described as characteristic of the craving, and of

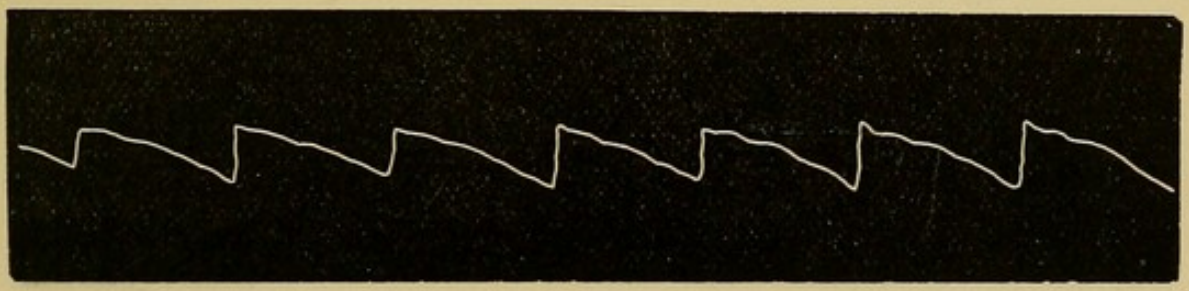

Fig. 11.—Pulse of morphia *habitué* in a state of abstinence.

which, at the risk of some repetition, I subjoin a tracing. Should the morphia be withheld still longer, the pulse may pass into the condition seen

in the next tracing where the impulsion of the heart is restored, and the characteristic *plateau* has

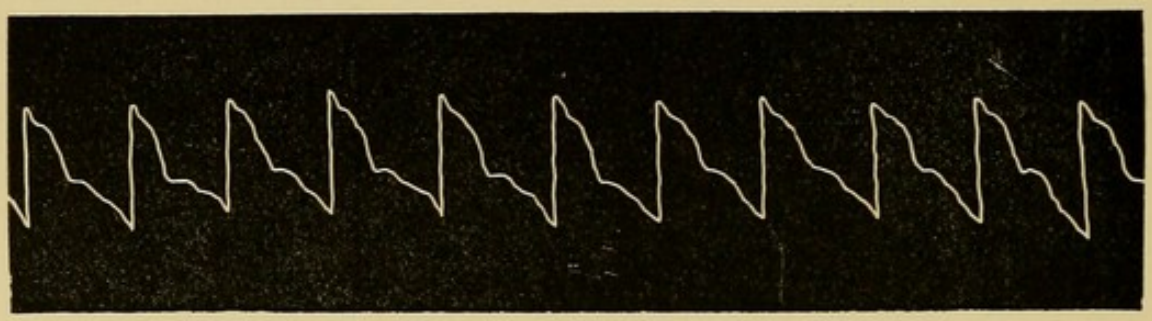

Fig. 12.—Disappearance of *plateau* through febrile impulsion of the heart.

disappeared, in consequence of the febrile state of the patient. In this case the morphia had not been absorbed in consequence of diarrhœa (it had been ordered to be given by the rectum), and the temperature was 40°, the pulse being 130. At other times the pulse tracing will present a shakiness which is in accordance with the general restlessness, but it is difficult to say what part of the tracing is a pulse record, or how much depends upon muscular tremor. The following is a good specimen :

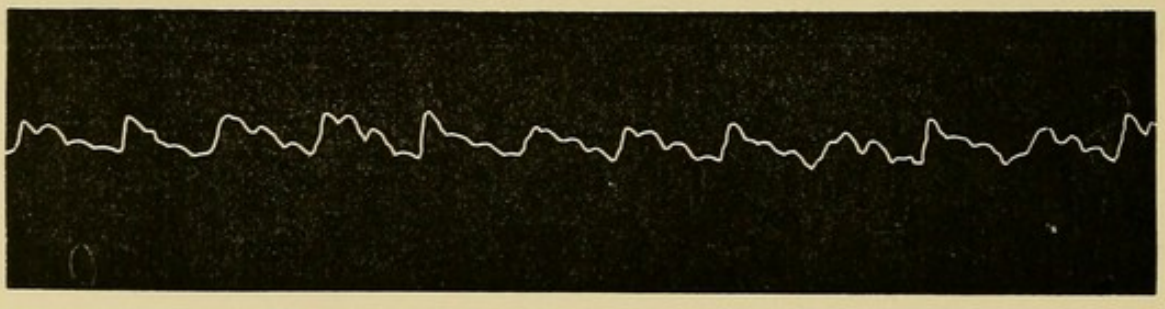

Fig. 13.—Advanced state of privation.

Although German writers expect these tracings, I do not think it needful myself to wait for any manifestations of the kind, and consider the complete *plateau* as a legitimate indication for relief.*

To prevent the weakness of the heart, of which the *plateau* is an indication, I was formerly in favour of sparteine, because its action hypodermically is rapid and mathematical, but I prefer now to keep the heart sustained all along, rather than give hypodermic injections from time to time. There is a great difference in individuals as regards tolerance for this drug hypodermically, and, although ten times the dose I would give by the skin to begin with, has been so administered, I would earnestly advise those who may try this plan to commence with a moderate dose. I have seen cramp about the heart, and precordial anxiety of a very alarming character, caused by the injection of one-third of a grain of sparteine;

* The tracings which best show the *plateau* are those obtained when the heart has not been modified by cardiac medicines. When heart tonics have been administered, the *plateau* takes much longer to appear, and is usually less marked. The craving is also proportionally less distressing. See in proof of this, Fig. 18.

symptoms that were not relieved by brandy, and which only disappeared upon the hypodermic injection of morphia. The patient was an *ex-habitué*, and equally sensitive to digitalis. In this connection, it may be mentioned that this extreme sensitiveness to the action of cardiac medicines is more common than is generally supposed, and in heart cases, it is often thought that some particular drug is unsuitable, when, as a matter of fact, it is only that the dose is too large.

A governess, suffering from nervous derangement of the heart, giving the following sphygmographic tracing, was advised by me to take :

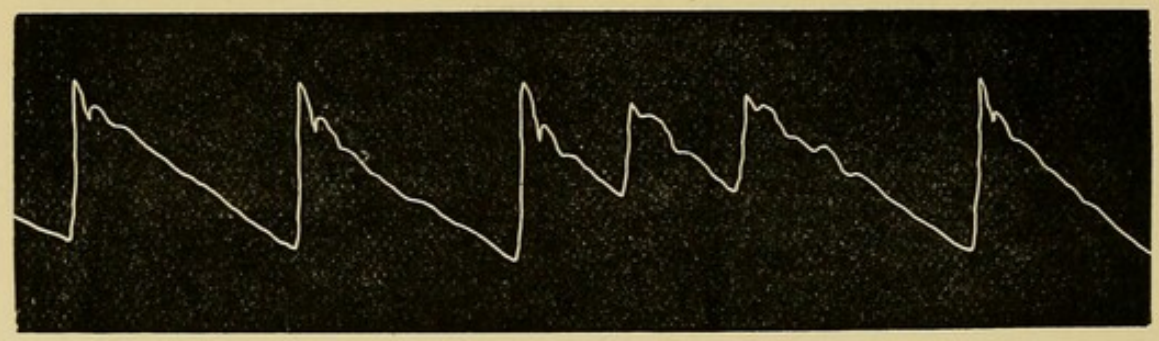

Fig. 14.—Tracing showing nervous irregularity of heart.

Ferri et Quiniæ Cit.	-	ʒj.
Tr. Digitalis	-	ʒj.
Syrup. Limonis	-	ʒij.
Aquam ad.	-	ʒvj.

A table-spoonful to be taken three times a day. When I next saw her she told me that the medicine had produced such a violent action of the heart that, thinking I had made a mistake, and intended her to take tea-spoonful doses instead of table-spoonfuls, she had reduced the medicine to that amount, the consequence being that it suited her exactly. Her tracing had become as follows :

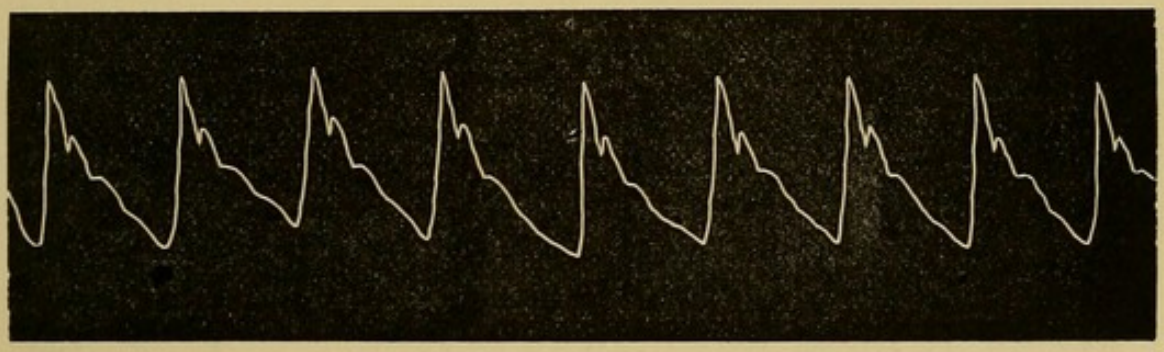

Fig. 15.—Effect of digitalis on preceding case.

Thinking that, in such small doses, the effect might be due to imagination, I had the digitalis omitted without her knowledge, and in the course of a few days the pulse returned to its first condition, becoming once more regular when the digitalis was resumed.

Another reason which led me to give up the

hypodermic injection of sparteine, was that in many instances the chief element of difficulty in the treatment of the morphia habit is the mania of injecting. The morbid pleasure of injecting something under the skin is as great a fascination as the effects of the morphia. When this is the case, one must be especially careful about allowing injections of sparteine, and invariably refuse to countenance the smallest addition of cocaine. I was shown one day by a physician, who had called me into consultation, and for whose patient we had recommended, amongst other things, hypodermic injections of sparteine, a most plausible letter, stating that the injections were painful, and asking if there was no way of rendering them less so. My *confrère* proposed that we should add to the solution a small proportion of cocaine, but I strongly advised him to do no such thing, as the invariable result of the hypodermic injection of cocaine is to develop the mania of injecting to an incomprehensible degree. I say incomprehensible, because, although a very small dose may produce a certain sense of relief, it is both incomplete and

evanescent, having nothing of the vital turgescence resulting from morphia, and being followed almost immediately by an irresistible impulse to further injections. The patient feels an uncontrollable morbid impulsion, rather than a craving for stimulant, and what is most curious, each injection may be followed by the most alarming and distressing sensations, and yet no sooner have they passed off than another dose of the poison is taken. A gentleman told me that each sensation made him feel as if he were dying, and yet there was a horrible kind of pleasure in the feeling. Others have similar sensations, and feel them only to be disagreeable, and still they are unable to control the impulse that leads them to repeat the injection.* The propriety of refusing to add

* When the patient, and it soon is learned, knows that he can neutralise the discomforts caused by cocaine, to a certain extent, with alcohol, and almost mathematically with morphia, the case assumes the gravest aspects, and restraint may become necessary. I have known a morphia *habitué* who was taking, a few days before, four or five grains of morphia only, alternately inject morphine and cocaine for hours together, demorphinising himself, as he expressed it, with cocaine, and neutralising the overdose of cocaine with brandy and morphine, until he fell into a state of semi-coma, which would last sometimes for twelve or fourteen hours.

cocaine to the sparteine solution in the case I refer to, was speedily confirmed. Not obtaining the desired prescription from her medical attendant, the patient worked on the feelings of a too indulgent aud weak-minded father, and so procured a first solution, of which she promised to take only a few drops at a time, in order to be able to abolish the pain of the sparteine. The supply was soon exhausted, but the impulse once started, it became necessary to obtain larger quantities, both of cocaine and morphine. Although she was not left alone for a moment, and had a young medical man attached to her person, she managed to purchase from twenty to thirty grains a day, without any one knowing it, for more than two months. At last, her husband, a medical man, and a morphia *habitué* himself, puzzled by the outbreak of hallucinations, which were set down by the father to deprivation of morphia, sent for me hurriedly one night. The symptoms being identical with those I had recently seen in a case of acknowledged cocaine poisoning, I taxed the patient with taking it, and easily obtained a full

confession. She had, notwithstanding the surveillance, retained the direction of her household, and had allowed a flighty maid to remain out half the night, on condition she should bring back the necessary supply of cocaine and morphine, which were entered upon her book of household expenses as butcher's meat or groceries. Speculating upon her mistress' passion, the servant had already made her pay for what had been supplied with various articles of jewelry, and the very day the affair was discovered, she had given her two valuable bracelets which had been pawned with an unlicensed receiver for over fifty pounds. It was partly through fear of the hallucinations, but more the dread of being in the power of her servant, that led the patient to make her confession. From her point of view, confession had also the advantage of establishing the fact that she was also a cocaine *habituée*, and, although I was in favour of cutting off the cocaine brusquely, other counsels prevailed, and in all her subsequent pretences at treatment, both morphia and cocaine were given concurrently. The last time I heard

of this patient, she had once more, when within a fraction of a grain of complete suppression, bribed the wife of a chemist to send her morphia in a double-bottomed *bon-bon* box at the price of two pounds a gramme; the cost price being about three pence.

Although the management of the heart is of primary importance, it is also necessary to secure, as far as possible, a healthy action of the other organs.

The liver is generally enlarged and sluggish, in consequence of the constant alternatives of active hyperœmia and passive stasis, which correspond to the alternate conditions of morphia satisfaction and abstinence. This functional disturbance of the liver is often aggravated by the immoderate use of alcoholic stimulants, and may so pass into organic disease, although it is less frequent than might be supposed *a priori*, and than theoretical writers have affirmed. I have pointed out such a common symptom of this condition in morphia *habitués* is oozing of blood from the nose or rectum. Everyone knows that torpor of the liver leads to the congestion of the hæmorrhoidal veins, and although

it is now forgotten, Galen taught that hepatic congestion was often the cause of epistaxis, and recommended a blister over the region of the liver as the best treatment for nasal hæmorrhage. In one of my cases, where the habit had originally been acquired for the relief of hepatic colic, the success of the treatment was on the point of being compromised at the last moment by severe gastralgia, but a blister over the stomach afforded the necessary relief, and the case terminated satisfactorily.

Another organ requiring no little management is the stomach, and this on account of its vast possibilities with respect to indigestion. The morphia *habitué* digests not with pepsine, but with morphine, and when the quantity is restricted it becomes necessary to tax the functions of the stomach as lightly as possible. Some authors recommend a liberal and nutritious food, and I have no objection to offer if it can be digested. But this is not the case at the end, when it generally happens that no food can be taken in comfort except in conjunction with morphia, and even then it must be of the lightest and most digestible kind.

The question of diet becomes then of the greatest importance, as an imprudent meal may often cause a relapse of several days. One of my invariable recommendations, when there is any stomach difficulty, is the administration of bi-carbonate of soda, in the form of Vichy water. Its effect in the relief of the craving brought about by imperfect digestion is often immediate, and is probably not limited to the neutralisation of the over-acidity of the stomach. Alkaline solutions increase the efficiency of the heart's action, and cause contraction of the capillaries, a result which lessens abdominal stasis, and helps to facilitate the general circulation.

The avoidance of indigestion is not only an important precaution during the reduction cure, but it is one of the chief things to be observed as an after precaution. More early relapses are brought about by indigestion than by any other cause, and the occasion is not unfrequently the festive gathering that celebrates the return of the ex-*habitué* to society. Notwithstanding the best resolves, he allows himself to be over-persuaded, and rises from table with the sense of discomfort, increasing as the

evening draws on until he has reached the highest intensity of dyspepsia, that threatens, and even may be the imminence, of heart failure. Many ex-*habitués* are hypochondriacal about the state of their heart, and it is difficult under the circumstances to resist resorting to a hypodermic injection that past experience has shown to be infallible. I have already said that the best treatment of such a case would be an emetic of hot water, and I have just alluded to the great value of bi-carbonate of soda as a preventive of indigestion. Another remedy, which I have only appreciated at its proper worth within the last few years, is linseed, which was counselled by Trousseau in a variety of gastric affections. Both for morphia *habitués* and others I know of no medicine to equal it, in slow, laborious digestion, accompanied either by pain or heaviness, and in flatulent dyspepsia, either with constipation or diarrhœa. By the relief it affords to the gastric symptoms it becomes a marvellous remedy also in a number of reflex nervous and hypochondriacal symptoms.

CHAPTER VI.

THE plan sketched in the preceding pages will be sufficient to bring the treatment to a successful issue in most cases where the patient has started with the earnest resolution to get well, but there are sometimes symptoms that require special attention, and for which there are plenty of means of relief. Before, however, passing these in review, I will relate a few cases as illustrations of my method under different circumstances.

A distinguished officer had contracted the morphia habit for the relief of gastralgia, having its origin in the privations of a campaign. When he consulted me he had just been appointed to an important official post. I was desirous to defer treatment until the work incident to his accession to his new duties had been got over, the more so as there could be very little surveillance. His wife, however, was anxious to begin at once. The amount taken was between two and three grains daily, and the habit

was only of a year's standing, but the patient had already made repeated attempts at curing himself, which had always failed in consequence of the want of a proper method.

I wrote him out a programme according to which he was to diminish, by a quarter of a grain hypodermically daily, and to substitute half a grain by suppository for each quarter given up by the skin. At the end of eight days the four grains taken by the rectum were to be diminished by a quarter of a grain a day. Sparteine was prescribed by the mouth as a heart tonic, tablets of trinitrine, and inhalations of nitrite of amyl for the relief of the craving, should it be felt towards the end of the treatment, hydrate of amylene for the last night.

At the expiration of six weeks my client, who had taken his medicines with him in the form of Burroughs & Wellcome's tabloids, returned to Paris and informed me that the treatment had been followed to the letter, and that the last dose of morphia had been taken on the day and at the hour anticipated. He was, of course, unable to tell me what help he had derived from the sparteine,

TABLE OF REDUCTIONS.

	8 A.M.	2 P.M.		7 P.M.	12 P.M.
1	10	10		10	10
2	9	9		9	9
3	8	8		8	8
4	7	7		7	7
5	6	6		6	6
6	6	5		5	6
7	5	5		5	5
8	5	4		4	5
9	4	4		4	4
10	4	3		4	4
11	4	3		3	4
12	3	3		3	4
13	3	3		3	3
14	3	2		3	3
15	3	2		2	3
16	2	2		2	3
17	2	2		2	2
18	2	2		1 (II)	2
19	2	2		(II)	2 (II)
20	2	1 (II)		(II)	2 (II)
21	2	(II)		(II)	2 (IV)
22	1 (II)	(II)		(II)	2 (IV)
23	1 (II)	(II)		(II)	1 (VI)
24	(IV)	(II)		(II)	1 (VI)
25	(IV)	(II)		(IV)	(VI)
26	(IV)	(II)		(II)	(VI)
27	(III)	(II)		(II)	(V)
28	(II)	(II)	(4 P.M.)	(II)	(IV)
29	(II)		(III)		(IV)
30	(II)		(II)		(IV)
31	(II)		(II)		(III)
32	(II)		(II)		(II)
33	(II)		(I)		(II)
34	(II)				(II)
35	(I)				(II)
36	(I)				(I)
37					(I)

but he was enthusiastic in praise of the nitrite of amyl, which he had constantly carried in his pocket, and which had arrested the craving whenever he had resorted to it.

This case shows that a cure may be obtained under methodical treatment, without seclusion and with imperfect surveillance, but successes of the kind are rare, and can only be hoped for in mild cases, and where there have not been any previous failures.

A medical man, aged 32, was brought to me by his cousin, a well-known alienest. The habit had originated in family annoyances, and was of two years' standing. I transcribe the progression from beginning to end, in order that it may serve as a model for others as regards the mechanism of the reduction. He was taking at the time sixty centigrammes a day, which was rapidly reduced to 40 taken in 4 doses. From 40 to 24 the decrease was at the rate of 4 centigrammes a day, from 24 to 16 it was 2 daily, from 16 to 8, 1. From 8 to 6 the decrease was at the rate of 1 daily with an allowance of 2 by the rectum for every one suppressed hypodermically. As soon as 0 by hypodermic

injection was reached, the progressive decrease of the morphia taken by the rectum was commenced and carried out according to the foregoing tableau.

Although the final result was unsatisfactory, the patient relapsing at the last moment on account of paroxysmal cough which nothing but morphia could relieve, the table shows how to conduct a typical reduction. The eventual failure proves, moreover, that there was a real difficulty, which had only been kept in abeyance, thanks to the methodical exactitude with which all the directions were carried out.

The compensatory morphia, noted in the tableau with bracketed Roman figures, was given in the form of a solution administered by means of the glycerine enema syringe, an instrument that might have been devised especially for the purpose. This plan has the advantage over suppositories of being always accurate as regards dosage, and much quicker in effect, the patient having the satisfaction of appreciating the cessation of the commencing malaise. The hypodermic morphia was given in the form of tabloids. Although complimented daily by his cousin and myself upon the punctuality with

which he followed his treatment, my *confrère* declared that he suffered so little discomfort that there was no merit on his part in adhering to the programme. Sometimes he was himself surprised, and would ask us if we had not hypnotised him into obedience to our wishes. At one time there was a commencement of that mental yearning which is much more distressing than pain, but this was kept under by frequent applications of the galvanic current, the anode on the nape of the neck, the cathode on the forehead. He took sparteine internally during the whole of the treatment, as well as bromide of sodium, and used faradisation and trinitrine whenever there was restlessness. Finally, when he had reached the amount of one centigramme by the mouth, he was seized with repeated attacks of convulsive paroxysmal cough, for which everything which he and I could think of was tried in vain. Painting the fauces with nitrate of silver, local applications of cocaine, large doses of bromide, inhalations of ether, and hypodermic injections of phosphate of codeine, together with many other sedatives and anti-spasmodics all were used without

success. Under the influence of ether the cough would cease, as it did also in the hot-room of the Turkish bath, but it was, of course, impossible to keep up this treatment continuously, and the patient returned temporarily to a small quantity of morphia, promising me to give it up as soon as he got to a warmer climate. My own opinion was that the cough was neuro-mimetic, as I had remarked all through the treatment an almost feminine degree of sensibility in other various respects. It must be said also, that, although when the treatment was first decided upon, the patient and his cousin had both agreed with me that supervision was necessary, the absence of all disagreeable symptoms caused it to be relaxed, and at the last moment he was certainly overtaxing his resources. I do not know how the case ended, but as the patient set out upon an arduous journey soon after, and has never been near me since, it most likely terminated in a complete relapse.

A lawyer, aged 35, has been addicted to morphia a little over ten years, having been taught the practice by his medical attendant for the relief of

hepatic colic. The practitioner in question seems to have been certainly culpable, having propagated the use of the syringe amongst his patients in the most imprudent manner, leaving them to employ it at their own discretion. The consequence was that in a small provincial town my informant knew of at least a dozen *habitués*. But, unfortunately, the habit once formed, the doctor had been powerless to help him out of the difficulty, appearing to think that it was simply and purely a question of will, and that he could leave off the practice whenever he liked. After several futile attempts at breaking with it, he decided upon coming to Paris, and when he left home his body and limbs were so covered with abscesses and his health so shattered that no one expected to see him return alive.

The tableau of the preceding case applies exactly to this patient, with the exception that on several occasions relapses occurred in consequence of different therapeutic experiments that he insisted upon trying, and during which our professional relations were suspended. A long time was lost with cocaine; a whole week through a bad

attack of indigestion, and a few days through an abuse of bromidia.

In no instance have I seen a better illustration of the part played by the heart in the causation of the craving, and of the importance of heart tonics in the cure of the habit. Up to the eighth day of the treatment, which was pushed as rapidly as possible, no succedanea of any kind were given, but on that day I made the following note:—Saw Mr. —— a quarter of an hour before the time for making the injection. He was depressed, tearful, and restless, and complained of uncomfortable sensations about the heart. Said he would rather give up the treatment at once than continue so to suffer. The tracing of his pulse was as follows:

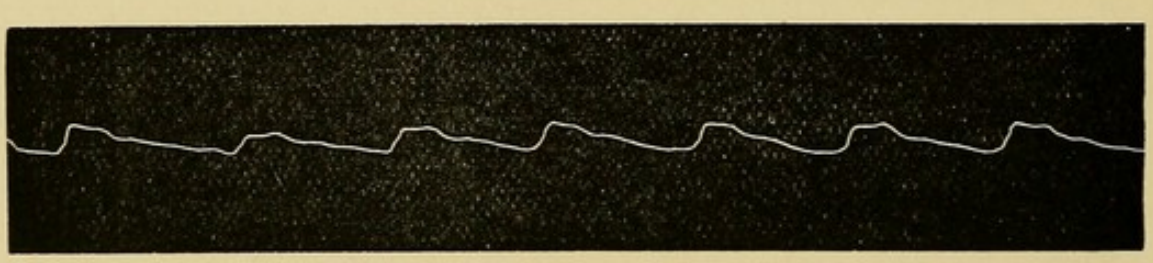

Fig. 16.—Example of heart weakness of morphia craving.

A few minutes after the injection of the morphia it was perfectly restored (Fig. 17).

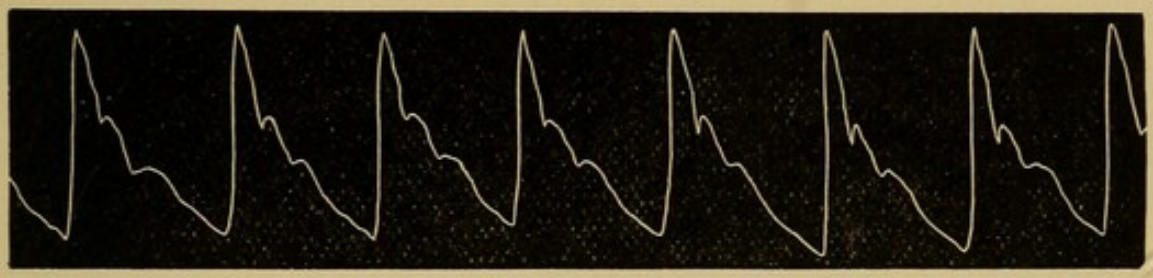

Fig. 17.—Restoration of pulse by morphia.

I then explained to him that whilst desirous of reducing the daily quantity of morphia as fast as possible, and refraining from the administration of succedanea as long as they could be dispensed with, it is never necessary to inflict the suffering corresponding to the first of the above tracings (Fig. 16). Such a tracing is, on the contrary, the indication for slower progress—[we had decreased from forty to eighteen centigrammes, about four grains, a little more than half the quantity taken, in eight days]—or for the administration of a heart tonic. I prescribed digitalis, and for the remainder of the treatment there was no further trouble with the heart, the following tracing being the worst I obtained :

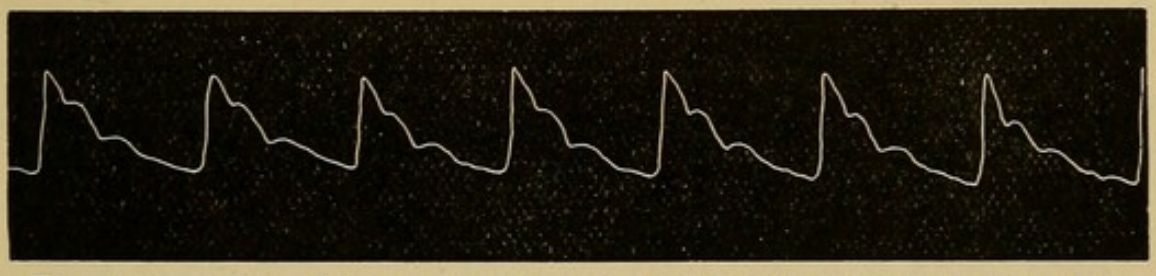

Fig. 18.—State of craving modified by administration of digitalis.

The chief interest of this case, however, centres in its termination, it being brought to a satisfactory conclusion thanks to a hot air bath that was administered the evening after the last dose of morphia, and which brought about a comfortable sleep, although a few hours before the patient was despairing of being able to get through the night. It is worthy of remark that I had at the same time under my care a medical man, who always spoke with the greatest confidence about the strength of his will, and his certitude of overcoming the habit, provided I could only make him sleep. Curiously enough, the administration of hyoscine by the rectum procured him regularly twelve hours' sleep, a result I have never seen from it in any other instance. Notwithstanding this, I was not surprised one morning to find that my patient had decamped. As I have said and repeated, a morphia *habitué* must be in real earnest if he wish to get well, but protestations of energy are no proof of strength. Patients who are too self-reliant are often inclined to modify their treatment unknown to the doctor, according to their own ideas, whereas past failures being a proof of their

incapacity, it would be far better if they would leave themselves entirely in their adviser's hands. The best criterion of earnestness is consent to all the conditions laid down, more particularly those of which the patient does not understand the import.

Two instances of cure have already been given; of the others, one was a lady, who followed the treatment laid down under the supervision of her husband, whom she consented to take as her jailor; the fourth a gentleman, who owed his recovery to the intelligent care of his servant, who carried out the instructions I gave him to the letter. The fifth was the first case in point of time, that upon which my first paper on the subject was founded, and referred to an *habitué* of five years' standing, addicted to cocaine and alcohol as well.* The last case of cure is that of a gentleman who had taken morphia for 14 years, and who had been in special establishments half-a-dozen times at least. The great bar to his recovery was a fixed pain in the head and cerebral excitement, which occurred when-

* This case forms the subject of my first memoir on the question in *L'Encephale*, 1887.

ever he was in a state of craving. The case was peculiar in that it was the only one in which I ever observed a persistence of sexual power, which was certainly increased. The patient had a large family, the youngest child being six months old, and the only one whose health was at all defective was the eldest, born before the father had commenced to take morphia. Gelseminum and codeine were successful in controlling the pain, and for the last week the patient took Turkish baths regularly. Shortly after the cessation of his treatment he began to drink heavily, and this soon led to a return to morphia.

CHAPTER VII.

IN the course of treatment a number of minor discomforts are complained of, for which the patient is always anxious to try some new medicine, more particularly anything with a name ending in "ine," and so it happens that the sitting-room of a morphia *habitué* is often almost as well stocked with poisons as a toxicological laboratory. Although relief must, of course, be afforded when really necessary, the mania for taking a different drug for every symptom must be combatted, otherwise it will lead to an accumulation of opposite remedies, the result of which is anything but salutary.

The action of SPARTEINE has been already dwelt upon, but I think that the doses fixed for hypodermic injection by some French writers are much too high. I have known the most uncomfortable sensation about the heart follow an injection of two centigrammes, and I believe that the administration of an overdose of this drug has caused

death. I now prescribe sparteine by the skin but rarely, preferring to sustain the action of the heart by an even tonification to giving it sudden pulls up, from time to time. The dose by the mouth is about five or six centigrammes three times a day. A patient of mine, suffering from cardiasthenia, took sixteen centigrammes instead of four by the mouth, in consequence of a mistake—the chemist having written a tablespoonful instead of a teaspoonful of the mixture. Had I not been obliged to tell him of the mistake in order to avoid a repetition of it, I do not think he would have suspected the overdose. As it was he said he felt "queer about the heart".

DIGITALIS has also been dealt with in Chapter V., but I may couple it with sparteine in saying that one of the two should be given as soon as the amount of morphia taken daily does not suffice to keep the pulse of full amplitude—that is to say, just as soon as the plateau appears in the sphygmographic tracing, before the time fixed for each morphia injection. The dose is a question of idiosyncrasy, and I have quite recently seen another

patient whose heart's action became depressed and irregular after a few days, at eight drops a day.

An overdose of a cardiac tonic, digitalis, sparteine, or cocaine (for, although I do not prescribe it, many morphia patients come to me taking it on their own account), exaggerates the discomfort which a suitable dose would relieve, but within certain limits the symptoms due to an overdose may be relieved by the administration of a supplement of morphia. I am speaking, of course, of morphia *habitués* and of those who have taken an overdose as a substitute for morphia. When, as it sometimes happens, the excessive dose has been taken by an *habitué* from that recklessness which will lead such patients, particularly when it concerns cocaine, to go on injecting successively a little too much of the one, and then a little of the other to neutralise the first, the best treatment consists of dry friction, mustard leaves, particularly over the heart and nape of the neck, and a moderate amount of brandy and coffee by the mouth and rectum. I have seen some cases of great gravity, all of which recovered by these means.

TRINITRINE is useful where there are symptoms of chilliness, and in suitable doses gives a faint illusion of the hypodermic injection. When taken until its physiological action is produced we can obtain a break in the monotony of the craving; and, supposing that from the time the uneasiness first appears until that fixed for the injection a couple of hours have to be passed, they may be broken up into periods of ten minutes of craving, with five minute intervals of comfort, which is far less distressing than two hours absolute misery. The compound trinitrine tabloids of Burroughs & Wellcome are elegant preparations, and the addition of a small quantity of nitrite of amyl renders them more efficient.

NITRITE OF AMYL and ISO-BUTYL NITRITE have the same properties as trinitrine, but in a more powerful, rapid, and ephemeral degree. One of my patients carried a small bottle of the first in his pocket, which he smelled at repeatedly, and to which he attributed his recovery. Like trinitrine, they are not tolerated by every one, and should be used with caution wherever there is

organic or nervous trouble about the heart. As in angina pectoris a small dose may do good, but a large one often aggravates the evil.

BROMIDE OF SODIUM, or the combinations of the bromides of sodium and ammonium are recommended by Dr. Mattison as a routine treatment, and I must confess that I know of no means so efficacious of combatting the morphine-nostalgia as I have termed the mania of the syringe. Patients will often dilute their solutions four or five times in order to have a larger amount of fluid to inject, but when they take bromide they are more ready to content themselves with the effect of the morphia, and their brain cells cease to be polarised in the direction of the syringe.

The fluid extract of COCA is a valuable preparation for relieving restlessness, and morphia patients can generally take it in teaspoonful doses, frequently repeated. The morphia habit creates a tolerance for coca and cocaine, but those in attendance upon these cases should recollect that it is not the same for them. In June, 1888, I prescribed this fluid extract in half teaspoonful doses to a young lady

suffering from nervous prostration. The very first dose was followed by symptoms of poisoning, giddiness, prostration, small rapid pulse, pain at the epigastrium, and impossibility to remain in any but a recumbent position. It was three days before she entirely recovered. In July, 1889, a young lady in attendance upon her cousin, a morphia patient, coming home very tired and nervous, took the amount of the extract of coca generally taken by her relative several times a day, and which was probably about the third of an ounce. She was shortly afterwards seized with vomiting and prostration, and when I saw her at the expiration of an hour, the breathing was excessively shallow and suspirious, pulse 140, the whole surface cold and clammy, the patient convinced that she was going to die, and complaining particularly of the head and heart. The way in which the pillows and bolster were thrown aside, and the head buried in their place was characteristic of poisoning by cocaine, as was also the position of the body, a peculiar sprawl on the side, leaning over on the stomach as much as the flexion of the limbs would permit. The patient

was too incapable of collecting her faculties to make any reliable answer, but said "Yes," in answer to my inquiry as to whether she saw a peculiar spectrum around the candle, described to me under similar circumstances by a morphino-cocainist, and consisting of concentric coloured rings like a lunar rainbow. None of the remedies usually applied in such cases were successful. I had administered on arriving a hypodermic injection of morphia, which I had expected to see relieve the symptoms at once. Nitrite of amyl gave no better result. Coffee and mustard leaves had been resorted to before my arrival; and, as I had no personal experience of the hypodermic injection of strychnine in such cases, I hesitated to use it, except as a last resource. With coffee, brandy, and inhalations of ammonia she gradually got better, but remained in a sufficiently critical state to require medical supervision the whole night, a medical friend remaining in the house. What is still more remarkable, the next day she felt and appeared quite well. This is so unusual after an excess of cocaine, that had it not been for certain symptoms, I should have felt

inclined to look upon the whole affair as an attack of hysteria.

I am convinced that there is still much to be learned about coca and cocaine, and some of the statements made by surgeons respecting the latter are profoundly injudicious. It is often said that several grains of cocaine may be injected hypodermically without danger, but many people cannot stand even a fraction of a grain without discomfort, and are seriously inconvenienced by a dose of a grain. A couple of years since I painted the fauces of a middle-aged gentleman, a general officer, with a one-in-twenty solution, of which it is impossible that more than three or four drops, at the outside a fifth of a grain, could have been absorbed. Within a few minutes he looked strange, and felt giddy as if he were going to faint. I laid him down flat on the ground, when all the symptoms passed away, returning as soon as he attempted to rise up. As it was during my consulting hours, I was obliged to take him into an adjoining room, and, although brandy was administered to him in sufficient quantities, it was fully an hour before he recovered.

It is an interesting fact, and one that has not been noted, that the acquired tolerance for cocaine may be lost. One of my patients, who formerly took fifteen grains of cocaine daily, and as much morphia, cannot at the present day take a quarter of a grain of cocaine, or a teaspoonful of liquid extract of coca, without being prostrated in consequence for several days. I have no desire to undertake a crusade against coca, but I think it right to utter a warning against its misuse as a cerebral or mental stimulant, which I feel sure the future will endorse. The different wines and elixirs of coca have at the present day an immense vogue. When Weston was supposed to keep himself going by chewing coca leaves, the leading English physiologists came to the conclusion that the belief in its virtues was a delusion. Experience shows that the legends of the South American Indians performing feats of strength and endurance, thanks to its aid, may be received as historical facts. But coca is not without danger, and it has already been my lot to witness nervous and cerebral breakdowns under its use, which could not be attributed to any other cause.

CANNABIS INDICA. Of this drug I have no personal experience, and the evidence concerning its value is somewhat contradictory. Dr. Mattison advises teaspoonful doses of the fluid extract, one-in-one, to be given and repeated frequently. In conversation with myself he assured me that there was no danger, and that its toxic power is feeble. It is his practice to give large doses of bromide for a few days, and then to withdraw the morphia rapidly, the cannabis Indica being given as a hypnotic. He says, moreover, that small doses are exciting, and therefore worse than useless. Notwithstanding the assertions of Dr. Mattison, I have never ventured upon the larger dose, but, on the other hand, after what he has said, I did not think it worth while to try the smaller. An Indian practitioner contributed a short paper to the *Lancet* stating that small doses of the extract, one to two grains in pills, had cured two cases of opium habit that he had been called upon to treat; but, although he added that the patients did not know what they were taking, success of the kind is so contrary to all experience that I cannot help thinking there was some

deception ; of course I mean on the part of the patient. Although morphia patients, like all others, are quite free to put an end to the treatment whenever it becomes irksome, I have never yet met with one sufficiently straightforward to tell me that he would prefer to give up the attempt. But it is extremely common for them to pretend to get on phenomenally well, with or without the aid of some drug, and at the expiration of a short time to declare they are cured. A few months ago a case went the rounds of the medical press of a woman who had acquired the morphia habit, and who was cured by a German physician with a few doses of tincture of castoreum. The Indian cases probably belong to the same category.

ATROPINE has the same action in those addicted to the morphia habit as under other circumstances, being, as a rule, an absolute controller of perspiration. A hundredth part of a grain twice a day by the mouth is sufficient. Since the introduction of the hypodermic tabloids, some morphia *habitués*, Americans more especially, have been accustomed to use a combination of morphia and atropine. In

the only case of the kind I have met with, the heart was left, after the cure, with a very tired beat. In a case of poisoning by atropine over three fiftieths of a grain were taken hypodermically by a morphia *habitué*, the whole of the body became intensely dry and red as a boiled lobster in the course of five minutes. The sight was lost to such an extent that very little could be perceived but light and darkness, the throat dry and constricted, and the heart rapid and incoherent. A third of a grain of pilocarpine restored the patient to absolute comfort, with moist skin and throat, and a regular action of the heart, but the vision did not become normal for several days.

CODEINE and its phosphate in the form of the hypodermic tabloids produce a certain amount of calm, but I have not used them sufficiently often to have formed a definite opinion of their value.

GELSEMINUM is of use in dental neuralgia, but it is better for the patient to have his teeth, which are nearly always in a bad state, attended to before commencing the treatment. If this is not done, the carious teeth make themselves felt at a critical

moment, and often serve as an excuse for a relapse.

HYDRATE OF AMYLENE is sometimes useful, but I have not found it reliable. It is the routine narcotic at the Maison de Santé, at Schönenberg.

SULPHONAL is one of the newly introduced hypnotics. It is not easily soluble, and is, therefore, difficult to administer in a mixture, unless given with gum acacia or tragacanth. The dose is from twenty to thirty grains, and the drug often acts on the night following its administration. I have recently administered it extensively, and think that if reserved for a critical moment it may be of service. After a few doses, however, it usually fails, in morphine cases, to procure sleep. Exceptionally it may render the greatest service, and I have recently seen two cases where it proved remarkably useful. The first was a lady who had been unable to make the slightest progress under the direction of her husband, himself a medical man, chiefly because she suffered from constant discomfort about the heart, entirely caused by the hypodermic injection of sparteine. I substituted digitalis, and insisted upon

having the complete and absolute direction of the case. In fifteen days the amount of morphia was reduced from thirty to eight centigrammes, and there had not been a single uncomfortable feeling of any importance. Under the influence of sulphonal there were from ten to twelve hours' sleep each night. At this point the husband, foolishly imagining that he had learned all my little secrets, insisted upon resuming the treatment himself, the result, as I had foreseen, being an immediate relapse, the one secret of success being the separation of husband and wife.

The second case was that of a lady brought to me by one of the leading physicians of Havre. She had been taking sulphonal for some weeks, and under its influence she had been able to reduce by herself from sixty centigrammes to ten, and it was in order to make further headway that I was consulted on her account. In a third case, that of an American lady, sent to me by a physician in San Francisco, sulphonal was so efficacious for a time that the patient declared it relieved her even more than morphia. This effect did not, however, prove lasting.

HYOSCINE. In one instance it gave twelve hours' sleep in the dose of 1-75 of a grain by the rectum, but in other cases I have been entirely disappointed by it.

VALERIANATE OF AMMONIA is a refreshing sedative, and was recommended by De Quincey. It is one of a number of small means which I nearly always employ, and the sum of which contributes largely to the patient's comfort.

BICARBONATE OF SODA I have already spoken of at some slight length. Slight digestive difficulties are often relieved by it.

I mention AVENA SATIVA and HOPEINE only to put morphia patients on guard against them as therapeutical frauds.

Besides the preceding therapeutic remedies, a number of other physical agents and appliances may be made to render the greatest service. HOT WATER ENEMATA are the best means of controlling diarrhœa. MUSTARD LEAVES over the heart relieve nervous feeling about that organ, and, at the nape of the neck, soothe cerebral restlessness and n somnia. The HAMMOCK combines the possibility of rest and motion, and is therefore, useful when

there is that state of restlessness and prostration which makes it equally difficult to remain still or to keep moving. The patient experiences the fidgets, or, as the French call it, "*des inquietudes*" (a sensation of which it is very difficult to give a description), chiefly in the forearms and shins. The same kind of sensations, although in a lesser degree, are sometimes felt in gout, neurasthenia, and other conditions, and often delay sleep, but they may be relieved as a rule by friction, and pass off after a time. The morphia fidgets are characterised by the fact that though they be masked by suitable treatment, as soon as the application is suspended they return with renewed intensity, and can only be arrested by a dose of morphia. Morphia patients will understand the description of this restlessness as a kind of organic anxiety, "*anxietas tibiarum*," a nervous orgasm caused by the physical expectation of constantly impending but delayed relief. When the treatment is conducted too quickly this restlessness is also felt in the brain. There is then a maximum of prostration, and the patient is compelled to lie on a bed or a couch ; but rest is impossible, and the head

is tossed from side to side in fruitless search of repose, whilst the general restlessness prevents any lengthened stillness of the body. With moderate progression, the degree of unrest is quite bearable, and, even when a complete cure has not been obtained when the means I advise are employed, I have constantly seen the hypodermic injections given up, and a considerable decrease made in the quantity taken by the mouth or rectum, without distress.

For the different degrees of restlessness I employ the HAMMOCK, which is often sufficient, FRICTION, FARADISATION, and the TURKISH BATH. Should there be cerebral restlessness, as will happen when the patient has been deceiving and is striving to recover his ground without making a confession, small MUSTARD LEAVES at the nape of the neck or the HOT WATER BOTTLE are what I usually rely upon. ASCENDING GALVANIC CURRENTS, of from 3 to 5 milliampères, are also of the greatest service.

HOT BATHS promote calm and sleep, but they are not to be compared with the HOT AIR BATH, which I always use at the end of the treatment, both for procuring sleep and allaying restlessness.

The moderate restlessness which occurs when patients are properly treated disappears entirely in the hot-room of the TURKISH BATH, and the subsequent MASSAGE and COLD DOUCHE form the most perfect sedative that a morphia *habitué* can be allowed. There is no better means, moreover, of dealing with the revival of the craving that occurs afterwards from time to time, especially under the influence of indigestion. If a Turkish bath is not available, the best substitute for it is Ellis' portable apparatus, which several of my patients have used with success.

MASSAGE À FRICTIONS is by itself useful in soothing the fidgets, but electricity in the form of FARADISATION is better. The sensation caused by the faradic current covers this distressing sensation perfectly.

GALVANISM is, according to Dr. A. Mattison, the best mode of treating the pains that sometimes threaten to compromise the result at the last moment. I have also found the ascending current second only to bromide in relieving some of the head symptoms.

THE END.