COMPARISON OF THE QUICK AND THE SLOW METHODS OF THE TREATMENT OF MORPHINISM.*

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Perhaps an explanation of the title of my paper would make it a little more clear. We will call all forms of treatment where the morphin is withdrawn at once, or where it is withdrawn within five or ten days, a quick method, and where the reduction is gradual and slow and extends over a period of several weeks or months we will term a slow method.

There has, within the past few years, been much advertising of quick cures for morphinism. Nearly every newspaper and magazine, and I am sorry to say some medical journals, contain one or more of these advertisements, and as it has been for the past dozen years my exclusive business to treat narcotic and alcoholic patients I have been much interested in searching for the best method of treatment. I have investigated several of the so-called three, five and ten-day cures. At none of these so-called quick cures do they do anything like what they advertise to do. The morphin is withdrawn within the specified time in some instances, to be sure, but the patient is far from being restored to his normal condition. Often they are in a very much worse condition than as though they had never taken any form of treatment. Hydrobromate of hyoscin is probably the remedy used in all these so-called quick cures. When the remedy is given to certain individuals in proper doses it apparently does remove the desire for morphin. The patient recovers from his hallucinations after five to ten days, soon begins to have an appetite and makes a fair recovery within a few weeks' time, but unfortunately this favorable ending is not the rule but the exception. It appears impossible to decide in advance which patients will tolerate the remedy and be so favorably influenced, and which may be permanently injured by the use of it. While I believe that death from the use of this drug is rare, mental derangement is common. I have known four patients where the mental equilibrium was not restored for several weeks and one patient that was in the insane asylum for six months, when she had somewhat improved and was discharged, but she has never yet returned to her normal condition, and it has been now more than three years since she was released from the asylum.

I have a patient under treatment at the time of writing this paper who was taken to an institution where they advertise to cure the morphin addiction in from 24 to 30 hours. Two weeks later his friends were notified by the physician in charge of the institution that the patient was insane and that he would probably die, and they had better take him home. He was brought to my place and two nurses were required to care for him for two weeks, and he had to be constantly watched for over a month. He was taking as much morphin when he came to me as he did before he took the hyoscin treatment. Now, at the end of two months, he is free of the morphin and seems in a fair way to regain his mental balance.

Dr. Crothers reports having tested the effects of hyoscin in several cases of morphinism and also in alcoholics and always with bad results. In each case delirium with hallucinations and delusions, came on after

the second or third dose and continued from two to four weeks. In three instances the delirium lasted two months, and in one instance the mind did not recover and the patient was placed in an insane asylum, where he still remained two years later. Two alcoholics never recovered fully; while not drinking, they have become mild cases of dementia, with great prostration. He also reports a case of a physician who treated himself with large doses of hyoscin, who died suddenly, and that there were reasons for believing that this drug was the cause of death. Also another case treated by a physician with large doses of hyoscin and the morphin removed at once; the delirium lasted for two weeks, then suddenly terminated in coma and death.

Dr. Wagner reports several cases that he treated in the Cleveland City Hospital with hyoscin hydrobromate. He says that this treatment is not devoid of danger, and it is most important that no case be attempted without a special nurse day and night during active treatment, so that the patient is not alone for a minute during this period.

Dr. John Punton says that the treatment of morphinism with hyoscin is unsatisfactory and always contains an element of danger. A large percentage of patients treated after this method regain strength very slowly. One physician, with whom I am acquainted and who had been, up to the time of taking the hyoscin treatment, a strong, healthy man, was unable, after eight months, to attend to his professional duties, and I have known several similar cases.

This method of treatment is irrational and unsafe, and while, as I have previously said, there are some patients treated satisfactorily, the large majority are made only worse by the treatment. There has, as yet, been found no substitute or antidote for morphin, while with the gradual adaptive method we have a perfectly safe and sure form of treatment. Every patient not afflicted with some painful complicating malady who desires to be cured and will co-operate with the physician can be cured, and with very little discomfort. There is no class of patients who shrink from pain and discomfort as do morphinists. There is no other class that has so little fortitude. Why are not these unfortunates entitled to our consideration in making their recovery as painless as possible, just as much so as are surgical patients? There is no class that is more desirous to be relieved of their affliction than is the better element in the bondage of opium, remembering that among the many thousands of addicts there are very, very many of the best educated and most brilliant minds, many with a finely organized, highly developed nervous system, who have worked on a high tension, who have either through their own or some other person's indiscretion or carelessness become the slave of morphin. Others who have been unfortunate in having a long and painful illness, when it seemed almost impossible to endure the suffering, have been given the drug until they have not had the necessary will power to discontinue the morphin after they had recovered from such afflictions. These patients are entitled to our very best efforts to relieve them and with as little suffering as possible.

Thousands of persons are to-day enslaved with the morphin habit that would have taken treatment and become free of the addiction did they not have such a dread and horror of the suffering that they anticipate they must endure in being relieved of it.

There have been several forms of slow withdrawal advocated by different men, such as withdrawing a small

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fraction of the daily dose each day or withdrawing a certain amount every third or fourth day. Also the adaptive slow withdrawal.

No patient can be kept anything like comfortable where a certain amount of his daily dose, or a certain part of a grain is withdrawn at a certain time or at fixed periods. Such a plan would assume that every day was the same, that is, that a person felt the same every day and there were no headaches, no neuralgias, no indigestion, and a thousand other causes that will produce extreme discomfort if the quantity of the drug is lessened at such times. Such a system will be necessarily more or less of a failure, unless the reduction is so very slow and is made to extend over a very much longer period than would be required by the adaptive plan. When the above plan is practiced there is sure to be so much discomfort, nervousness and nausea that there will be little or no physical improvement during the period of withdrawal, and consequently there will have to be a longer period of convalescence than as though the patient had been kept more comfortable by the adaptive plan and had been regaining health and strength during the entire time, as a large majority of patients will do.

The adaptive plan, as I practice it, I have described in papers previously read in this section, so that it is unnecessary to go into details. It may be well, however, to give the outlines of the plan of reduction. When the patient comes for treatment he is probably taking from two to four times as much morphin as he requires to keep him comfortable. This surplus may be withdrawn at once. He is also very likely taking one or more other drugs which may be discontinued at once. Perhaps it may require four or five days to find out just how much reduction can be made and still not make him too uncomfortable. We may have reduced the quantity too much and the dose have to be increased a little before we get him started just right. When the quantity has been found that will keep him almost comfortable from one dose time until the next, we make no change in this amount for three or four days, or until the patient is feeling very well, when another small reduction is made, so small that he will hardly be conscious of it. When we are again sure that the amount then being given is going to keep him comfortable, we make another small reduction. These are made only when the condition of the patient has so improved that the reduction will not make him too uncomfortable. Thus we continue the reduction until the quantity used is so small that it can be withdrawn without the patient's knowledge of it. This amount will seldom be more than 1/120 gr. In this way the large majority of morphinists can be kept more comfortable during the entire withdrawal period than while taking the drug themselves. Of course they will require a supportive and tonic treatment, combined with a nourishing diet, during the withdrawal period, which should be continued for some time afterward, depending on their condition.

One of the most difficult and important problems in the management of all cases of morphinism is after they are free of the morphin. Usually within three to ten days after the morphin has been entirely withdrawn they are feeling well and are anxious to get home, and in the large majority of cases it is impossible to get them to stay as long as they should to insure them as much as possible from relapse. For some time after the desire for the drug has been entirely removed there is an unstable, weak and eccentric mental condition,

and during this time slight pain, trouble, grief or insomnia will often be sufficient cause to induce him to take a dose or two for temporary relief. Each dose weakens his resistance and the mania is quickly recontracted and is sure to happen if he allows himself to take the first dose. As much time as is necessary to secure a good physical and mental condition should be spent under the personal care of his physician. This is a case where if there is a mistake to be made it is profitable to make it on the safe side.

To recapitulate. The quick cure by hyoscin is irrational, unsafe and unsatisfactory. The diarrhea and vomiting which always occur after the sudden withdrawal of morphin, whether the hyoscin is given or not, which lasts from two to ten days, is very distressing, and the hallucinations, which last for an uncertain length of time are unpleasant, to say the least, and from which the patient may never recover. Relapses, I believe, are much more frequent and convalescence is usually greatly protracted.

The adaptive slow withdrawal is rational, safe and satisfactory. No diarrhea, vomiting, extreme nervousness or any of the severe symptoms shown with sudden withdrawal are ever produced. Convalescence is well advanced when the last small amount of morphin is withdrawn and nearly always rapidly completed. Relapses are much less likely to occur.

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DISCUSSION.

DR. T. D. CROTHERS, Hartford, Conn., said that the subject of morphinism has a personal interest to every physician, because it is one of the most frequent addictions among active workers in the profession. From some studies which he made five years ago and which have since been fully confirmed, he is convinced that at least from 15 to 20 per cent. of physicians in active practice are victims of morphia and spirit-taking. Dr. Pressey's outline of the methods of treatment is very suggestive and demonstrates the efficiency of certain drugs when given with care and skill. Of course, there can be no specifics because the addiction is both a psychosis and a neurosis. All physicians have seen patients make a good recovery by use of hydropathic measures, and often persons recover from the exclusive use of some particular drug. It would not do to reason from this that all patients will recover by the same means. Each case is a law to itself and must be treated individually. There are no rules and no special classes of remedies which will apply to every patient.

DR. H. G. BRAINARD, Los Angeles, declared that he was astounded at the statements made by Dr. Crothers and thinks that it is a sad reflection on the condition of the physician. Dr. Brainard said that he knows that in California there is no such proportion as 10 or even 5 per cent. of physicians who are victims of the morphin habit. He is sure that such conditions do not obtain in the profession throughout the country. He is sorry for the people of Connecticut if there is such a condition of affairs there.

DR. A. J. PRESSEY said that the figures given by Dr. Crothers must be an estimate, as he does not understand how any one could get exact and reliable statistics on such a subject. Dr. Pressey does not think that there is any such proportion of morphin-users among physicians in any part of the country. More than half of the patients he treats are physicians, but that does not mean that half of all the morphin habitués are physicians. Too many physicians take this drug, but Dr. Pressey does not think there is quite 2 per cent., perhaps about 1 per cent. He does not know just how to get the exact figures.

DR. T. D. CROTHERS, Hartford, Conn., said that the facts may be startling, but the evidence on which they are based fully sustains them. A general study of the habits of physicians in four of the largest cities of the country showed that from 10 to 15 per cent. were drug and spirit-takers. In one city a prominent daily paper made inquiries and concluded that at least 15 per cent. of all persons practicing medicine, includ-

ing members of all the schools, were spirit and drug takers. In other cities the percentage has been estimated as high as 20. In one city over 11 per cent. of all physicians were known or reputed to be using drugs. Dr. Crothers said that he was not prepared to defend any exact statistical percentage as indicating the use of drugs and spirits among the profession, but the discussion of this subject for the past five years since his first study of the habits of 3,500 physicians which were made at that time have amply confirmed the original conclusions. One of the reasons for this is the failure of teachers in medical colleges to make prominent the dangers from both alcohol and opium. The young graduate seldom has any knowledge of the risks and perils from indiscriminate use of these drugs, and as a result many of the profession become victims at first secretly, then openly. This is one of the great personal dangers confronting the profession that should be studied and removed in the near future.

LAWS CONCERNING TEACHING HYGIENE.*

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It has recently been my work in another medical society to compile and analyze our present laws relating to the teaching of hygiene, 45 state and 1 federal, all more or less elaborated. This time-consuming task was undertaken with ideas that I have been compelled to alter radically in the progress of the study. My anticipations were based on certain general—somewhat pessimistic—statements in lay, scientific and medical current literature; but the exact details now reported should be known to all physicians interested in preventive medicine.

It is not my intention to discuss this legislation further than to give the facts as they stand in the present laws.

The laws existing in 1903 (none have been altered since then) are published in the *Bulletin of the American Academy of Medicine*, April, 1904, as a preliminary report of the committee to investigate the teaching of hygiene in public schools. The details of all the statistics I shall give can be found in appendix A of the first installment of the committee's report published in the *Bulletin*, June, 1905.

It is well known that the initiator of public sentiment that has resulted in this legislation extending over all territory under our jurisdiction, was the Woman's Christian Temperance Union. Its immediate aim has been and is to have hygiene, in connection with instruction as to the nature and effects of alcohol, tobacco and other narcotics, taught on a scientific basis in public schools as thoroughly as is arithmetic or any other branch required by law. We find accordingly in all the laws the phrase "physiology and hygiene with special reference to the nature and effects of alcoholic drinks and other narcotics." There are several variations in this wording, the reasons for which it is not necessary to discuss at this time. The general interpretation of this clause is that physiology and hygiene shall be taught, including the special topic indicated.

The nine other chief details occur irregularly, most of them appearing first during the five years after the original law of 1882 in Vermont. Their *raison d'être* is that it seemed necessary to specify them in order to secure enforcement of the spirit of the law. Any physician who has had experience in our political methods can easily imagine the evasions these laws have met, in consequence chiefly of the opposition of one of the largest commercial interests, as well as from certain social

influences; from the indifference or ignorance of many, and from teachers' lack of preparation for teaching science. Without going further into their history, let us now examine these nine legal specifications.

I. SPECIFICATIONS CONCERNING WHAT SCHOOLS SHALL TEACH HYGIENE.

The federal law specifies all public schools, including Indian and colored, in the territories and District of Columbia, and military and naval academies.

Twenty-three state laws specify "all public (common, free) schools."

Twenty-two specify "all schools supported wholly or in part by public money, or under state control," Illinois and New York adding all normal schools, teachers' training classes and institutes, and schools connected with reformatory institutions. Private schools having special charters are "under state control," but the law is not generally interpreted to include them. The law of Michigan, however, specifies all such schools, and the law of Massachusetts all private day schools except those solely for instruction in particular branches. Alabama specifies colleges; Indiana, Maryland, Minnesota, Ohio, Pennsylvania, Utah and Wyoming specify "all educational institutions" aided by state funds. This would include state universities, colleges and normal schools, certain institutions for study of special subjects, schools for defectives (blind, crippled, deaf mutes, feeble-minded); schools for the neglected, destitute and incorrigible; schools in reformatory and penal institutions. I do not know how literally these seven laws are enforced. As a matter of fact, many of the 22 laws specifying simply "public schools" are interpreted to include normal, reformatory and some others.

This detail of the 46 laws differs little anywhere in actual intent, and the same is true of the next.

II. SPECIFICATION CONCERNING PREPARATION OF TEACHERS.

Fifteen states have only the general school law requiring examinations of teachers in all subjects ordered by law to be taught. Thirty specify examination in this branch as in others, Idaho excepting primary teachers; New Jersey, teachers of music, drawing, manual training, etc. The federal law does not mention examination of teachers in military and naval academies.

III. SPECIFICATIONS AS TO WHAT PUPILS IN THESE SCHOOLS SHALL RECEIVE INSTRUCTION.

Fourteen laws do not specify what pupils shall receive this instruction, and 23 specify "all pupils." California specifies all grades, in all classes, during entire school course; Connecticut, "above third grade and below high school;" Illinois and New York, "below second year of high school;" New Hampshire, "above primary grade;" South Carolina, "as far as practicable."

This detail as to teaching hygiene in primary and grammar grades is influenced by the fact that in round numbers out of five million pupils entering the lowest primary grade only one million go on to grammar grades, and only one-quarter of a million enter high school. Nineteen-twentieths of the pupils, and they of the poorer classes, would receive no instruction in hygiene if it were confined to high schools; sixteen-twentieths, none if it were confined to grammar schools.

IV. CONCERNING METHODS AND THOROUGHNESS OF INSTRUCTION.

Fourteen laws make no specification as to whether the instruction shall be oral or by text-book. Nine laws specify "text-books in the hands of pupils;" nine specify

* Read at the Thirty-third Annual Meeting of the American Public Health Association, Boston, September, 1905.