

## Part First.

### ORIGINAL COMMUNICATIONS.

#### I.—DISEASED CRAVINGS AND PARALYSED CONTROL: DIPSOMANIA; MORPHINOMANIA; CHLORALISM; CO- CAINISM.

By T. S. CLOUSTON, M.D., F.R.C.P.E., Physician-Superintendent, Royal Edinburgh Asylum for the Insane; Lecturer on Mental Diseases, Edinburgh University.

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*Morphinomania.*—The habit of taking opium differs widely from dipsomania in this respect, that the one is an absolutely unnatural and artificially induced appetite, while the other often proceeds out of the ordinary habits and needs of mankind. They differ as a drug differs from a food. But they have this in common, that in nine out of ten cases only certain kinds and qualities of brain can acquire them. Ordinary mankind cannot, fortunately, become dipsomaniacs in the mass, and still fewer of them could take to opium in excess. The greatest tolerance of opium as well as the keenest craving for it seems to exist among the Chinese, in the form of smoking, of any people. We know little of the psychological upbuild of the Chinese brain, or of the prevailing morbid heredities to which it is liable, but it seems clear that a general capacity to endure, and a patient resignation to things as they are, must be one of the most necessary qualities of millions of that stagnant, overcrowded country. A race without these qualities would never have solidified itself into the political and social condition of China, and remained in that condition for hundreds, or possibly thousands of years. The political heredity of a Chinaman must be so strong and definite that any other ideas than those of his ancestry must be utterly out of consonance with his mental habit. But even this cast-iron state of feeling from generation to generation cannot have utterly obliterated the spontaneity or the individualism of the *genus homo* in China. Is it a tenable hypothesis that the use of opium there is so prevalent and so keenly craved because it makes the quality of endurance more easy, while at the same time it creates an artificial and purely subjective state of mind in which unlimited scope is given to imaginary individual choice? It takes the Chinaman out of China, where no man has any choice to speak of, into a paradise where there are no mandarins, no struggles for existence under the most unfavourable

conditions, and where there is unlimited scope to live. In Europe, and in the only conditions with which we have to do, the opium habit is rare, but it prevails sufficiently to make its study an important one from both the mental and the bodily points of view. Unfortunately, one man of genius has so glorified and idealized the mental effects of opium as felt by himself, that we poor dryasdusts of science have no sort of chance of correcting and enlarging the picture he has made a part of English literature. Here is what the English opium-eater says:—

“O just, subtle, and all-conquering opium! that, to the hearts of rich and poor alike, for the wounds that will never heal, and for the pangs of grief that ‘tempt the spirit to rebel,’ bringest an assuaging balm;—eloquent opium! that with thy potent rhetoric stealest away the purposes of wrath, pleadest effectually for relenting pity, and through one night’s heavenly sleep callest back to the guilty man the visions of his infancy, and hands washed pure from blood;—O just and righteous opium! that to the chancery of dreams summonest, for the triumphs of despairing innocence, false witnesses; and confoundest perjury; and dost reverse the sentences of unrighteous judges;—thou buildest upon the bosom of darkness, out of the fantastic imagery of the brain, cities and temples, beyond the art of Phidias and Praxiteles—beyond the splendours of Babylon and Hekatómpylos; and ‘from the anarchy of dreaming sleep’ callest into sunny light the faces of long-buried beauties, and the blessed household countenances, cleansed from the ‘dishonours of the grave.’ Thou only givest these gifts to man; and thou hast the keys of Paradise, O just, subtle, and mighty opium!”

“That my pains had vanished, was now a trifle in my eyes; this negative effect was swallowed up in the immensity of those positive effects which had opened before me, in the abyss of divine enjoyment thus suddenly revealed. Here was a panacea, a *φαρμακον νήπενθες*, for all human woes; here was the secret of happiness, about which philosophers had disputed for many ages, at once discovered; happiness might now be bought for a penny, and carried in the waistcoat pocket; portable ecstasies might be had corked up in a pint bottle; and peace of mind could be sent down by the mail.”

Here is his physiological and psychological analysis of the difference between the effects of opium and alcohol:—

“But crude opium, I affirm peremptorily, is incapable of producing any state of body at all resembling that which is produced by alcohol; and not in *degree* only incapable, but even in *kind*; it is not in the quantity of its effects merely, but in the quality, that it differs altogether. The pleasure given by wine is always rapidly mounting, and tending to a crisis, after which as rapidly it declines; that from opium, when once generated, is stationary for eight or ten hours; the first, to borrow a technical distinction from medi-

cine, is a case of acute, the second of chronic, pleasure; the one is a flickering flame, the other a steady and equable glow. But the main distinction lies in this—that, whereas wine disorders the mental faculties, opium, on the contrary (if taken in a proper manner), introduces amongst them the most exquisite order, legislation, and harmony. Wine robs a man of his self-possession; opium sustains and reinforces it. Wine unsettles the judgment, and gives a preternatural brightness and a vivid exaltation to the contempts and the admirations, to the loves and the hatreds, of the drinker; opium, on the contrary, communicates serenity and equipoise to all the faculties, active or passive, and, with respect to the temper and moral feelings in general, it gives simply that sort of vital warmth which is approved by the judgment, and which would probably always accompany a bodily constitution of primeval or antediluvian health. Thus, for instance, opium, like wine, gives an expansion to the heart and the benevolent affections; but, then, with this remarkable difference, that in the sudden development of kind-heartedness which accompanies inebriation, there is always more or less of a maudlin and a transitory character, which exposes it to the contempt of the bystander.”

No doubt De Quincey was thus idealizing the effects of his favourite but fatal drug. We cannot take what he says as a scientific description of even the effects of the drug on himself. His imagination was too strong for that, and his literary faculty exceeded his imaginative. Even the amount of sober fact that underlies all this brilliant picture only applies to the effects of opium on his own brain and a few others of similar quality. It is utterly useless as a guide to the effects of opium on the brains of ordinary men. It has no doubt acted as the lure to entice thousands of people to their destruction, for De Quincey's account of the terrible effects of his drug is not read by one for ten that read his prose poem on its joys. And if they did, there are too many minds who ignore the hell that is to follow for the bliss of pleasures near at hand.

No general rule can be laid down as to the psychological effects of the exciting stage of opium, because they differ so greatly in different persons, but the following symptoms are very general:—The higher and finer sense of duty is soon impaired; volition is diminished by even one dose while it remains in the blood; the desire for active muscular exercise or, indeed, for active energising of any sort is much lessened. The appetite for food and the sexual desires are lessened. The intellectual processes are in some cases heightened in intensity; but trains of thought arise more by suggestion, continue more automatically, and are less under control altogether. The imagination is dulled in some cases, but when excited, is no doubt greatly exalted. The feelings are also dulled in some cases, but pleasurably intensified to an extraordinary degree in others. Take De Quincey's description and

modify every statement about fivefold, and probably one would get a general idea of the actual effect of opium on ordinary brains. Looked at broadly, opium in single doses or temporarily taken diminishes the intensity of the faculties that lead to action or inhibition, and intensifies those that lead towards a subjective and introspective life. I need not here enter on the physiological effects or the therapeutic uses of the drug.

When taken in excess continuously for very long periods the mental effects are much more marked and the brain damage greater and more permanent than corresponding excesses in the use of alcohol. Intensify and exaggerate the effects of single doses tenfold, and we get a general idea of the effects of continuous use. In bad cases one may describe the volition, the resistiveness, and the power of attention to objective things, as being paralysed. One effect is very marked and has not been sufficiently dwelt on, and that is the asocial condition it produces. The real opium eater is always a recluse; he shuns his fellows; he lives in the dark; he shirks social engagements; he has lost the sense of comradeship; and he avoids the duties of natural affection because he does not feel its ties. His own too subjective world is all he wants to live in. He is melancholic after the immediate effects of the drug have passed off. He rejects all the adjuncts and supports of social life,—orderliness, cleanliness, the appearance of his person and his clothes. He prefers to be among a class of society less moral, less educated, less refined, and less evolved generally than that in which he was born. He gets into that state which would at once disintegrate society, and reduce it to barbarism, if not to extinction, were it to become general.

The bodily symptoms and accompaniments of this mental change are well marked. He loses appetite for food, and often has nausea. His relish for exercise is gone; he lies in bed all day. He loses flesh, and looks grey and anæmic. The patient does not sleep well or soundly. The eye is lustreless after the immediate effects have gone, and he cannot look you in the face. Cold is felt intensely; no amount of clothing can keep him warm. The pupils take on a sort of permanent contraction. The tongue is tremulous, like that of a heavy tobacco smoker, or drunkard, or a general paralytic. The hands are often tremulous, and the handwriting altered. The pulse is usually small. The sexual appetite is paralysed.

But, then, is it not the case that many persons take opium habitually for the greater part of their lives, and yet remain strong and healthy, and do good work, often even highly original work? This is undoubtedly so in a few cases; and Christison's remark about persons being opium eaters for years without its being found out by relatives or friends, is certainly true. I lately saw a case where for fifteen years a lady had taken over 19 grains of opium a day, and it had never been suspected by her husband or her

nearest friends. Still more strange, she had been a typical opium eater at one time, had been "cured" by residence in an asylum, and had, after getting home, begun the regulated use I have described, which she never seems to have exceeded except on Sundays, when she usually said she was not well, and stayed in her room. But such are but the exceptions that prove the rule, for they are the few cases in which the dose is not increased, and does not lose its effect. These exceptions are usually strong men who go up to a certain point and stop there, just as many men take a large daily quantity of alcohol, some of them going drunk to bed every night of their lives, and yet keep healthy, live long, do good work, and die "natural deaths."

One of the most characteristic facts of the morphia habit is that the dose which this month produced full effects will next month cease to do so, and must be increased, until enormous quantities of the drug have to be taken daily,—quantities enough to poison those not habituated to the drug ten times over. We all know De Quincey's habit of drinking laudanum in sherry glasses just as we drink wine.

The morbid craving for alcohol may be intense, and the power of inhibition entirely paralysed, but neither the one nor the other can compare with the imperativeness of the morphine craving and the utter lack of any rudimentary trace of inhibition over it.

A morphinomaniac, in an advanced stage of his complaint, is a most miserable object in mind and body. He is manifestly diseased in all his nervous and most of his other functions. There is just one other being on earth who is more miserable-looking and more miserable, and that is the morphinomaniac who is being cured by enforced abstinence. The one is alive; the other is more than half dead. As we shall see, the fight is not altogether for the cure of the deadly habit, but in the first instance to enable the patient to live through the cure.

The following case is a typical one of morphinomania:—A. B., studying for a profession, had, about the age of 20, an illness which left him weak and sleepless. He was distinctly of a nervous diathesis. He had to go in for examinations, and a friend told him that opium was a good thing to take to steady his nerves and to make him sleep, which was his weak point. He tried it, and found its effects delightful, and just what he wanted. He fully intended to stop it when he got strong, and after he got through his next examination. But he got more and more dependent on it, and the giving it up seemed ever harder, and it also seemed unnecessary, for he felt well, ate well, studied, enjoyed himself, and thought the morphia just supplemented his food. He easily persuaded himself that his "constitution needed it," though he always had an uneasy feeling in his mind that it was a dangerous "food" he was getting himself accustomed to, and that its effect might, in the long run, be bad instead of good. Of course it was

easy to stifle this feeling by resolving that he would give it up the moment he began to feel the slightest bad effect. By the time he had taken it in moderate doses for a year or two, he found that the dose, to be efficient, must be much larger than it had been. He entered his profession, and found that his power of facing up the future, of looking and planning, and resolving on any course, was weakened. He was alarmed, and again tried hard to give up his habit, but could not face the pain it caused whenever he tried it. He lost touch with his friends and relatives, and went "to study" in a foreign capital, thinking or fancying that a "complete change" would help him. But the habit grew stronger when there was no one but strangers about him, and settled into a part of his life. He had rheumatic arthritis, and morphia was prescribed for this, which strengthened the habit still more, for he needed large doses; and from that time he knew he was doomed. He again made an attempt to give it up, but could not do so. For about ten years he stayed abroad "studying," now reading a little, going solitarily to theatres and the opera, which he thoroughly enjoyed, like De Quincey, after his dose. He settled down to 10 grains of muriate of morphia a day, taking this usually in one dose in the morning, taking no breakfast, but eating a good late dinner. He was not social, and walked out much at night in bye-ways. He thinks his reason for this was that he knew he was a slave to the habit, and felt degraded and ashamed. It is certain he never wrote to his friends except for money, that he led the life of a morbid recluse, that he did no work, and that he got to be worse and worse in body. When he returned to this country he was a "broken-down" looking man, older than his age, his complexion grey, his eyes changed in expression, his habits morbid and peculiar, and his capacity for work or continuous thinking or living like other men gone. After some years of this life, and when weak-looking and decrepit, his mind being so weakened that he had delusions of suspicion, being untidy and uncleanly, his social habits so sunk that he would see no relative, living in a lower social stratum, his friends, partly by persuasion, and partly by the stern argument of cutting off the supplies of money and morphia, got him to place himself in an asylum voluntarily. On admission, after these twenty-five years of morphia habit, he was a miserable-looking object. He stooped; his gait was weak; he could not look you in the face; his complexion was grey; his eyes blood-shot; his body emaciated; his pulse 90, bounding and soft; his temperature  $100^{\circ}.4$ . His tongue had a large black triangle occupying nearly its whole dorsum, and was excessively tremulous. He had gastric catarrh, and his hand was violently tremulous, as well as his whole body, when he made the least motion. Heard music "as if playing in his ears." Mentally, he presented a mixture of depression, enfeeblement, fear, irritability, and suspicion. He could not think; he could not reason; his whole attention was

concentrated on himself and his bad feelings. He was treated with beef-tea and brandy, but the beef-tea caused diarrhœa, and had to be stopped. He could retain milk, liquid custards, and brandy better than anything else. His heart's action got very weak, and digitalis seemed to strengthen it. No morphia was given, but chloral and a little bromide were used—I should now give paraldehyde or sulphonal—to produce sleep. For a week he was "horribly depressed" and debilitated, and his life was certainly in danger. He had a constant burning pain in stomach and bowels, most difficult to bear, and dreadfully lowering. He slept restlessly, and awoke with a "feeling of horrors." In a week the temperature was normal, and in a fortnight he had got over all the worst symptoms. He had periodic attacks of irritability of stomach for a year. He has never got over his long morphia habit mentally—not that he has any craving for the drug—but all the intensity is out of his brain in thought, feeling, and volition. He is hypochondriacal, childishly irritable and suspicious, unsocial, conscientiously unfit to face the world, quite unable to do any sort of real work, and never has any feeling of organic satisfaction. He is asexual, and prefers still to walk out in the dusk along solitary roads rather than in public places. In fact, his brain is irretrievably damaged in all its higher functions by its twenty-five years' continuous intoxication by opium.

Before commenting on this case I shall relate two others.

C. D. had been a labouring man, and had regularly taken laudanum for twenty years before his admission at 49 to the Asylum as a certified patient. For many years his daily allowance had been 6 oz. of laudanum, that is, about 200 grains of opium. He is described as having been "delusional" for three years before admission. Ten years ago he had a "fit" with unconsciousness, and another similar "fit" three days before admission. After it he had been unconscious for an hour. His face had been drawn to left side, and both limbs had been convulsed. He had been "excited" three years ago after a fit. For three months back his wife had noticed his speech to be tremulous. His delusions before admission were grandiose. He had an excess of *bien être*. He had "gold watches" under his bed, was to get a "lot of money," and had exaggerated notions of his bodily powers. On admission he was fairly contented, and said the house belonged to him. His memory was almost gone; he was mentally enfeebled generally. His articulation was tremulous and thick. He gave the impression of being a general paralytic, and one asked: "Is this a case where continuous and excessive use of opium has produced general paralysis, as excessive drinking seems to do sometimes?" He had been in the Infirmary for a few days, and the worst part of the "cure" was over. His tongue was tremulous; his temperature 98°·6 at first, but it rose in a week to 102°. This elevated temperature in advanced morphinism has scarcely been noticed, but is

very significant of the deep-seated cortical mischief that is present. For a long time after admission C. D. had, when asleep, a peculiar, irregular breathing, suggesting Cheyne-Stokes breathing, with a slight rhythmical movement of the right arm at a certain point of the inspirations. He never asked for opium, soon picked up in strength, and took his food well, and now remains a healthy, facile, forgetful, partial dement, resembling much the ordinary cases of alcoholic amnesia with general mental damage, plus more speech damage. In both cases the higher strata of brain centres, where volition and craving lie, seem gone. The self-control is also gone, but there are no active brain processes or troublesome cravings to inhibit. He has now remained three years in that state.

I shall now relate a third case, which perhaps should have come first, because the morphia habit was of much shorter duration. It was chiefly used hypodermically, and evidently much less permanent damage was done.

F. G., *æt.* 19, no neurotic heredity admitted, of "self-indulgent" habits. Once had a fall, and sustained injury to one hip, which became ankylosed and had to be "broken up." Abscesses formed, and he suffered great pain. For this hypodermic injections of morphia were ordered. This first occurred about five years before his voluntary admission into the Asylum for morphomania. The habit grew on him, so that "it had become a craving, completely demoralizing him." He committed offences against the law to get money with which to buy morphia, for which he was punished. He has been sleepless except when under the influence of morphia. He was lazy, "self-indulgent," and without any traces of moral feeling or natural affection. He used "immense quantities" of morphia subcutaneously, and took by the mouth as much laudanum and nepenthe as he could get. On several occasions he has taken at once 3 oz. of nepenthe, equal to 100 grains of opium.

On admission he was much depressed and nervous, sleepless and exhausted. He had no delusions. He was fairly nourished. The tongue was moist, flabby, and furred. The whole of his thighs and groins were discoloured from hypodermic injections, and the abscesses they had caused. His pulse was 96, of fair strength, and his temperature  $98^{\circ}.3$ . His weight was 8 stone 7 lbs. The process of cure consisted of stopping the morphia at once, and keeping up his strength by special nourishment. He improved rapidly, and in a fortnight he had got over all the worst symptoms. By that time he was sleeping well. He took to heavy smoking, which I allowed. In five months he was discharged recovered; and I believe did not at once take to morphia again. He was not a youth with much power of inhibition naturally.

Those cases show—what all who have had experience agree on—that opium establishes a far more dominant habit than even alcohol, and, in fact, cannot be cured by any self-effort after it



has been established long, and that its mental effects are more certainly and distinctly an insanity than those of alcohol. This proves that there has been a great disintegration of the highest mental quality, viz., that of volition. The same thing is shown in the constancy of the habit. Periodic dipsomania, with intervals of self-control and a morbid craving, is common; but no such cases of periodic morphinomania are on record. Once established, there is no diminution or cessation of the craving for a day. A dipsomaniac may do some work at times; a typical opium eater never after it is fairly established. As is well known, opium affects the trophic energy of the brain even more than alcohol. There is more loss of flesh and far more gastric disturbance. It is often said that the visible pathological damage to the brain and its membranes is more seen from a long-continued and excessive use of alcohol than of opium. I am not in a position to speak dogmatically on this point, but C. D.'s case does not point that way. If the membranes are less damaged, assuredly the cortex is more so, whether our means of investigation enable us to prove this under the microscope or not. A damaged function implies a damaged organ, and the cases A. B. and C. D. prove both. The sort of damage to the motor functions of the cortex implied in C. D.'s convulsions and impaired articulation has not been much referred to by authors on the subject. It is common for an alcoholic case to simulate general paralysis in its grandiose delusions, its convulsions, its tremulous speech; but this has seldom been recorded of opium before. Such extreme cases enable us to estimate the damaging effect of the lesser doses taken for shorter times.

The modern habit of the hypodermic use of morphia is more subtle and dominant than even its use by the mouth. The effects are more instant, and the stomach and gastric mucous membranes seem to suffer somewhat less. I lately saw a lady about 30, who had arduous professional work to do, and had a year or two ago an accident which left her subject to severe neuralgic pains. To enable her to subdue this, and so to do her work, she had prescribed for her the hypodermic use of morphia. This had the effect desired, but it had to be continued, and within a year a habit was established, and a craving that was masterful and required a very strong exercise of will to subdue it, was set up. All fatigue, all pain, and every state of body that implied nerve exhaustion, abnormal nervous depression, irritability, instability, or hyperæsthesia, suggested and seemed to demand morphia as a remedy and a calmate. This was unfortunately yielded to, and the more the remedy was used the more regular grew the occasion for its use. Intellectually she most fully realized the danger she was in, but she had not the courage to stop the drug at once and for ever. She was only taking about two grains a day, but the taking even this, or the leaving it off, meant all the difference between happiness and intense misery. I counselled an absolute and immediate

stoppage of the drug, the placing herself with a companion on board ship on a long voyage, or a visit to Sutherlandshire, ten miles from a druggist, with life in the fresh air, no intellectual work, and no avoidable worry, taking some bromide and wine for a fortnight as a temporary sedative to the brain. I have reason to think that my advice was taken, and was successful. The case impressed me more than any case I ever saw with the subtle psychology that lies in the use of pain-destroying drugs. I never felt before so keenly the responsibility that ever lies on him who prescribes them. I never asked the question with more sadness, "Are there not worse things than pain?" for to deaden pain in this case had been to all but wreck a life. There was no nervous heredity, no natural infirmity of will, and no lack of high moral qualities in this case. A finer all round specimen of womanhood of the nineteenth century intellectual and forceful type, it would have been difficult to find; and here she was almost helpless in the grasp of a craving that would certainly ruin all her high mental qualities if it were long gratified.

As to morphinomania, the following is a summary of what I have said:—

1. The habitual use of opium is in nine cases out of ten most injurious to the higher mental powers, and more especially impairs the volition.

2. The dose has to be steadily increased till such an amount is taken as tends to impair nutrition and the trophic energy of the brain, to disturb the appetite and the whole alimentary system, and ultimately to destroy the power of natural sleep.

3. The craving set up by such excessive use of opium is one of the most persistent, intense, and difficult to resist of any known morbid cravings. It has no remission or periodicity in it.

4. The nervous constitution of the patient has very much to do with the inception of the habit. It may be said generally that persons of the nervous diathesis, of nervous or insane or drinkers' heredity, all persons who feel and dread pain excessively, and most "excitable" persons, are specially liable to acquire the craving.

5. Given or taken for insomnia or to relieve pain, is the origin of most cases of morphinomania.

6. It behoves medical men to take the constitution of each individual patient carefully into consideration before opium is prescribed, and to ask, "Is there any danger of a habit being set up?"

7. As to the treatment of morphinomania, I have little hesitation in laying down its principles:—Help from without in the shape of skilled strong nursing; control and never remitting companionship are needed in almost all cases. It is better and safer to undergo the short Hades of absolute stoppage than the more prolonged purgatory of tapering off. While this is being gone through, use the bromides, wines, every form of beef and peptonoids that the stomach or the rectum will retain; bismuth,

ice, and counter irritation for the gastric pain and vomiting; digitalis and strophanthus for the weak and irregular heart's action. I should now use paraldehyde or sulphonal to get some sleep for a few nights, but I should not go on for long with them. If there is emaciation, I should try Dr Playfair's recommendation of massage,<sup>1</sup> though I suspect some of the good effect in his cases resulted from the control of the massage nurses, and the taking up of the patient's mind by the details of the process, and the assertions that would be dogmatically dinned into their ears as to its unflinching efficacy. The great things to aim at are good nerve tone, firm muscles, a brown sunburnt skin, steady occupation, as much fat as can be put on, a sound moral sense all round, strengthened inhibition, and a dominating conviction that the drug is poison in any dose, and under any possible circumstances whatever.

*Chloralism.*—Chloralism for a time threatened to become a rife craving, but chloral is becoming less liked and used than it was at one time, and I believe will be numbered largely with the superseded drugs. Dr Wilson of Philadelphia thus describes the symptoms produced by chloral used continuously:<sup>2</sup>—“There is general and often serious derangement of health without adequate discernible cause; the appetite is poor and capricious, the digestion imperfect and slowly performed; jaundice of variable intensity, often slight, sometimes severe, occurs in many cases; the bowels are not as a rule constipated; dyspnoea, upon slight exertion, is, in the absence of pulmonary, cardiac, or renal trouble, of diagnostic importance. The circulation is, as a rule, feeble; disorders of the skin, persistent or easily-provoked; conjunctivitis, and a tendency to hæmorrhages to mucous surfaces, also occur. When with these symptoms, irregularly grouped as they are apt to be, we find a tendency to recurring attacks of cerebral congestion, persistent or frequently recurring headaches, and the evidences of sub-acute peripheral neuritis, the abuse of chloral may be suspected. The pains in the limbs are almost characteristic; they are acute and persistent, neuralgic in character, but not localized to special nerve tracts; they are more common in the legs than in the arms, and occupy by preference the calves of the legs and the flexor muscles between the elbows and wrists; they do not implicate the joints, are not aggravated to any great extent by treatment, and are often temporarily relieved by gentle friction. The pains of chloralism have been described as though produced by encircling bands above the wrists and ankles. The suspicion of addiction to chloral becomes the more probable if there be a history of prolonged, painful illness, or prolonged insomnia in the past. The suspicion is confirmed if we remember at the same time perversion of the moral nature, enfeeblement

<sup>1</sup> *Journal of Mental Science*, July 1889.

<sup>2</sup> *The Medical and Surgical Reporter*, 11th May 1889.

of the wits and of the intellectual forces." Chloral differs from the other drugs, the craving for which we are considering, and from alcohol, in this essentially, that its effect is not stimulant in any dose, small or large, but simply and only sedative and hypnotic. It creates no ideal state of mind, it simply produces self-forgetfulness and sleep. A craving for it, or a habit of it, is therefore a strange and altogether abnormal thing. Why any human being should crave a drug, whose taste is disagreeable, to produce sleep in excess of the normal time, is entirely inexplicable on any hypothesis except that which attributes an essential affinity between the brain and nervous action, not only to alcohol, but to all the class of stimulant, sedative, and hypnotic drugs.

The following was a marked case of Chloralism ending in insanity:—

L. M.,<sup>1</sup> æt. 47. Father had died of kidney disease at an advanced age; mother "nervous," and died of paralysis; two sisters are neurotic and eccentric; a brother is a confirmed dipsomaniac. Patient had been teetotal for ten years. About seven years before admission into the asylum he had been ordered a mixture of chloral and bromide to relieve a spasmodic retention of urine. He gradually got into a habit of taking a drachm of each of these drugs daily. This continued for six years with no "apparent" bad effects. The patient was, however, aware that a craving had been thus roused which he could not at will control. The sedative effect was craved apart from the medicinal action, the necessity for which had ceased. At the end of the six years he took an attack of bronchitis, and was ordered, he says, this time chloral in 60-grain doses for the breathlessness. The bronchitis was soon recovered from, but the chloral was continued on account of its lethe-like qualities; for he was depressed, and had business worries, and sought oblivion in the effects of the drug. He soon began to take 180 grains a day regularly. While this stupefied him greatly, he was able for four years to attend to business in a way. He carried the bottle of chloral solution in his pocket, and took some every hour. It produced a feeling of quiet for an hour. He took only a dose of 10 grains at a time during the day, and a larger one at night to produce actual sleep. If he awoke he took another dose. During the day sleep was not induced, but a soothed feeling and a dreamy sense of comfort and *bien être* which drowned his cares. The general effect seemed to be like the sedative effect of opium. He had no actual depression as the result of the drug, but a feeling of lassitude, nervous debility and exhaustion, inaptitude for work, and incapacity for thought, as the effect of each dose passed off. He got more irritable as time went on, and for all his bad feelings chloral was his panacea. His digestion got weak, his appetite poor; his food lost its relish, and he took an

<sup>1</sup> This case was fully reported in this Journal by Mr Inglis in the September number 1877.

insufficient quantity of it. Nausea, sour eructations, and vomiting, and a furred tongue, showed how deeply his alimentary organs and their innervations were affected, as well as the fact that he was constipated, had piles, and the fæces were hard and white. Slight jaundice showed that the liver was also affected. By-and-by a moral and affective change took place in him. His character became untruthful and deceitful, and his love for his wife and children changed to dislike and suspicion. He was at times so passionate that he threatened violence to his wife. He would leave the house and wander aimlessly about the streets. He neglected his duty and his business.

Three weeks before admission he stopped the chloral and took to whisky in quantities sufficient to keep himself muddled, but not drunk. In a day or two after beginning the whisky, he had diarrhoea and a great discharge of blood from the bowels. In a few days he became violent and suicidal. Then he got into a condition which resembled delirium tremens, with hallucinations of hearing and sight of a frightful kind. He could not sleep. The next stage was convulsions of a severe kind occurring thrice at intervals of four hours. Then there followed stupor, and then raving delirium, for which he was at first sent to the Hospital, and thence to the Asylum.

On admission he looked old, broken down, anæmic, unable to speak aloud, or to walk. Mentally he was enfeebled, and also slightly depressed. His power of attention was gone, and his memory also. Had vague, fleeting delusions, such as, that the Queen took an interest in him. There was persistent muscular tremor, and none of the finer acts of co-ordination, such as writing or whistling, or articulating difficult words, could be done at all. The pupils were equal, dilated, irregular at margins, and insensible to light. The right side of the face was paralysed, the spinal reflexes were dulled, and sensation was hyperæsthetic, but he had no pain of any sort. Bowels were constipated, fæces hard and white, tongue white and coated. Temperature was 97°.

The patient had the most intense craving for soporifics, but none were given him. After a few nights of insomnia he slept. He got strychnine, tonics, and gentle aperients; exercise in the fresh air, and constant supervision, and was subjected to a regular regime. He gained in flesh and appearance very fast, and was quite well in three months.

The alcohol he had taken for a fortnight coming on the back of the long-continued use of chloral may have accentuated and complicated the symptoms of the chloralism to some extent, but there can be no doubt that the chief symptoms present were those resulting from the use of chloral. It is clear that it sets up a diseased craving like morphia and alcohol, and that the power of controlling this is also paralysed by the drug. The symptoms present are alimentary as well as nervous—more so than in the case of alcohol, opium, or cocaine. The way in which the symptoms of a ten years'

abuse of the drug was recovered from in three months shows clearly that chloral is far less permanently hurtful to the nervous centres than alcohol or opium. The wonder to me is that it had not weakened his heart's action more, and so killed him.

*Cocainism.*—The newest born of all the drug cravings is that for cocaine. It required two of the latest discoveries of science—the hypodermic needle and the extraction of cocaine from the coca-leaf—combined, to create this new vice-disease. So far as I have seen or heard of, cocaine is now always hypodermically taken to get its intoxicating effects. But, historically, its use as a narcotic intoxicant is as old as that of distilled alcohol, for the Spaniards found its virtues held in high esteem by the Peruvians in the fifteenth century. The plant was reserved for the use of the Incas, the coca plantations being owned by the State. The habit, when formed, reduced its victim to a pitiable condition. “Its first effect is to weaken digestion. To loss of appetite succeeds an inordinate desire for animal food. Then dropsical swellings and boils come on; the breath is foetid, the lips pale, and the teeth are discoloured; the eyes are dim and sunken, and the skin becomes of a yellow tinge.”<sup>1</sup> It was thought to be strength-giving and fatigue-resisting, neither hunger nor thirst being felt while it is being chewed.

This is not the place to describe the physiological effects of single doses, so I shall proceed to relate two cases of excessive and continuous use.

N. O., a young professional man of intellectual attainments far above the average, and of very industrious habits. He was of the nervous diathesis, there was a strong heredity towards mental disease and paralysis, and some history of phthisis also. He took to the use of cocaine eighteen months before I made his acquaintance, using it at first sparingly for its stimulant effect to enable him to do his work. He was in weak health, and had some of the preliminary symptoms of phthisis, being thin, and run down nervously. He says that it did not, like opium, excite brilliant fancies or produce a conscious excitement. He at first gained in flesh under its use, and did his work well; but he had rapidly to increase the dose to get the same effects. Beginning with half a grain, he soon had to take more and more at each hypodermic injection, till in six months he was using forty-five grains at least a day, and probably much more. From what I could make out, he often took injections of ten grains at a time. Rapid mental and moral deterioration followed after three months' abuse of the drug to this extent. He got dirty in his personal habits, eccentric, neglectful of duty, prevaricating when excuses for his conduct had to be made, and very sleepless, often sitting up all night. The next stage in his downward course was that of actual insanity, whose symptoms were hal-

<sup>1</sup> *Anaesthetics*, by George Foy, p. 83.

lucinations of vision and loss of memory. He imagined that people talked about him in the streets, and accused him of crimes. He was impulsive, and could scarcely restrain himself from assaulting his imaginary tormentors, with whom he remonstrated on the street. His memory was at times greatly impaired. He had no power to do any work; he did strange, motiveless acts. Throughout all this there was a half-consciousness that his brain was acting morbidly, and that his false beliefs might be delusions.

When I saw him first he was considerably excited; his memory was fairly good; he was quite coherent; and spoke of his "delusions" freely, as only half believed in. He was pale, his skin muddy, his pupils widely dilated, his nutrition and muscularity fair. He was utterly dirty and untidy—how all the manias take the outward polish off a gentleman! His pulse was good and regular, and was for a time 98. His trunk and limbs were scarred with the hypodermic needle. I gave him within the first forty-eight hours of treatment two hypodermic injections of cocaine of 1 grain each, and then stopped it entirely, giving him liquid food, wine, and plenty of strong tea and coffee, which he found a sort of substitute for the cocaine. He was most miserable, and begged for the drug for about a week, but in that time he had got over the effects of stopping its use. He was then sleeping well, eating well, and walking out in the open air a great deal. He became cheerful, and seemed to acquiesce in the necessary restrictions on his liberty implied in the treatment. But it is certain that he could no more of his own accord have carried out that treatment than he could have gone to the moon. Mentally he showed to a large extent the dipsomaniac's condition. He was plausible, full of promises, cocksure of not again taking to the drug, and suave towards those who had the control of him to a suspicious degree. But the strength of his resolution and the intensity of his craving were soon tested by his taking secretly to his old habit on the first opportunity he had. Every kind of excuse and evasion was practised. He showed that his moral control was utterly weakened, though his physical health was excellent, and he gained two stones in weight in a month. It was quite clear that to give any such case a proper chance of cure the law should allow him to be detained under supervision and enforced abstinence from the drug for a year after every symptom of intellectual disturbance had passed away. To gauge the strength of the craving and the power of the control is simply impossible. One can only apply a rough, common sense rule in regard to the time the highest brain functions are likely to take to recover their normal working, and then the only real test has to come, viz., the actual enjoyment of full liberty of action as an ordinary member of society.

The next case in all its essential features was like the last, but longer and more aggravated.

P. R., also a young professional man, cheerful, fairly indus-

trious, and steady. Heredity towards paralysis and phthisis on mother's side. Three and a half years before I saw him he had begun to take morphia hypodermically for the relief of pain, and continued this more or less, not apparently continuously, till two years ago, when he began to use cocaine to cure the morphinomania which he felt was mastering him. The cure soon was worse than the disease, for he continued the use of cocaine regularly. The result of each dose was at first exhilaration, followed by depression, which for its remedy needed another dose. The morphia habit had caused moral deterioration, but the cocaine habit accentuated this tenfold. Want of system, actual disorder, irregular habits generally, want of attention to ordinary family and social duties, and untruthful excuses, all followed each other rapidly within three months of beginning the cocaine habit. At the end of that time his mental disintegration proceeded deeper, and delusions of suspicion developed themselves, accompanied by hallucinations of sight and hearing. He lost the sense of time, and had not the rudiments of punctuality, even as to important matters. His weakened volition especially showed itself in procrastination, and his weakened control in extreme irritability. His next delusion was clearly suggested by the paræsthesia caused by the drug. He imagined he had a skin disease. He affirmed he felt sensations in the skin that could only be caused by living germs. He used medical means to cure the imaginary skin trouble. He often mixed the cocaine with morphia, and has lately taken 90 grains of cocaine and 20 grains of morphia each day, so far as can be ascertained. His irritability, his utter disregard of family duties, his untruthfulness, his sacrifice of everything and anything to get cocaine, his passing as an ill-used man when efforts had been made to restrain him, had gone the length of insanity. His utter want of system is best illustrated by the fact, that for two years before I saw him he had never sat down to a regular meal.

When I first saw him he was anæmic, weak, and covered with sores from the use of the needle. He had at last been driven, more apparently by coming to the end of his money to buy more cocaine, to place himself under care. Mentally and morally he was broken down, retaining enough of obstinacy, unreason, and discontent to be a most troublesome and disagreeable patient. I gave him a few small hypodermic injections of cocaine for the first forty-eight hours, and then gave a little morphia, some sulphonal, bromide of ammonium, brandy, tea, and coffee. He complained of all sorts of pains, evidently to get morphia or cocaine. He was restless, fretful, irritable, and during the night almost maniacal. He was, as he said, "in hell" during the night. He improved much in a fortnight, and then a change of residence was tried, still under control, and he got over all the symptoms of his disease in a few months. The last accounts I had of him are good.

Looking at cocainism generally, and comparing the effects of



cocaine on the higher functions of the brain with those of alcohol, opium, and chloral, one sees that they are more distinctly in the direction of intellectual perversion, of technical insanity in fact while they last, but that they are less enduringly hurtful and sooner recovered from than any of the other three drugs, except, perhaps, chloral. Hallucinations of sight and hearing, paræsthesia, especially of the skin, and insane suspicions, are constant accompaniments of cocaineism. The moral disintegration of a man seems to be the same in all these diseases; but the present intensity of the craving for cocaine is perhaps greater than for any other narcotic or stimulant whatsoever.

There are cases now on record where the drug, from being used in the most legitimate way as an external application to subdue the pains caused by skin eruptions and sores, has set up a craving for its continuous use and for its effects on the higher brain functions quite apart from the analgesic effect for which it was employed.

The chief facts about cocaine in relation to cocaineism may be thus summarized:—

1. It is the acutest and the most absolute destroyer of inhibition and of the moral sense generally that we yet know.

2. The morbid craving is very intense and control is absent.

3. The dose requires to be increased faster than that of any such drug to get the same effect.

4. The delirium and hallucinations of all the senses of single doses become chronic in cocaineism.

5. Its immediate effects are more transient than any other such drug, but this does not apply to the craving set up.

6. The treatment of cocaineism consists in outside control of the patient, in stopping the drug at once, in careful watching—I should not trust a patient under treatment as regards suicide for the first week—nursing, the use of every sort of food that will keep up the strength, and of the bromide of ammonium, brandy or wine, tea and coffee, and possibly a hypnotic, like paraldehyde or sulphonal, for two or three nights at least.

7. A patient suffering from cocaineism can usually be certified as insane so far as the presence of delusions are concerned, but he gets over these so soon, and yet is so far from the real cure, that certification and sending to an asylum is not a satisfactory process altogether. We need cocaineism included in any special legislation for dipsomania.

(To be continued.)

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## II.—CASES OF OVARIOTOMY.

By SKENE KEITH, M.B., F.R.C.S. Ed.

ON 18th February 1889 I performed ovariectomy on a case which presented several features of interest.

The lady was 48 years of age, and, although she had been ailing