

spirit of any kind; and tasted meat twice only. He was strictly watched during that time; and there is reason to believe that nothing of the kind was conveyed to him clandestinely.

Original Communications.

HOSPITAL EXPERIMENTS ON THE SUPPOSED THERAPEUTICAL ACTION OF THE EXCRETA OF SERPENTS.

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SOME of my professional brethren may, perhaps, think that I owe them an apology for the following experimental inquiry upon the action of the *excreta of serpents*. To such, therefore, I would offer a brief explanation of my views on the subject.

It seemed to me passing strange that our old enemy the serpent should turn out in this nineteenth century to be so great a benefactor as to supply us with a cure for phthisis; and this too by certain *excreta* chemically allied to that which, being so abundantly eliminated by our own renal organs, must obviously be regarded not only as unnecessary, but actually prejudicial. I had, moreover, long been convinced that for consumption there is not, and probably never will be, a *specific* remedy; the origin, the course, and the whole pathology of the disease irresistibly leading to such a conclusion. It will be evident, therefore, that my trial of the *excreta* was not dictated by any very hopeful expectation.

Many are the so-called "*specifics* for Consumption" introduced to my colleagues and myself at the Consumption Hospital, and urgent are the appeals to try them; but the object of their respective authors is either too obvious or too doubtful to deserve attention. With the *excreta* of reptiles, however, the case was different. Dr. Hastings has published his new remedy to the world, and invited other physicians to try it. Already have many consumptive sufferers taken it; some are reported to have spoken highly of its efficacy; and two such cases have come to my own knowledge. I felt, therefore, that I could hardly resist an appeal from one or two non-professional friends to try the far-famed *excreta*; and that by refusing to do so, I should fairly expose myself to that imputation of prejudice and dogmatism with which the legitimate practitioner is so constantly, and perhaps not altogether unreasonably, taxed.

To Mr. Harington, Resident Clinical Assistant at the Consumption Hospital, I am indebted for notes of the cases subjected to the experiment; and to him as well as to Mr. Edwards, Resident Medical Officer, who saw the patients daily, I can confidently refer as witnesses of the fairness of the inquiry, and the carefulness with which it was conducted. To avoid any possible error, the latter gentleman undertook the preparation of the *excreta* according to the following formula, which I obtained from Dr. Hastings. Eight grains of the *excreta* of the python were dissolved in sixteen ounces of water by the agency of three drachms of liquor potassæ. From this solution, the lithate of ammonia was partly or wholly precipitated by the addition of ten drops of strong sulphuric acid. This mixture, when filtered, constituted a lotion which was to be rubbed all over the chest two or three times a day; whilst one drachm of the same solution, diluted with six ounces of water, formed a mixture for internal administration, half an

ounce of it being given two or three times daily. Both the lotion and mixture were clear, colourless, and almost if not quite tasteless, and were compared by many of the patients (who were entirely ignorant of their composition) to rain water.

The following is a description, as brief as possible, of the cases, and how they were influenced by the treatment. The *inverted commas* indicate the patients' own remarks.

CASE I. *Phthisis: third stage*. W. S., aged 30, omnibus conductor. Chronic phthisis, with ordinary symptoms of some severity. Considerable cough, and dyspnoea. Cavernous breathing at the apex of left lung.

April 4th. To use the *excreta* lotion freely, and take the mixture twice daily.

April 8th. The same as on admission: cough and shortness of breathing unrelieved.

April 19th. "No improvement" in any of the symptoms.

CASE II. *Phthisis: third stage*. J. H. aged 39, manservant. Very chronic phthisis in an advanced condition. Dyspnoea, cough, night perspirations. Cavernous breathing with gurgling at the apex of the right lung; humid crackling at the apex of the left lung.

Has been in the hospital some weeks, under general tonic treatment, but without benefit.

April 4th. To have the chest rubbed with the lotion three times a day; and take the mixture twice a day.

April 11th. Breathing much easier; no other change. *The lotion changed for distilled water.*

April 15th. "*Lotion still relieves the breathing;*" but he does not feel so well as when taking the former tonics.

CASE III. *Phthisis: third stage*. G. G., aged 39, bricklayer. Chronic phthisis of ordinary character: severe cough. Cavernous breathing at the apex of the left lung.

Has been in the hospital for some time, and improving under quinine and cod-liver oil.

April 4th. To take half an ounce of the mixture three times a day.

April 11th. No change in any of the symptoms.

April 16th. Became so dissatisfied with the change, that at his own request he returned to his former tonics.

April 20th. "Feels better since taking the quinine and oil."

CASE IV. *Phthisis: first stage*. H. R., aged 25, cabinet-maker. Chronic phthisis, associated with general bronchitis and great dyspnoea. Weak respiration, with abundant subcrepitant rhonchus at the apex of the right lung. Percussion duller, with subcrepitant rhonchus at the apex of the left lung.

April 8th. To continue the remedies under which he has been gradually improving for some weeks, and to rub the chest frequently with the lotion.

April 11th. "No relief to breathing."

April 19th. "No better." Lotion discontinued.

CASE V. *Phthisis: first stage*. C. B., aged 31, housemaid. Chronic phthisis, with much cough and thoracic pain and distress. Dulness on percussion, and subcrepitant rhonchus at the apex of the left lung. Had previously taken tonics and cod-liver oil, with very little advantage.

April 4th. To take the mixture twice, and use the lotion three times daily.

April 8th. "No difference."

April 17th. Thinks the lotion has given her cold. No general improvement; left hospital at her own request.

CASE VI. *Phthisis: first stage*. M. S., aged 21, maidservant. Phthisis in quiescent condition: much cough and dyspnoea of nervous character. Harsh and weak respiration at the apex of the right lung. Had been in hospital some time, and improving under steel, etc.

April 4th. The lotion to be used frequently, and the mixture taken three times a day.

April 11th. Feels better generally. "No change in chest symptoms from the lotion."

April 15th. Not improving. Felt better under former treatment, to which she begged to return.

CASE VII. *Phthisis: second stage.* E. D., aged 20, maidservant. Chronic phthisis: much cough and expectoration. Pain beneath right clavicle, with "tightness of breath." Harsh respiration with humid crackling rhonchus at the upper part of the right lung. Had been some time in the hospital, and improved slightly.

April 8th. To try both the lotion and mixture.

April 11th. "Tightness relieved by the lotion." *Lotion changed for distilled water.*

April 21st. Lotion still relieves the breathing.

April 25th. "About the same in general, but *much better for the lotion*" (plain water).

CASE VIII. *Phthisis: first stage.* E. K., aged 18, maidservant. Chronic phthisis, with frequent dyspnoea, and much cough and oppression. Dulness on percussion, with weak and jerking respiration at the apex of the right lung. Had been in hospital for some weeks under various treatment, but had not improved.

April 4th. To use the lotion, and take the mixture in the ordinary way.

April 11th. "No difference."

April 15th. "No relief either of cough or oppression."

CASE IX. *Phthisis: first stage. Bronchitis.* F. S. aged 30. Chronic phthisis: constant cough, with dyspnoea of some years standing, especially during the winter. Pain at the mid-sternum: much oppression. Flattening of chest-wall: diminished motion, dulness and weak harsh respiration under the right clavicle. Sibilant rhonchus heard throughout the chest. Had been in hospital some time, and improving under treatment.

April 4th. To take half an ounce of the mixture thrice daily, and use the lotion frequently.

April 11th. "No difference since new medicine."

April 15th. No effect from either. She wishes to return to the old medicine.

April 21st. "Improving."

CASE X. *Phthisis: first stage.* M. E. aged 20. Phthisis of rather rapid form. Much cough and "tightness of breath." Pulse 100. Dulness of percussion and weak respiration with prolonged expiration beneath the right clavicle. Has been in hospital six weeks, and improving under steel and cod-liver oil.

April 4th. To use the lotion three times, and take the mixture twice daily.

April 9th. "No change; not better."

April 15th. "Not as well as with former medicine."

CASE XI. *Chronic Bronchitis: Emphysema.* J. J., aged 32, porter. Cough with dyspnoea for several years: worse during the winter. Much mucous expectoration. No hæmoptysis. No cardiac symptom. Percussion morbidly resonant all over chest: sibilant and loud sonorous râles throughout both lungs. Had been improving greatly under opium, ipecacuanha, and senega.

April 4th. Ordered to take the mixture twice daily, and to rub the chest three times a day with the lotion.

April 11th. "Not so well as under other physic." Less relief from the lotion than from croton oil liniment which he had been using. At his own request, he returned to the former treatment.

CASE XII. *Phthisis: first stage.* J. S., aged 25, stationer. Chronic phthisis with ordinary symptoms. Dulness of percussion note, with weak harsh breathing beneath the left clavicle.

April 8th. To take the mixture in the ordinary way.

April 15th. "Better, gaining strength."

April 12th. "Improving very much: less cough; stronger." In order to try whether the improvement

was due to the *excreta* or other causes, the mixture was changed to distilled water.

April 25th. Still improving. "Cough much less, and very much stronger" than on admission.

CASE XIII. *Phthisis: second stage. Bronchitis.* J. K., aged 30, shoemaker. Chronic phthisis, complicated with bronchitis of some standing. Much cough and dyspnoea. Humid crackling rhonchus at the apex of the left lung: subcrepitant rhonchus at bases of both lungs.

April 8th. To use both the lotion and the mixture in the ordinary way.

April 11th. "No relief."

April 15th. Cough increasing: dyspnoea severe.

April 19th. No change. Ordered small doses of quinine with chloric ether and opium.

April 25th. Decided improvement from new treatment.

CASE XIV. *Phthisis: third stage.* C. C., aged 22, porter. Chronic phthisis: considerable cough and dyspnoea: severe night perspirations—extreme emaciation. Cavernous respiration and rhonchus at the apex of the left lung.

April 4th. To take the mixture three times, and rub in the lotion frequently every day.

April 8th. "Chest relieved by the lotion."

April 11th. "Breathing much easier." *Lotion exchanged for distilled water.*

April 15th. "Breathing not so easy." The *excreta* lotion to be resumed.

April 19th. No improvement: cough and dyspnoea very troublesome. "No good from lotion or mixture."

CASE XV. *Phthisis: first stage.* J. W., aged 42, labourer. Chronic phthisis, with much secondary bronchitis and dyspnoea. Respiration weak and harsh, with abundant subcrepitant rhonchus at the apices of lungs. Has been under treatment four weeks, with benefit.

April 8th. To use the lotion, and take the mixture in the ordinary way.

April 15th. "Improving: breath easier: great good from lotion." *The lotion was changed to plain water and the mixture to lime water diluted with four times its bulk of distilled water.*

April 22nd. "Lotion and mixture still do a great deal of good."

April 28th. Continues as before, and is gaining strength—breathing much easier.

CASE XVI. *Chronic Bronchitis.* C. R., aged 56, gardener. Cough with more or less dyspnoea for five or six years. Worse during the winter. Percussion very clear all over the chest. Sibilant and sonorous râles throughout both lungs.

April 4th. To use the lotion three or four times a day, and to take a mixture of ipecacuanha and senega.

April 11th. Breath relieved. "Lotion does great good." *Lotion changed to plain water.*

April 21st. "Lotion does good to the chest and breath. Better since using it."

CASE XVII. *Chronic Bronchitis: Emphysema.* F. W., aged 13. Cough almost constant since infancy, when he had hooping-cough. Great dyspnoea. Much expectoration. Pulse quick. Percussion very clear all over the chest. Sibilant and sonorous rhonchi throughout the lungs.

April 8th. The mixture and lotion to be employed in the ordinary manner.

April 11th. No improvement.

April 15th. No change in any symptom. "Breath very tight; cough hard." No relief having been given, the patient was put under other treatment.

CASE XVIII. *Bronchitis: Emphysema.* R. H., aged 52, gardener. Cough for some years, with frequent attacks of asthma. At present, the breathing is laboured and the cough severe. Percussion very clear all over the chest. Respiration very weak, with loud sonorous

râles throughout both lungs. Has been four weeks in hospital, and improving under ipecacuanha, opium, and senega.

April 8th. To use the lotion, and take the mixture in the usual way.

April 11th. "Lotion relieves the breath."

April 19th. "Going on well"; "the medicine does much good." *The mixture and lotion changed for plain water.*

April 25th. "Still improving on medicine." Ordered compound cascarrilla mixture.

May 6th. Getting better; much improved in all symptoms since admission.

It will be seen that, of the above cases, fourteen were phthisical, and four bronchial. Of the consumptive patients, eight were in the first, two in the second, and four in the third stage of the disease. The four cases of bronchitis were of a chronic kind; three of them being associated with more or less emphysema. Of the patients generally, several had but just been admitted into the hospital; whilst others had already been under treatment, some of them more or less successfully; so that the new remedy was administered under every possible variety of circumstances.

A careful examination of the result is singular and interesting, not so much in reference to the question under consideration, as with respect to other matters medical. I shall, however, first notice the effect of the *excreta*.

Without reference to particular cases, in twelve no effect whatever was produced; no single symptom relieved; and the *excreta* solution appeared to be perfectly inoperative either for good or harm. So innocent was it of any effect, that of these twelve patients, five who had previously been deriving more or less benefit under other treatment, begged that it might be exchanged for their former remedies. In six cases (Nos. II, VII, XII, XV, XVI, XVIII), either the lotion or the mixture was reported by the patients to have done good; three of these found relief only from the *lotion*; but the remaining three thought the *mixture* was more or less beneficial. The three (Nos. II, VII, XVI) who derived benefit from the *lotion*, found no difference in the result when the *excreta* solution was exchanged for plain water; and of the three who spoke in praise of the mixture (Nos. XII, XV, XVIII), two experienced no difference, but went on just as favourably when the same change was made in the mixture; and the third (No. XV) was equally uninfluenced when he unsuspectingly took weak lime water instead of the *excreta*.

With such facts before us, it is impossible to arrive at any other conclusion than that the *excreta* of serpents, in the treatment of phthisis, bronchitis, and emphysema, is a perfectly inert substance.

It would be wrong, however, to dismiss this subject without some remarks upon the six improved cases, since they teach us an important lesson. To what can we attribute the supposed success either of the lotion or mixture? Friction, doubtless, had a great share in the benefit resulting from the lotion; whilst in both, hopefulness, rest, good living, and hospital hygiene, were unquestionably the great agents. Perhaps, most of us are disposed to attribute too much to the action of physic, and too little to the circumstances with which it may be associated. It is so easy to forget that there are no better tonics than confidence and hope, and no physic more effective than good air and proper nourishment.

Sir Benjamin Brodie, in his well-known anti-homœopathy letter, has very justly remarked that "if anyone gave to his patients nothing but distilled water, and enjoined a careful diet and a prudent mode of life, although a great number would perish for want of further help, more would recover." It would seem, indeed, often to matter little whether we go back to earlier days, and give our patients an *infusion of pearls*, or let them use

metallic tractors, or indulge them with *homœopathic globules* or *serpents' excrement*; the remedy needs only to be harmless, and a certain number of them will recover. It is only necessary to look upon this "certain number" as the *rule*, and, at the same time, either to disregard or overlook the real element in their recovery, in order to believe that in any inert substance—it matters not what it is, so that it be only inert or something approaching it—we have found a great remedy.

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MEDICAL PSYCHOLOGY.

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III. On the Psychological Phenomena or Symptoms of Disease.

[Continued from page 382.]

Sleep. I cannot dismiss the important mental phenomena, in disease, of coma and delirium, without observing how difficult, if not impossible, it is, on the one hand to diagnose between natural sleep when profound, and the sleep merging into coma induced by opium and other narcotics; and, on the other hand, to distinguish between the phenomena of true delirium tremens, and certain recognised forms of insanity. As to sleep itself, it may well, as Sir Henry Holland has justly remarked, be called "one of the most wonderful functions of life—a state in which personal consciousness and sense of identity are scarcely maintained; in which memory and reason are equally disturbed; and yet one in which the fancy works variously and boldly, creating images and impressions which are frequently carried forward into waking life, and blend themselves deeply and strongly into every part of our mental existence. It is our familiarity with this great function of our nature which prevents our feeling how vast is the mystery it involves." He advocates the opinion that, in no case whatever of natural sleep, however profound, is consciousness wholly suspended. "It is not an unity of state with which we are dealing under the name of sleep; but a series of fluctuating conditions, of which no two successive moments are, perhaps, strictly alike. And whatever interpretation we may give to this most mysterious phenomenon of life, it seems certain that the state of consciousness, or recollected dreaming, is that which comes into closest connexion with our waking existence. It forms a passage or gradation from one state to the other; an obscure and broken link, it may be, yet belonging to that chain which gives succession and continuity to all the phenomena of our being."

On the psychological phenomena of sleep, though so interesting and curious, as in dreaming, somnambulism, and the vagaries of the imagination, when the controlling influence of the will is suspended, it is not my intention to dwell; but in certain diseases, the character of the sleep affords us an indication of great practical importance, graduating, as it does at times, into coma. In cases, indeed, of moderate compression, from effusion of blood upon the surface of the brain, it often is difficult to recognise any other distinction between sound sleep and coma, beyond that of the duration and persistence of the state; though, from the difference of the inducing cause, other variations must necessarily exist. Dr. Wilson Philip held that no sleep from which we cannot be readily and easily aroused is healthy. Now, it is true, that sleep may be too profound, and merge into coma; but then it may be too light to be refreshing. Its relations to affections of the brain are most important; and in some other functional derangements of the system, and especially in disease of the kidneys, we are aware of the importance and practical value of the indications which it furnishes to us.

As to its proximate cause, the most recent contribu-