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Clinical Lecture

ON

OPIUM: ITS USE AND ABUSE.

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GENTLEMEN,—I propose, on the present occasion, to place before you some remarks on the use of opium, with reference both to its success and to its failure as a remedy in the treatment of disease; with reference also to the danger which is involved in its indiscriminate employment, in large doses. The subject is one of great importance; for unquestionably there is no medicine from which greater benefit may be derived, in those cases over which it exerts a favourable influence; whilst, at the same time, we appear to be especially exposed to disappointment in its use, from the circumstance that its operation appears to be governed by laws of which we have an imperfect knowledge, or over which we are able to exercise but little control.

Let me premise, that my attention was first called to this subject by some admirable lectures delivered by Dr. Johnson, before the College of Physicians, in 1853, and reported in the *Medical Times* of that year; and I may take the opportunity of especially recommending these lectures to your perusal.

In order to give a practical character to the few observations I have to make, I shall select for their application a particular class of cases; one which especially exemplifies the action of opium, and which you will have frequent opportunities of observing, both in public and in private practice. I refer to cases in which symptoms of very serious character, affecting the health and even the life of the sufferer, originate in various forms of mental disturbance. The starting point in the disorder is a state of protracted mental agitation, sometimes commencing in a sudden and deep impression made upon the mind, as by fright, by profound grief, even by intense joy; sometimes connected with long continued anxiety or distress. In either case, the condition of unhealthy excitement which is produced in the seat of the mental functions, speedily extends to other parts of the nervous centres, and various morbid phenomena result, connected with the nervous system primarily, and with the nutrition of the entire body secondarily; in not a few cases running on to the production of one or other of the more serious forms of disorder of the nervous system, or ending in a depraved state of bodily health, or in disease of some organ, through the instrumentality of an impoverished or diseased condition of the blood.

In all the varied forms which this malady assumes, evidence of nervous, and especially of mental excitement, takes the initiative, and maintains throughout the most prominent place; and this nervous derangement is indicated most clearly in protracted wakefulness, or disturbed sleep, and the patients very pointedly accuse their mental disquietude of being the cause of their sleeplessness. One of our hospital patients declared that she could never overget her troubles; she "never seemed to forget them"; and used to lie awake for three or four nights thinking of them. Another was haunted by fears day and night; she went to bed at nine, but lay awake till daylight, "thinking of things"; and a third was so much disturbed, that his wife was afraid of allowing herself to fall asleep. The uneasy sleep of such patients, when at last sleep is obtained, is haunted by frightful dreams, from which they often awake with a start or a scream, with their heart palpi-

tating, or their body bedewed with cold perspiration; they shed tears whilst sleeping, or even awake in a hysteric fit; and the history of such disturbed and imperfect sleep may extend over two or three years.

Another symptom is very commonly presented by patients suffering under the unfavourable influences I have mentioned: namely, a tendency to see phantoms; spectral appearances, conjured up by their disordered imagination, haunt their couch, or terrify them even in broad daylight; some describe the visitation of the image of a departed friend, whose sudden loss has caused their sorrow; wives awake from a troubled sleep to see their deceased husband standing by their bed, with the most vivid distinctness; others see dogs, cats, or monkeys around them, or flames, or faces peering at them, or thieves about to attack them; not infrequently the author of evil himself is present to them in bodily form. One woman, who suffered from curious seizures of a semi-cataleptic character, spoke of visions of heaven and hell, and another ascribed her later symptoms to fright, occasioned by the figure of a man, which stood at her bed's foot, as it seemed to her, for some minutes.

The consequence of this prolonged state of mental disquiet, aggravated by want of the nightly repose which the worn nervous system doubly needs, is manifested in a depressed condition of all the functions of that system; mental energy is enfeebled; the emotions are aroused by the least stimulus, often by no stimulus at all, and when excited speedily escape from all control; the mind is gloomy, and oppressed with undefined fears of impending evil; restlessness, and entire inability to command the attention, irritability of temper, and distaste for the business and even the enjoyment of life, render the sufferers incapable of occupation or diversion; and these troubles, with headache, vertigo, and a disposition to register in the mind every sensation, and to dwell upon every ailment, in time convert a high-spirited woman into a hypochondriacal valetudinarian, unfitted for her ordinary duties, and insensible to her highest responsibilities. Nor are the graver forms of nervous disease wanting in the catalogue of the sufferings endured by the patient; neuralgia, hysteric fits, mania, insanity, and not unfrequently epilepsy, have their origin in the state I am describing. I have had the opportunity of presenting to you more than one instance of epilepsy, which has plainly resulted from prolonged worry and anxiety; fright is a well known cause of epilepsy, and the hysteric fit is a more common consequence of mental disquiet.

It would be impossible for so much disorder to exist in the nervous system without the nutrition of the entire body suffering more or less; and accordingly we find evidence of very serious depression of bodily health in these cases of nervous disorder; digestion is difficult, often attended with pain; the appetite is diminished, not infrequently annihilated; the blood becomes impoverished, the red corpuscles fail to be reproduced in sufficient quantity; emaciation advances progressively; the menstrual function is disordered in women; palpitation, short breath, often œdema of the feet, present themselves; hæmorrhages from the mucous membranes are liable to take place, sometimes profusely; and, finally, life may be destroyed, either by failure of the general nutrition, or by phthisis, by degeneration of the heart or of the kidney, by loss of blood, or by some other equally grave disease.

The following case affords a good illustration of the ordinary form of the disorder I have described to you:—

Mrs. B., aged 39, seven years ago was much weakened by illness after confinement, and subsequently by a prolonged attack of rheumatic fever. During the last year and a half she has suffered from great anxiety, in consequence of the continued ill health of her husband, and ever since her health has deteriorated greatly. She fretted a great deal, and lost flesh rapidly. She was haunted by fears during the day, and at night her sleep was disturbed by frightful dreams and spectral appearances; she awoke in alarm, with palpitation of the heart, and in profuse perspiration. She used to go to bed

at nine o'clock, but lay awake till early morning, occupied with her painful thoughts. She became very restless; she could not sit in her house quietly, but was afraid to go out, until at last she dared not go into the street. She fancied that evils were about to happen, and her mind was so entirely absorbed by her morbid impressions, that if she went out, she did not know where she was. She became subject to hysteric attacks, and to fits of crying, which always afforded her relief for the time.

When she came under our notice, she was complaining of these painful nervous disorders, together with epigastric pain, increased by the presence of food in the stomach, palpitation and short breath, and some anasarca; she had frontal headache and vertigo. Her menstrual function was much disordered, sometimes occurring frequently, sometimes after long intervals. She was considerably emaciated, anæmic, and had a remarkably anxious expression of face.

I add a few details of a second case, to exemplify one of the injurious consequences of the disorder in depraved nutrition of the blood:—

Mrs. C., aged 30, had been subject to long-continued ill-treatment from her husband, who finally deserted her. She lost her sleep, from the distress and anxiety she endured, and soon after a confinement, became suddenly deranged, and continued in that state for six weeks. From this attack she recovered completely. She has suffered from spectral appearances, and during her attendance at the Hospital, she suddenly lost the power of articulating distinctly, and for three or four days could not speak intelligibly. Her appetite failed, she emaciated rapidly, and has been constantly ailing. She became subject to cough, short breath, and palpitation, with anasarca; she had pain across her forehead, with vertigo. These ailments have extended over three or four years. Two years ago she was seized with vomiting of blood, and at different periods since that time has spat blood, and has had profuse hæmorrhage from her nose. Subsequently her menstruation became suspended for a considerable length of time. She presented, when she first came under our notice, an extremely emaciated anæmic appearance, and a very nervous aspect; and since she has been under our care, she has had repeated hæmorrhages from the mucous membrane of the uterus, and has again spat blood, and has had epistaxis. She complains bitterly of muscular pains in different parts of her body, and her mental energy is so utterly prostrated that she is incapable even of the necessary effort to assist her recovery. No disease can be discovered in any of the organs of her body.

In treating this dangerous and very common form of disorder, it must be obvious that the most judicious administration of tonic remedies, and the most generous diet, will entirely fail, unless attention be paid in the first instance to the condition in which the disorder originates. There are few circumstances in which sound pathological knowledge, derived from practical familiarity with the phenomena of disease, together with sagacity and tact in the employment of such knowledge, are more requisite. Among the remedies to be employed, the first place must be given to opium; and there are no cases in which its beneficial influence as a narcotic is more strikingly exemplified; it acts indeed as the most powerful tonic. The object to be attained is in the first instance to procure rest for the nervous system—an opportunity for the central organs of that system to repair the waste which has taken place in their nutrition. This is to be accomplished primarily, by altering, if possible, the circumstances in which the patient is placed, and by ministering, so far as is practicable, to the state of his mind; secondarily, by procuring for him the enjoyment of refreshing sleep through the employment of opium.

The salutary influence which opium exerts, when once it has obtained the mastery over the mental and nervous excitement which has prevailed, is evidenced most strikingly in every function of the body. The patient gladly acknowledges that his mental gloom is relieved, his energy revived, his spirits raised; that his appetite has returned, and his physical vigour is reinforced, and his bodily nutrition is repaired. Even a few nights of sound sleep will sometimes effect a change in the condition of the patient, which he mentions to you with surprise, and which is evident even in his general appearance and demeanour. One woman, an out-patient of the hospital, after having taken a grain of opium nightly, and having enjoyed a week's tolerable sleep, manifested very distinct improvement; in five weeks the alarms at night had subsided, she was "a deal better in going about", her appetite had increased, and she had gained flesh; her hysterical symptoms had very much left her, and her strength was invigorated.

Another patient, in six weeks, reported that her spirits were good, and she felt well, excepting that she still suffered from some headache and vertigo. A third, who experienced the favourable influence of her nightly potion from the very commencement of the treatment, manifested, at her second visit, a marked alteration in the expression of her face, and in all her symptoms; she became able to sleep the night through, and in two or three weeks was "a deal stronger, and a deal better spirited".

It is needless for me to multiply instances which you may witness for yourselves in our out-patient room, and which are well worthy your attentive study. You will there observe that, gratifying as are the results when the remedy is successful, it is not often, indeed not generally, that this success is attained speedily. You will find that much patience is requisite in waiting for the desired result, and much care in adapting the remedy to the requirements of the particular case. One of the chief obstacles to the operation of the medicine consists in the very late period of the case at which the sufferers present themselves, when the health of the nervous centres has been deeply, in some instances hopelessly depressed, and when the blood has acquired a fixed standard of nutrition far below that which is consistent with health. Under such circumstances, it is often with great difficulty that we succeed in overcoming a condition of nervous irritability which has become almost a second nature; and even if we succeed, the mischief is too deeply seated to be effectually repaired. By the most favourable arrangement of circumstances, and by assiduous medical treatment, we raise the patient to a certain elevation in the scale of health, but he cannot advance beyond it, and when he removes from our care, the slightest cause is sufficient to bring back the excitement, and to destroy the fruit of our labour. Moreover, the habitual state of gloomy dejection, of proneness to entertain hypochondriacal fears, the failure of hope, too well justified by his own consciousness, constitutes a frame of mind the most difficult to overcome, and the most unfavourable for acquiring health, whether of body or of mind. A striking illustration of this extreme form of the disease is afforded by one of our present patients, whose case I have briefly detailed, who has been under our care for more than a year. She improved, at first, to a considerable extent, but soon relapsed, and now manifests a hopeless condition of mental infirmity and of bodily emaciation, which is aggravated by frequent hæmorrhage from the uterus, from the lungs, or from the nose. Two others are so susceptible of the slightest excitement, that we have found it needful to arrange for their being speedily dismissed from the patients' hall, otherwise the first half of the week is occupied by them in overcoming the nervous disturbance which is created by their mixing with the crowd of patients.

Very closely connected with the group of cases which I have now brought before you, both in the nature of the pathological phenomena and in the remedy required, connected also in the nature of the difficulties involved, and in the ultimate tendencies which are manifested, is the state of habitual depression and excitement not unfrequently presented by those who accustom themselves to excessive indulgence in the use of ale, and especially of spirits. In such patients, we notice a succession of symptoms, sometimes intensified, but otherwise resembling in a very striking manner those which are produced by depressing influences of a mental nature. The habitual ingestion of alcohol in excess, like sustained functional derangement, induces in time a state of lowered nutrition in the nervous centres, which manifests its existence by symptoms such as those I have already described. We hear the same history of sleepless nights, of frightful dreams, of spectral visitations; of wild beasts threatening to destroy the affrighted sufferer; of flames, or of sulphur; or of rocky heights, from which a fall is imminent. We are told of depressed spirits, of undefined fears, of restlessness and irritability, of loss of appetite, nausea, flatulence, and constipation; of headache and vertigo. We witness the presence of anemia and emaciation; and not unfrequently we are called to treat one or other of the serious and often fatal nervous or bodily diseases to which I have already alluded as terminating a case of nervous depression from mental influences. At times, attacks of transient mania, or of delirium, conduct the ailment by insensible gradations to the disease so well known as delirium tremens.

The connexion between these two classes of cases is drawn closer by the circumstance that, in the latter, mental influences have probably their share in increasing the disorder. It is not easy to realise the misery of mind which often accompanies habits of intemperance; to imagine the repentance which

follows indulgence; the struggle to resist temptation; the awful craving for the stimulus to which the stomach has been accustomed. Nor must we forget the pain with which the sufferer discovers his altered position in society, the disorder in his affairs, the sorrow of those nearest and dearest; nor his prostrate dread of apoplexy, epilepsy, paralysis, or delirium, to which he knows that his evil habits will in time subject him.

In the attacks of delirium to which such patients are subject, we have convincing proof of the extent to which the nervous power has been lowered. Exhaustion is very readily induced; and the patient may even die suddenly, under the influence of any cause of a debilitating nature. Such an event happened under my own notice, in a patient whose case had been misunderstood, and to whose temples leeches had been applied.

Now, in cases of nervous disorder from intemperance, opium holds a prominent place among remedies; with the restrictions, however, which I shall lay down in connexion with delirium tremens; and, if we be called upon to administer to the patient before his habits have become confirmed or have been indulged in for a long time, opium will not only relieve his immediate sufferings, but, what is of even greater importance, will reinforce his mind to struggle against his dangerous tendency.

On the other hand, at a late period, opium can but palliate; the effect of the prolonged operation upon the nervous centres of the influence of alcohol, is to induce a state of wasting and degeneration, as evidenced by the increased quantity of sub-arachnoid fluid found in the cranium after death, by the shrunken and separated convolutions, the thickened and opaque membranes; and such wasting it is out of our power to repair. You may recollect a man who was in attendance for a considerable time, who exhibited a fair specimen of the effects of "soaking". He was anæmic, and had lost flesh considerably; and his expression indicated much nervous worry, and a tendency to insanity. He suffered from disturbed sleep; and from depression and irritability, with fits of excitement, by day. He derived a certain amount of benefit from opiates and tonics; but his improvement was not sustained, and he has now ceased to attend at the hospital. It may be that he suffered from the teetotal discipline, which it was necessary to enforce as the only means of averting a greater evil.

[To be continued.]

THE MASSACRE OF THE INNOCENTS. Five ships of the most approved transport quality, and the property of the most favoured Government contractors, started from the English shores, full laden with helpless women and children, anxiously looking forward to a joyous meeting with their natural protectors at the end of a prosperous voyage. They were going at the public expense, and it was the wish of the public that every care should be taken both of their comfort and safety. Important officials, high, responsible, and well-paid, were to select the ships, to see that the stores were of the best quality, and the berths and bedding comfortable and well ventilated; and so well did they perform their duty, that, we learn, out of these five human cargoes, no less than two hundred and seventy children have perished on the voyage, and been thrown overboard. Probably, since the days of King Herod, so extensive a "Massacre of the Innocents" has never been heard of in history. Now, this is a matter which must at once be taken in hand, and in earnest, by those military members of the House of Commons who have any pretensions to the proud title of the "soldier's friend". It will not do to have it left to a mere inquiry by a civilian member, to be evasively answered in the usual heartless, unintelligible official manner. The service is, no doubt, indebted to Mr. Alderman Salomons for doing, in the case of the *Accrington*, what no military member of the House of Commons thought himself called upon to do; but, still, the further ventilation of the matter must not be thrown upon the shoulders of the worthy alderman. This is a military question, and we call upon some military member—we care not whether on the ministerial or opposition side of the House—to take up the case of these poor slaughtered children with a will. The revised military estimates will give the opportunity, and it must not be exhausted in a mere question which can lead to no practical results. Means must in some way be found for safely and comfortably transmitting our soldiers and their wives and children to the various stations all over the world; and it must not be said that what is done in the case of emigrant ships daily by private merchants is to remain a problem impossible of solution to the officials of Her Majesty's Department of War. (*United Service Gazette*.)

A Course of Lectures ON URINE, URINARY DEPOSITS, AND CALCULI.

DELIVERED AT THE PATHOLOGICAL LABORATORY,
DURING THE SESSION 1857-58.

BY

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LECTURE V.

URINE IN DISEASE. SOLUBLE SUBSTANCES PRESENT IN URINE IN DISEASE WHICH DO NOT EXIST IN THE HEALTHY SECRETION. ALBUMEN. *Of Detecting the Presence of Albumen; Tests; Nitric Acid; Heat; Anomalous Results in Employing these Tests; Apparent Presence of Albumen in Urine which contains none; Phosphate resembling Albumen; Uric Acid resembling Albumen; Cases. Apparent Absence of Albumen in Urine which contains a large Quantity; Cases. Cause of the Precipitation of Albumen by Heat being prevented by a Trace of Nitric Acid. Other Tests for Albumen. On Estimating the Quantity of Albumen. Peculiar Substance in Urine allied to Albumen. Of the Importance of Albumen in Urine in a Clinical point of view. Dropsy in Disease of the Kidney. BILE.* *Tests. Nitric Acid. Heller's Test. Pettenkofer's Test. Yellow Colour of the Cells, etc., in the Urinary Deposit. On Estimating the Quantity of the Biliary Acids in Urine. SUGAR. General Characters of the Urine in Diabetes. Diabetic Sugar. Tests for Diabetic Sugar; Moore's Test; Trommer's Test; Barreswill's and other Solutions. On Testing for Sugar when only Traces are present. Circumstances interfering with the Action of Trommer's Test. Of the Yeast Test. Maumené's or the Perchloride of Tin Test. Bismuth Test. Of Estimating the Quantity of Sugar; volumetrically; by Fermentation; by Dr. Garrod's Method; by the Polarising Saccharimeter. Circumstances under which Sugar is excreted in the Urine. Analyses of Urine in Diabetes. OTHER SOLUBLE SUBSTANCES WHICH ARE NOT PRESENT IN HEALTH. LEUCINE. TYROSINE. INOSITE. ACETONE. CYSTINE.*

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Of the importance of Albumen in the Urine in a clinical point of view. In the majority of cases, in which the urine contains a very large quantity of albumen, and especially if the urine be of specific gravity of 1020 or higher, the inference will be that the case is an acute one, and that this large quantity of albumen has not been passing from the kidney for any length of time. By far the majority of these acute cases recover if the patients are placed under favourable circumstances. In some instances, however, the circulation through the kidney becomes more and more obstructed; the urinary constituents accumulate in the blood and seriously impair the various actions going on in the body, and especially affect the nervous system; and death results, probably preceded by coma and sometimes by convulsions. Occasionally pus is found in considerable quantity in the uriniferous tubes. Sometimes the acute stage passes off, and the albumen, although it diminishes in quantity, does not entirely disappear from the urine, and the acute attack afterwards proves to have been the commencement of chronic kidney-disease.

If the quantity of albumen be small, amounting merely to milkiness or opalescence when heat is applied, or nitric acid added to the urine, and especially if the urine be pale and of specific gravity 1012 or lower, we should suspect that the lesion giving rise to the escape of the albumen was chronic, and would ultimately destroy life. If the proportion of urea to the other constituents of the solid matter were large, we should form a more favourable opinion than if the percentage in the solid matter were very much less than in health. In the latter case, a great part of the renal structure would probably be involved; but, in the former, there would be reason to think the disease had only affected a certain number of the secreting tubules. There are, however, some exceptions to these general statements. Patients have passed small quantities of albumen in the urine for many months, and it has afterwards disappeared.