

**Synoptical account of the effects of certain medicines applied in the treatment of asthma and consumption, on the principle of endosmosis / by W.H. Brown.**

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SYNOPTICAL ACCOUNT  
OF THE  
EFFECTS OF CERTAIN MEDICINES  
APPLIED IN THE TREATMENT OF  
ASTHMA AND CONSUMPTION,  
ON THE PRINCIPLE OF  
ENDOSMOSIS.

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Dispensary.*

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LONDON:  
SAMUEL HIGHLEY, 32, FLEET STREET.

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LONDON:  
SAMUEL HIGHLEY, 32, FLEET STREET.

1844

TO

KLEIN GRANT, Esq., M.D.

*Lecturer on the Practice of Medicine, and Physician to the General  
Dispensary, Aldersgate Street, &c., &c.*

THE FOLLOWING PAGES ARE INSCRIBED,

IN HUMBLE TESTIMONY

OF THE SINCERE ESTEEM, IN WHICH, FOR THE

EXCELLENCES OF HIS INTELLECTUAL AND MORAL

NATURE,

HE IS HELD BY

THEIR AUTHOR.



# KLEIN GRANT, M.D.

Professor in the Faculty of Medicine, and Physician to the General Hospital, Philadelphia, Pa.

Philadelphia, Pa.

## THE FOLLOWING CASES ARE PRESENTED

### IN BRIEF TESTIMONY

OF THE SIGNIFICANCE OF THE

EXCELLENCE OF HIS INTERNAL AND EXTERNAL

NATURE

HE IS BORN AT

THEIR ACTION

## SYNOPTICAL ACCOUNT, &c.

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ONE day in the early part of last year, when engaged in examining the chest of a person, in whose lungs there existed a large cavity replete with tuberculous matter; the thought suddenly occurred to me that some benefit might be afforded to people so situated by applications made on the principle of Endosmosis.

I have since this, put the idea pretty largely into practice, not only in the treatment of Phthisis, but in the treatment of Asthma likewise, with what success the following synoptical account will disclose.

When this is weighed, and it is further reflected that something remarkably similar, if not actually identical, has been recommended lately by one of the most deservedly celebrated members of our profession, I am sure that no one, however poor may be the success of the plan in his hands, will tax me with irregularity in thus bringing it forth, or denounce the motive by which I have been induced to do so, as unworthy.

I am naturally anxious on this head in days like the present, when the frequency of charlatanism and imposture is not alone to be lamented; but when instances are rife amongst us of the regularly educated



practitioner, hopeful through the most fatal of popular weaknesses, to draw the victims of humanity's worst foe to his door, stooping to play nostrum-monger to it too—he who of all men best knows that ‘one remedy’ is as absurd in Medicine, as ‘one appliance’ would be inconsistent in Surgery.

Endosmose, is the term applied to that action which sets in, when two miscible fluids of unequal density are separated from each other by animal or vegetable membrane, and which carries the thin fluid into the thick ; thus, if a bladder containing gum water, be immersed in common water, we have the conditions necessary for Endosmose to take place present, and the water begins to make its way gradually through the bladder to the gum water ; at the same time a minor action commences, which carries a portion of the gum-water to the water : this action is denominated Exosmose. These two actions continue until they have equalised the density of the fluids on either side of the membrane ; they may therefore, be looked upon as actions, having this for their end. Of course, when the experiment is reversed, *i. e.* the denser fluid made to surround the less dense, the major action is Exosmose, the minor, Endosmose.

Now, as to whether the human body presents one of the conditions necessary for the production of Endosmosis, and if so, whether its vital action admits



or hinders this physical one, or not, I cannot quote the opinion of a more worthy authority than Dr. CARPENTER, who, in his Work on "General and Comparative Anatomy," when discussing this matter generally with regard to the human constitution, (that is to say, how far internal as well as external absorption is dependant upon it,) says, "It may be reasonably enquired, how far the passage of fluid through membranes or tissues in the living body, may be explained on this principle. It has been maintained, that this is a purely vital change, because it does not occur except during the continuance of life. But it may be alleged on the other side, that if we regard the other vital actions as furnishing the conditions of Endosmose, the absorption of fluid may itself be considered as only an instance of the phenomenon. That this is the case in the vegetable kingdom, subsequent details will show ; and there will be no difficulty, therefore, in understanding why the process should cease with life. The functions of absorption in animals, cannot, however, be so conveniently studied ; and its true character has not yet been satisfactorily elucidated. Still there seems much reason to believe, that it is here also due to physical laws acting under conditions supplied by the living system ; for transudation readily takes place through dead as well as living animal membranes, even where these, instead of forming a distinct septum, as in the production of Endosmose,



are in contact with the tissues on the other side. Thus, LEBKUCHNER, found, that oil of turpentine and camphor, placed on the skin of a rabbit twelve hours after death, communicated, in the space of ten hours, their peculiar odours to a paper placed on the internal surface of that membrane. A solution of prussiate of potass penetrated in five hours ; sulphuric acid, in six hours ; and acetic acid, in twenty-four hours ; and a solution of ammoniuret of copper, required two days for its transit. \* \* \* \* \*

Again, MAGENDIE, immersed the amputated paw of a rabbit in ink, and the cellular membrane became coloured. He formed a bag from a piece of human skin, the epidermis being internal, and then filled it with water ; transudation took place rapidly, but when the experiment was reversed, and the epidermis placed externally, it became raised into a blister ; thus showing, that, from some physical causes, the passage of fluids takes place through it much more readily in the internal, than in the external direction. It is very easy to explain on this theory, why absorption should take place so much more rapidly and energetically during life than after death ; since the quantity of fluid which first penetrates the membrane, is conveyed no further into the system, unless there is a demand for it ; and it therefore, saturates the tissues with which it is in contact, and prevents the admission of more. But when the fluid, so absorbed, is constantly being drawn off, for



parallel with the first, so that the whole consists of six folds. These are stretched, applied across the upper part of the thorax just below the clavicles, and fastened to the shoulder straps, or other part of the dress, which latter is to be arranged so as to be readily opened and closed. A sponge, the size of a walnut, is then filled with the lotion and pressed upon the linen along its whole course, the dress being opened for this purpose, and immediately closed. This operation need not occupy five seconds. It should be repeated, as I have stated, every five minutes. The application of the lotion, should be incessant during the day, and all waking hours ; the dress being light, or even entirely removed, so as to allow of free and rapid evaporation. It is suspended during the night.

It is by no means my wish to laud this remedy beyond its just value ; but I have no hesitation in asserting that it possesses a power, in checking the progress of the deposition and softening of tubercle in the lungs, beyond any other which I have ever tried. And the number of patients who have recovered from incipient Phthisis under its use ; and who, after many years, are still living, and in apparent health, induces me to express myself in strong terms in regard to its extreme value.

One patient, who consulted me fifteen years ago, had dulness on percussion, and pectoriloquy, and every other sign of incipient Phthisis. He applied,



and long wore, the alcoholic lotion, called it his "breast plate," and is now Professor of ——— College.

A Lady, about thirty years of age, became affected with Hæmoptysis, and displayed the physical signs and the usual symptoms of Phthisis. She was enjoined the alcoholic lotion. It is fourteen years since it was first applied, and it is continued, or renewed, if ever suspended, to this day.

I saw a young lady two years ago, one of a most consumptive family, affected with Hæmoptysis, and with every threatening sign and symptom of incipient Phthisis. I prescribed the alcoholic lotion, and the Cough and Hæmoptysis were removed, and every fear dispelled. It had already been proposed that this young lady should take a voyage to Madeira. She did so, continuing the lotion, and returned in apparent good health.

Three months ago, a young lady was brought to me, having a recurrence of Hæmoptysis. There were pectoriloquy and dulness under the right clavicle, cough, loss of colour, and of flesh. The alcoholic lotion was applied. The Hæmoptysis and Cough ceased. The patient went to Hastings, and every account which I have received, has been one of improved health.

I give these cases as examples. I do not imagine that the alcoholic lotion does more than *check* the



the purposes of the economy, a continual demand for a renewed supply is created, and thus the action becomes one of the most regular of those subservient to life."

The plan which I adopt for keeping the thin fluid, *i. e.* the remedy, in constant apposition with the chest, is the following:—I have a piece of cork cut to fit just below the clavicle, hollowed out interiorly and filled with sponge, which is kept constantly saturated; the outside of this apparatus is covered with linen or calico, two long ends of which being left on either side, enable it to be fastened on both above and below the shoulder,\* and thereby retained accurately in its place.

The thin fluids which I have employed have been principally spirituous preparations, as will be seen from the following, however, in which the effects of all are duly recorded, I have likewise made trial of several acidulous and alkaline preparations.

With regard to the first of these applications, the one in which I have the greatest reliance, my own experience has been so strikingly concordant with that of Dr. MARSHALL HALL, that I cannot abstain from securing better attention to a statement of it

\* Messrs. J. S. & W. Taylor, Anatomical Machinists to Charing Cross Hospital, and to the late Sir Astley Cooper, of 37, Strand, have just manufactured an apparatus vastly superior to this, composed of metal, and retained in its place by a spring. It of course entirely supersedes the simple construction I have described.



by prefacing it with a statement of his, — to which I have already alluded in the third paragraph, —and which appeared at page 121 of the last volume of the *Lancet*.

“ So many persons affected by incipient Phthisis, marked by dulness of sound on percussion, *and no doubtful pectoriloquy under the clavicle(?)* hæmoptysis and disposition to chills, heats, and early morning perspirations, &c. have been benefited and restored to apparent health by the remedy, or remedies, which I am about to mention, that I cannot but think they possess great efficacy.

The first and the principal of the remedies is an alcoholic lotion, constantly applied by means of six folds of linen over and across the upper lobes of the lungs.

One part of pure alcohol is mixed with three parts of pure water. It is applied tepid at first, afterwards of the temperature of the atmosphere. It is applied, in *small* quantity at a time, every *five* minutes, so that the application may always consist of alcohol and water. (If applied in larger quantity, and less frequently, the alcohol would evaporate, and water alone would be left, and this would be the source of a feeling of discomfort instead of the feeling of glow, which the alcohol induces). The application is easily made ; a piece of soft linen, of the size of a very *large* sheet of letter paper, being folded in the usual manner, is then folded twice more, in lines



“ Mr. B. who put himself under my care,” and so forth. At the same time, although I have avoided giving what I may term ‘hacknied’ symptoms, I have not omitted to mention ‘special’ ones where such have existed. I know that the over-punctilious of my brethren will object to this,—that is to my not enumerating symptoms in all my cases—that it throws considerable doubt as to their real character over them ; but then it is useless to attempt to accommodate these gentry, who would still entertain the same scepticism, if not a more offensive one were I to do so.

### SPIRITUOUS APPLICATIONS.

Of these I have used the following :—

I have seldom found it necessary to renew the application of them, more than three or four times in the day, my method not being so favourable to evaporation as that of Dr. M. HALL.

Alcohol, mixed with water, in half and half proportions.

Æther Sulphuricus—the same.

In seventeen cases of, for the most part clearly marked incipient Phthisis, I have used the above indifferently, with the most unequivocal success. The diatheses of these patients were purely



consumptive, an hereditary taint in the majority. The treatment was kept up from eight to fourteen weeks.

The latter of these applications, I have found relieve the breathing in Asthma ; from the first I have derived no advantage whatever in this complaint.

Tinctura Opii, a fourth, combined with Alcohol, a fourth, and water, a half.

Tinct. Hyoscyami,	} Mixed with Alcohol and Water in the same propor- tions as the former.
Tinct. Digitalis,	
Tinct. Conii,	

Nine cases of more advanced Phthisis, than the above, which were making little or no progress, under the former applications yielded readily to these. Although these four applications seemed to be pretty good substitutes for each other, they were not so completely so, as the former, three of the cases getting on faster when the first was adopted ; another three under the second ; two under the third ; and one under the last. I could detect no constitutional difference to account for this. Neither was discontinued for upwards of four months.

I have seen benefit, well nigh tantamount to cure, result from the steady application of these means to many persons affected with dry or Spasmodic Asthma.



morbid processes. But — ‘*Est quoddam prodire  
tenus, si non datur ultra.*’

In what the morbid processes of the deposition and softening of tubercle consist, I believe we do not know ; but if these processes be really checked by the application of the alcoholic lotion, we have a practical fact which must excite the deepest interest. Some degree of this influence in incipient cases, is, I believe, exerted by this remedy.

None of the remedies ever yet proposed for Phthisis, has maintained the character first given to it. The encomiums bestowed upon them, were always beyond the truth. I would, therefore, carefully guard against such an event in the present instance ; and I would beg to be understood, as stating only the fact, that I have witnessed many, very many cases of incipient Phthisis checked by the strenuous application of the alcoholic lotion ; and the patients restored to apparent health,—these cases having been proved to be Phthisis, by the appearance of the physical signs, as well as the morbid symptoms of this dire disease.

I would also, guard my readers, against trusting to this remedy as a sort of cure for Phthisis. I think it the most important remedy in this disease, which we possess ; but I would by no means neglect any of the other well known aids in the treatment of Phthisis. Of these,—change of air, free exposure to sea breezes, a sea voyage, a mild climate, a chalky



soil, a locality screened from the north-east winds, and gentle exercises, especially on horseback; a meat diet with a little of Bass's ale, perhaps, but otherwise without stimulus; the system of sponging with the sea water, or salt and water, or vinegar and water; light clothing, with flannel next to the skin, &c., the plan recommended by the late Dr. STEWART, &c., constitute the additional remedies to be adopted in the treatment of Phthisis."

The wise and candid cautions of the concluding paragraphs, I beg to reiterate.

Having now stated the principle on which I act, explained the scientific process of which it is but an application, and shown it has received trial, to a limited extent, in other hands—though I should say without being so termed, and perhaps from mere accident, since no reason is assigned—and this with the utmost success, I shall proceed to explain the various ways in which I have put this principle into practice, and to detail the success which has attended each.

I would beg, however, before I go any further, to remind my readers that this is merely a "Synoptical Account,"—cases therefore will not be given in detail. Indeed, the only purpose which this seems to me to answer in, by far the majority of cases, is that of making a book, naturally a duodecimo, a folio, of which I have about as great an abhorrence as I have of writing "Mrs. A. who consulted me last January,"



Tinctura Iodini Composita, one drachm to four ounces of Alcohol, and four ounces of Water.

Tinctura Ferri Sesquichloridi, a quarter, Alcohol, a quarter, and Water, a half.

In four cases of Phthisis, (three in the early stages, one in which there appeared to be a small cavity) occurring in patients of the Scrofulous Diathesis, the application of the above was attended with success. I used the two indifferently, but found the first certainly the most active preparation.

In Asthma, I have not made use of either.

Tinctura Gallæ, a quarter part, Alcohol, a quarter, and Water, a half.

Tinctura Kino, with Alcohol and Water, in the same proportions.

Five cases of incipient Phthisis which set in after attacks of other diseases (Typhus fever in two instances) and which seemed to be making no progress towards recovery under the Alcoholic treatment, mended rapidly under this. It was persevered with for about nine weeks.

I have not applied these in Asthmatic cases with any decided advantage.

Tinctura Ammonia Composita, one drachm and a half, Alcohol, four ounces, and Water, four ounces.

Tinct. Camphoræ Composita, a quarter, Alcohol, a quarter, and Water, a half.



In Phthisis, I have derived no especial advantage from the application of these ; the influence of the first appearing to be identical, with that of the first class of preparations I have set down ; that of the last with the second, or rather first of the second, the Tinct. Opii, for which it appears to me it might be substituted. On the other hand, in the moist species of Asthma, I have seen the most beneficial effects result from the continued application of these, in numerous cases.

Tinctura Belladonnæ,\* one drachm, Alcohol, six ounces, and Water, six ounces.

Tinctura Stramonii,† (Ph. U. S.) with Alcohol and Water, in the same proportions.

Tinctura Lobeliæ, (Ph. Edin,) a quarter, Alcohol, a quarter, and Water, a half.

The efficacy of these in the treatment of Phthisis appears to me to be exactly similar to that of the second class of preparations, for which, in the treat-

\* R

Fol. Belladonnæ, two ounces.

Sp. Rectificati, sixteen ounces.

Macerate for twenty days and strain.

(Bailey in Pereira's Mat. Med.)

† R

Sem. Stramonii, bruised, four ounces.

Sp. Rectificati, thirty-two ounces.

Macerate for fourteen days and filter through paper.

(Pereira's Mat. Med.)

ment of the successful cases set down thereto, I sometimes substituted them indifferently, apparently without any loss of advantage.

I make a separate class of these, on account of the peculiar good which I have seen them afford, in many cases of Spasmodic Asthma, i. e., by considerably abating the violence, and frequency of the Paroxysms.

I have never seen any unpleasant symptoms result from the application of the two first, but I have always kept a strict watch over my patients whilst I had them under this treatment. Indeed, in all but two, which I might term desperate cases, I have caused the treatment to be suspended after it had been persevered in for three weeks, for eight or ten days, lest too much of the active principle should get absorbed into the constitution.

## ACIDULOUS PREPARATIONS.

Acidum Nitricum Dilutum, one drachm to eight ounces of water.

Acidum Sulphuricum Dilutum, in the above proportions.

I submitted three cases of incipient Phthisis, in which an unusually large quantity of blood was spat up, and the night perspirations were most excessive,



and which seemed to be making no good progress under either of the spirituous applications, to these. Both the symptoms I have mentioned gave way in about a fortnight; the alcoholic applications were then resumed and the patients finally recovered. These are not of the number set down to the alcoholic treatment, the cures perhaps belonging more to this.

I have not used either of these in the treatment of Asthma.

Acidum Hydrocyanicum Dilutum, fifteen minims to an ounce of water.

I cannot say that I have derived any very unequivocal advantage from the use of this in Phthisis, although I have tried it in many cases and in different stages of the complaint. In some cases of Spasmodic Asthma, however, I have seen it exert a beneficial influence, and this very speedily.

### ALKALINE PREPARATIONS.

Liquor Potassæ, one drachm in an ounce of Water. The only case in which I have derived good from the application of this, was in that of a young man whose constitution was previously undermined. In this instance a cure was made by this means, of which

no other, though persevered in for some time, gave the slightest indication.

I have not made trial of this in the treatment of Asthma.

Liquor Ammoniaë, two drachms to an ounce of Water.

I have only used this in Asthma, in the moist species of which I have found it afford much relief after a day or two by diminishing the sense of tightness and fulness in the Chest, and promoting the expectoration.

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Liquor Argenti Nitratis, mixed with distilled water in half and half proportions.

I have restored one patient—a young man who showed symptoms of Phthisis as he was recovering from a long attack of continued Fever—in whose case none of the spirituous applications seemed to exert any beneficial influence whatever, by this means. The discolouring property of this application prevents one from having recourse to it largely.

In Asthma, I have not employed it.

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Well, then, this is the patient investigation I have been conducting, and what has come of it. Now,



several questions will naturally arise in the minds of my readers, to which it is my duty to reply ere I take my leave of them ; and the first of these will be, are these all the cases of Phthisis and Asthma you have had under your care since you hit on this method of treatment ; in other words, (since you mention nothing but success as being attendant on your plan, at any rate as far as Phthisis is concerned,) do you mean to tell us that with it you have cured or relieved all of Phthisis and Asthma, that has come before you since you possessed it ? Most certainly not ;—a goodly majority, rather above three-fifths, but certainly not all, and as to the Phthisical cases, they were, with two or three exceptions, in which cavities appeared to exist,\* all in the early stages. Then, did you rely solely on this Endosmotic treatment, or did you accompany it with any other ? I relied upon this to effect direct good, but I have always, at the same time, endeavoured to bring about indirect good through the medium of the constitution, by means of tonics, alteratives, change of air, and the other methods usually had recourse to, to improve the constitution. Again, are these you have mentioned, all the preparations you have tried, and if so, what induced you to make choice of them ? These are all the preparations I have tried ; their selection

\* I say *appeared to exist*, because it is not so easily *determined*, as many would lead us to believe.

was little more than empirical, at best, because at one time or other they had been in repute in the treatment of the two maladies.

I have now, but a caution and a hint to give, and my short task is concluded ; the former, do not attempt to carry out the principle of which this treats, over an abraded cuticle, the reason for which is obvious,—the latter, might not this principle bear a wider application in the treatment of disease, than that here given to it? No, this does not conclude it ; the proper finish to all such efforts, is the expression of a fervent wish, that the sum of human ill and misery may be the less for them, and such a wish, apart from every selfish motive, I with all sincerity express.

13, *Bedford Street,*

*Bedford Square,*

*December, 1844.*



and little more than common sense, at best, because at  
one time or other they had been in repute in the  
treatment of the two maladies.  
I have now, but a notion and a hint to give, and  
my shortness is considered; the former, do not at-  
tempt to carry out the principle of which this treatise  
over an extended article, the reason for which is obvi-  
ous—the latter might not this principle bear a  
wide application in the treatment of disease, but  
that have given to it, No. 11, this does not conclude  
the proper basis to all such efforts, is the expression  
of a fervent wish, that the sum of human ill and mis-  
ery may be the less for them, and such a wish, apart  
from every selfish motive, I wish all sincerely express.

13, Bedford Street,  
Bedford Square,  
December, 1844.  
I have the honor to acknowledge the receipt of your  
letter of the 10th inst. and in reply to inform you  
that the same has been forwarded to the proper  
authorities for their consideration. I am, Sir,  
very respectfully,  
Your obedient servant,  
J. C. Galt.

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