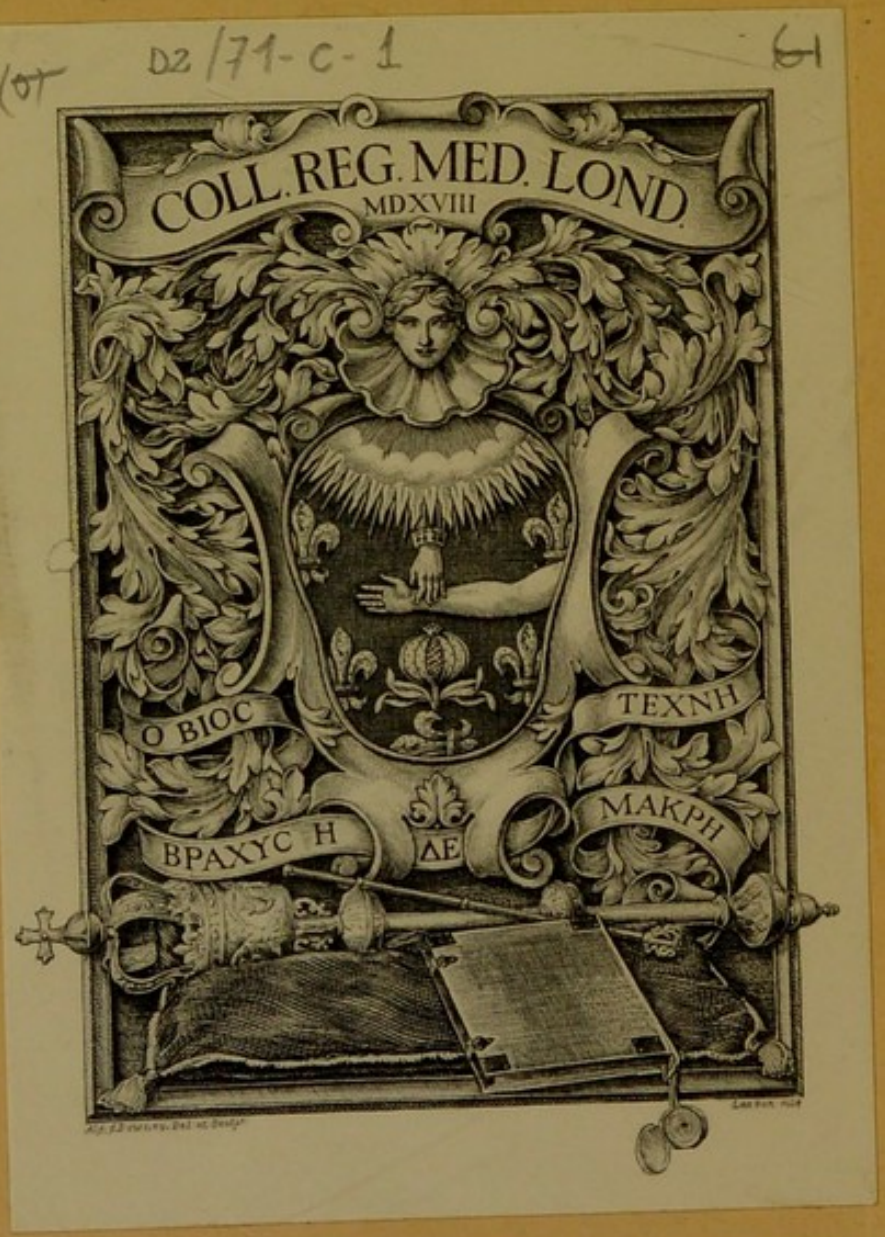
A treatise on the employment of certain methods of friction and inhalation in consumption, asthma and other maladies / by John Pocock Holmes.

HOLMES
ON
CONSUMPTION
ASTHMA &c.



Royal Institution
with the Authors respects

A TREATISE

ON

THE EMPLOYMENT OF CERTAIN METHODS

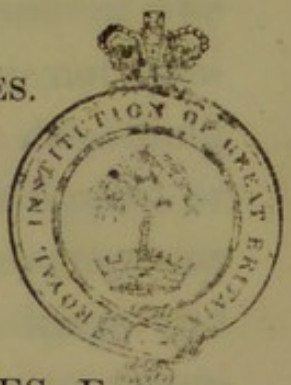
OF

FRICTION AND INHALATION

IN

CONSUMPTION, ASTHMA,

AND OTHER MALADIES.



BY

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PREFACE.

In throwing together the following pages it may not be altogether inexpedient for their author to state the nature of the attempt he has made. He has not proposed to himself the task of describing fully, either from his own experience, or from the writings of others, the symptoms or causes of diseases of the lungs and heart. His first object has been to recommend to public notice a method of introducing medicines into the system, which had not excited the attention its merits seem to demand until within the last few years. His second intention has been to demonstrate the particular efficacy of certain remedies known to himself exclusively,

and which are most conveniently and securely exhibited by the method in question.

Hence it follows, that the reader should not expect any thing more, in way of detailed account of symptomatology, than brief notices of the more remarkable and prominent features of disease: nor are these brief sketches necessary to the plan, further than to establish the fact of the existence of a particular complaint, in order to connect with the cases in the book the power of the remedy in such complaint generally.

An apology, if apology for not entering more deeply into the subject were necessary, might readily be found by the author in the well-known fact, that the pathology, causes, symptoms, and morbid appearances, of affections of the heart and lungs have been so fully described, that little remains to be added, at least in the present state of science. Hence, any attempt at a full history of those topics would have rendered this work, in great part, a tedious

transcript of the investigations of foreign authors, as is the case with many modern English productions. In the practical or therapeutical part, in the treatment of disease, the great authorities above referred to are evidently deficient. Here is ample room for improvement. To this point the writer has endeavoured to direct the resources derived from patient observations; and whatever he has mentioned, either of symptoms or pathology, may be considered subsidiary to the improvement of our means of cure.

The attentive reader will not fail to observe the great mass of evidence by which the efficacy of the treatment recommended is attested. He will observe also the unobjectionable nature of the evidence, all of it being in the writing of the parties, or derived directly from their statements, and duly authenticated by their names, signatures, and addresses; and further, that all these parties are highly respectable, and above any suspicion of the wish to deceive.

Yet, notwithstanding this powerful proof in his favour, the author has had sufficient experience to know that it will not satisfy all minds; that his discoveries will be denied, and his treatment opposed. It is probable that the arguments he has adduced in favour of endermism and inhalation, as general methods, will be claimed for others. He is not aware that any one has dwelt on their use with the same confidence as he has done—he is almost sure that no person has inculcated the great principle, that the *extent* of counter-irritation counterbalances severity—but on this point he is comparatively indifferent. It is of little importance whether his ideas have been anticipated; the main point of interest to the public is, whether they are correct.

But the chief objection he anticipates is to the circumstance, that he alludes to the use of a remedy peculiar to himself; or, in plain terms, that he employs a *secret* agent. This practice is decidedly at variance with the public professions of his medical brethren, and held in ill favour by

many of the public. He trusts, however, that the dispassionate in both will be open to the conviction, that a general rule, however accurate, admits of exceptions in particular cases, and that in the present instance one of those particular cases may be made out by the following course of argumentation.

In the first place it is conceded, that the practice of selling secret or proprietary medicines cannot be sufficiently reprobated. If recommended in all cases of a particular disorder, it is from the nature of all science sure to do partial injury, because no disorders admit of relief in all cases by the same means. Worse are the consequences where the public are the self-administrators of medicines, since they are subject to the double disadvantage of not knowing either the nature of the remedy, its requisite corrections and modifications, or whether the malady, for which it is recommended, is actually making its attack—whether in fact it may not be another, and of an opposite character. Nor is the case much amended

where regular medical men administer remedies unknown to themselves, such as the "Eau Medicinale," "James's Powder," &c. (though the practice has been followed by physicians conventionally of the highest rank,) for those being in darkness as to the properties of the substances they employ, are consequently unable to advance the doses to their effective proportions, or to diminish them where anomalous symptoms occur which may be due to their effects. In fine, all secret remedies administered indiscriminately, or by persons unacquainted with their composition, are dangerous and improper. The whole system is bad.

But the case of a medicine administered by the discoverer, when that discoverer displays proofs of experience, and has undergone the regular examinations, by which his knowledge of his profession has been tested, is very different. The most prejudiced cannot deny that the mere circumstances of a man's publishing to another a secret, or reserving it to himself, can be no

proof whether it be true or not. All that can be alleged, is the probability that the secret remedy is no remedy, from several collateral inferences, of which the following are the examples.

First Objection.—The evidence of a man in favour of a method confined to himself is little to be depended on, because his own interest is a strong inducement to misrepresentation; and his belief, however conscientious, has not the advantage of undergoing correction from others, and, therefore, is likely to be founded on insufficient grounds.

It is admitted that this objection is forcible—the evidence of the author in favour of himself is possibly, is probably, weak: however, it is not necessarily so; and he would be very foolish who did not seek for the more unobjectionable testimony that may be derived from others, as to the actual efficiency of the remedy. Of this unobjectionable testimony enough will be found in the pages of this work.

The second objection will be found (of

the same surmising character however) in the probability that a surgeon, in the possession of a great improvement, would naturally, in an enlightened age, be anxious to promulgate it, since reputation, and its natural adjunct fortune, would be secured to him in a rapid and direct manner.

This the author denies, from observation on all that has occurred around him during the thirty years he has been engaged in medical practice. Neither in medicine, nor in other sciences generally, does fame or fortune attend the disclosure of important discoveries, however valuable they may ultimately be allowed to have been. In literature we have the example of half-starved authors, whose works have immortalized them, but *enriched* only the booksellers, who have succeeded to the heritage of re-printing and circulating the posthumous editions. The early inventors of the great physical discoveries, printing, steam, &c. left to successors the emoluments of their labours. Dalton receives a tardy honour after many years of a reputation

confined to the learned, but unrewarded, according to its deserts, either by the learned or the public. The same takes place, and has taken place in medicine. If a practitioner introduces, openly and candidly, a novel method or remedy, several opponents start forward to rummage from ancient or obscure works, a hint as to its utility; or if nothing written be found, a lecturer puts in a claim, founded on the dubious memories of pupils or assistants.

If this species of opposition is overcome, every one adopts the remedy, employs it, circulates his own observations as to its doses and effects, but who recommends, consults, or in any way advances the fortune or reputation of the person who first brought the invaluable agent into notice? As far as regards doing well in the profession, the safest chance therefore is to keep for a time what is known to oneself.

But next comes the third objection, that such a defence is one of sordid self-interest; that the members of so scientific and dignified a profession should hold them-

selves above such a motive, and in the spirit of philanthropy should be prepared to impart their discoveries to others, that the benefit may be more rapidly extended to the whole family of mankind than could be effected by the exertions of one individual.

This objection may be fairly examined by a reference to the customs and professions of mankind at large; since conduct universally given up cannot be considered a just or obligatory course of life. It is not demanded of men who follow the sea or land service, that, because their duties form the whole protection of the fairest portion of the globe, they should act for nothing; nor does any one expect that his attorney, out of mere love of right, should let his client's opponent know every point which his research has acquainted him with, as a means of defending the latter—such a legal adviser would be considered a simpleton. Come then, ye wealthy ones, who possess woodlands and cultivated gardens far beyond your necessary per-

sonal consumption, abandon these to the poor and needy, who are starving for want of necessaries. You refuse for reasons into which this is not the season to enter, but for reasons which it is obvious will apply with stronger force to him who conceals for his own benefit the discovery made by his mental exertions than to the person who withholds the temporal and substantial benefits which accident or inheritance have placed in his hands.

Such then are the arguments by which the practice of retaining one's own discoveries for the sake of personal advantage may be defended.

Yet after all the author rests but little on them. They may be considered in the light of the pleading of an advocate, who states all the arguments by which a cause ought to be supported, and who knows they cannot be broken down by his opponent; but who may still retain doubts in his own breast as to the merits of his client. In the same spirit the author confesses that however justifiable he may be able to

prove the line he has taken to be, he does not follow it from choice alone. The exact reasons which induce him to follow this practice of not revealing the remedies he has employed with so much success are only two in number. They are satisfactory to himself; whether they will prove so to others is a matter *in futuro*.

In the first place he is assured that the promulgation of his remedy would prove injurious rather than useful, by placing a powerful agency in the hands of inexperienced medical men, or of such who, however well educated, are not prepared to assent to his particular views until he has accumulated more ample details, both theoretical and practical, than his time and extensive practice enable him to do at present. He is, however, preparing a full history of the diseases of the chest, when his system will be fully laid open.

Secondly (but this is only mentioned collaterally, since little attention is likely to be paid to a mere *ex parte* statement), there are *particular private reasons* why

one of the substances used for friction and inhalation cannot be disclosed; any such disclosure would involve a breach of private honour. This assertion will naturally be treated with very little respect by those who do not know the author: he must be contented therefore with the ill opinion of such persons until a few years shall permit him to vindicate himself by a full exposition of his views and his remedies.

In the interim, he has only to assure the public, to which he appeals, that his remedies being applied to the skin, or by inhalation, *never disorder the digestive organs*, those main sources of health and disease; that in all cases *no extreme irritation of the skin* has been excited; no *confinement* or particular regimen has been required to obviate the accidental effects which often result from the use of more active drugs; and that by a surprising coincidence of innocence and efficacy, the same remedy which, endermically applied, has produced, according to the cases published, such astonishing effects, is almost inert in the

stomach—a *child* having, on one occasion in the author's practice, *actually swallowed a large portion* of it by mistake, without suffering any serious symptoms. *Tute et jucunde* is the motto, therefore, which the employer of this system may safely and conscientiously adopt.

Doctors' Commons,
Oct. 2, 1837.

ON

FRICTION AND INHALATION.

ALTHOUGH the popular and general opinion seems to consider the stomach as the only medium through which aliment or medicine is conveyed into the system, a little consideration serves to show that, as far as the more active principles are concerned, other membranes possess the faculty of incorporating into our system nutrient and therapeutic substances. Thus the miasms of ague, the contagious effluvia of plague and typhus, find ready and dangerous access to our systems through the medium of the delicate membrane which forms a lining for the pulmonary organs; and again, the rubbing of mercurial ointments on the skin produces ptyalism even when the mineral exhibited through the mouth has failed in producing any such effect; sulphur also seems to have more power when absorbed by the skin than when taken into the stomach. These are familiar examples; but it is

as certain, although not so generally known, that almost all medicines, whether purgative or otherwise, may be made to operate by application to the skin; few, however, acting when merely placed in contact with the surface, most requiring active friction to be employed, and others remaining inert unless the cuticle has been previously removed by blistering or similar means.

Friction may be considered in three different points of view. 1st. The simple, or mere mechanical kind, in which no medical or surgical applications are made. 2dly. Friction, with such substances as have a local, irritating, or caustic effect; and our object in using which is to bring about a translation of disease from the interior to the exterior of the body. 3dly. Friction, with such agents as are capable of being absorbed and carried into the general circulation, and of producing salutary changes in remote organs. This method may be combined with that which is simple or mechanical, and also with escharotic and irritating substances.

I. There is little doubt that friction exerts an important influence on the animal system. The consequence of the continued movement even of light and delicate clothing will be to inflame the skin, and that in direct proportion to the delicacy of the latter, and the debility of the consti-

tution. Horses are known by every one to be materially improved in their condition by the use of the curricomb and brush, independent of diet. Pigs on board of ships are found to thrive much better than ordinary if well rubbed and washed. I am aware that much in these cases is to be attributed to the effect of cleanliness in promoting the health of the skin, but I am assured that the rubbing of the surface is followed by such evident excitement of the cutaneous blood-vessels, and by such pleasant sensations in the nerves, that it cannot be denied that it is, independent of mere lavation, a useful agent; and, let me observe, not the less useful because it does not act in a sudden and violent manner, but by gently supporting and exciting the powers of life: for it appears to me that through the whole period of our existence, the various morbid or healthy changes to which we are subject, are brought about by the continued operation of moderate agencies rather than by the temporary action of extreme forces.

II. The power which such agents exert on the general system, as are capable of causticating or irritating the surface, has been long known; but the particular effects of particular kinds of substances have not been accurately discriminated. The use of cutaneous irritants rests upon a general fact, which, however surprising, is sup-

ported by the concurrent testimony of nearly all pathologists, namely, that whenever an acute internal disease exists, its progress is liable to be arrested by almost any agent that is capable of irritating, in a great degree, the skin that covers the organ first attacked. Hence the utility of blisters, issues, setons, sinapisms, &c.

The explanation of this circumstance is, we must confess, very difficult. It has been surmised by some that a blister relieves in internal inflammation, by drawing a quantity of blood from the disordered part to the surface, and thereby removing an accumulation which may be presumed to be the main cause of the inflammatory affection. But it is subversive of this theory, that we find no direct communication between the vessels of the heart or lungs and the skin of the breast, although blisters and counter-irritants are so eminently efficacious in diseases of those organs.

Others have considered that the effects in question result from the operation of the nerves; that the nervous matter being attracted to the surface, leaves the inflamed vessels to rest and become diminished. An equal difficulty occurs in this as in the previous hypothesis—the communication between the respective nerves is not more direct than that of the vessels. It is only possible then that this view of the case may be

correct, by supposing the nervous influence to be capable, like electricity, of traversing contiguous structures without being confined to the tract of the nerves. As I have not leisure or inclination to follow out investigations of a purely theoretical character, I shall confine myself, therefore, to a practical history of the actual facts and symptoms that are observed to follow the different kinds of cutaneous irritation.

The commonest, as well as the most established, mode of producing cutaneous irritation is that of blistering. The cantharides is not, however, a simple irritant of the skin: it is liable to be absorbed, and then to produce unpleasant effects; its efficacy, however, and convenience, in many respects, will prevent its being abandoned in practice under certain restrictions.

Of the next ordinary agents which produce counter-irritation, without much evidence of specific general effects, I shall only mention the actual or direct cautery, potash, the nitrate of silver, and tartarized antimony.

The application of direct burning seems to persons in this country a measure too severe. Very experienced surgeons in France and other parts of the continent testify its utility and assert it to be less painful, when properly managed, than could possibly be supposed by those who have

been burnt or scalded unscientifically. They affirm that such a moderate heat as that produced by an iron heated to a degree that does not produce redness causes more pain than one actually red hot; but that further, if the iron be subjected to the action of a furnace until it acquires the high temperature denominated a *white heat*, it actually excites very little sensation (although rapid destruction of parts), particularly if applied for only a short space of time.

I do not profess to admire or adopt this kind of practice; but I am not prepared to deny that it may occasionally be fair to try it, when we are certain that a disease is so inveterate that no *time* is allowable for ordinary methods. Nor have I any doubt that great heat quickly applied, and to a small surface, is less painful than a comparatively moderate degree applied for a longer period or extensively over the skin.

Of escharotics, which act chemically, the *fused potash* is at once the most rapid in action, when rapid action is required, and the most easily regulated and securely applied. When employed in its severest form there is spread over the skin some adhesive plaster, with spaces cut in it corresponding with the parts it is proposed to causticate. The stick of potash is rubbed over the intervals, or a paste of which the same substance forms an ingredient, is fastened over them

by other layers of plaster. There are numerous caustic pastes, according to the opinions of particular surgeons, but all may be used in the same manner.

When not used to remove tumours and other morbid growths, the employment of the caustic potash is usually restricted to the formation of issues. These excite a slow species of irritation attended with purulent discharge, and form an efficacious method in cases of old plethoric persons who have not very active symptoms of disease.

The *nitrate of silver* or *lunar caustic* may be applied in the same way as the fused potash for the same purposes, but is less potent. In various degrees of dilution it forms a counter-irritant of the first value. The manner in which it arrests erysipelas is most remarkable. Even when so much diluted that it does not turn the cuticle black for some time after its application, and when its operation terminates without pain, and is attended simply by desquamation; it has, nevertheless, a powerful influence over that formidable disease.*

* It would be unnecessary to mention to any but non-professional readers, that we are indebted to Mr. Higginbotham for discovering the applicability of lunar caustic to erysipelas; and that in still further degrees of dilution it is highly valuable as a local astringent, or even an internal remedy.

The friction with *tartarized antimony* mixed with ointment, as a more permanent counter-irritation than blisters, has now become tolerably prevalent. It has been long employed by myself, and my experience justifies me in giving it a very high character. The inunction of antimony often removes severe neuralgic pains and partial attacks of pleurisy, without exciting any visible local action. Usually, however, no beneficial effects are experienced until a crop of pimples containing matter and closely resembling the pustules of small-pox makes its appearance. From this state, by continuing the use of the medicine, or increasing its strength, or the frequency of its application, we may carry the irritating effect to any point. In those who are of delicate and enfeebled constitutions, excessive excitement of this kind is soon induced, and is attended with serious symptoms. Large malignant-looking boils are formed, which penetrate deeply into the skin, and require time and care to heal them. Hence doubtless much mischief has arisen from quacks or incautious persons employing this and similar remedies; they being ignorant when to suspend the exhibition of the remedy, or how to arrest its action when too powerful.

The tartarized antimony is of material utility in most affections of the chest, and, as I shall presently show, appears more useful when applied

in weak proportions over an extended surface, than when placed in a more concentrated form over a smaller space. I had some hesitation for a considerable time as to whether the antimony ought to be included in this class or in that in which a medicinal effect, by means of absorption, came into play to aid the utility of the counter-irritant. The great efficacy of this medicine, when internally administered, in pulmonary diseases, seemed to form a *primâ facie* case in favour of the supposition, that part of the good effects of the antimonial ointment were owing to absorption: but after carefully examining the matter in numerous instances, and never finding, however severe the ulceration might have been, that any nausea, vomiting, purging, or perspiration, or other effects of antimony in the system occurred (except such symptoms were traceable to other causes), I came to the conclusion that it is simply a local counter-irritant.

III. Let us now proceed to consider the nature of those substances which, when applied to the skin, become absorbed, and produce general effects on the system. Some of these operate readily by mere friction; others do not act unless the cuticle be abraded as after a blister; and of such as are capable of operating by friction, all are more speedy in their action when applied in the last-mentioned manner. We have already

adverted to the circumstance, that cantharides act by absorption from the surface they have vesicated, when they cause strangury and other unpleasant though evanescent effects. But the most valuable application that is made of this principle is in the employment of mercury. This mineral, so powerful in its sanatory effects, cannot sometimes be brought to act readily on the system, either by internal exhibition or inunction. Now there are cases in which it is requisite that its peculiar action should be effected in a few hours. In such instances the weak mercurial ointment spread over a blistered surface is absorbed with astonishing rapidity.

It would be superfluous to occupy the reader's attention with a disquisition, as to the effects of various remedies which may be directed from the exterior to the interior of the body by friction. Opium, belladonna, digitalis, may be thus introduced. Croton oil, and other purgatives, act as forcibly when rubbed on the skin as if absorbed from the stomach. I have tried these and many others, and have found them to exert the same peculiar influence which they display when administered in the ordinary way. Some particular remedies which have been much vaunted I have also tried. To the veratrine, so strongly recommended by Dr. Turnbull, I gave a somewhat extensive trial: in one case in com-

pany with the Doctor. I never found any thing further effected by it except what might be attributed to its counter-irritating power. Iodine is locally absorbed, but I have not perceived any general constitutional impression from its external application.

Repeated experiments have induced me to employ combinations, which have not been resorted to by practitioners in general, and which, for the reasons stated in the Preface, I do not here more particularly describe.

But whatever be the substance employed (and I have no doubt many will be found of value), there appears to me two important principles to be regarded in the employment of every kind of friction. The first is, that it should be performed over as extensive a surface as may be; the second, that the friction should be continued for a long time at every sitting, and should be repeated patiently many times — the constant action of mechanical friction being very favourable to the absorption of medical substances.

I shall now proceed to speak of diseases of the Chest, as a class to which this treatment is particularly applicable.

CHAPTER II.

ON CONSUMPTION.

The symptoms of consumption were for a long period of time confounded with those of other complaints of the chest, of a much less formidable character. Physicians were formerly satisfied with forming their opinion from the hectic condition of the patient's constitution, from the attendant emaciation, and from an examination of the expectorated matter. If the latter became readily mixed with water, they concluded that it consisted of pus, therefore that some ulcerations had occurred in the lungs, a state of parts forming confirmed consumption. If, however, the sputa floated about in water, without mixing with that fluid, it was presumed that it was merely a catarrh of the membrane, a serious disorder, but one by no means necessarily fatal. But these marks led to little certainty in several instances, and it was agreed, that there are many cases of chronic catarrh exactly resembling phthisis. Upon this a very general and injurious dogma was established, namely, that consumption is never cured—that

all those cases in which health has been restored were mistaken for phthisis, and were in fact nothing more than the peculiar chronic catarrh before alluded to.

Since the immortal LAENNEC established the important fact, that a certain proportion of confirmed phthisical patients do recover, and since he discovered the improved method of examining the chest with the stethoscope, our diagnosis has been more accurate, and our practice more satisfactory. Without entering at large into the subject, I shall mention the leading features of consumption, according to the most approved modern authorities, in order to prove that the cases which have been relieved by the methods I am advocating were, in all human probability, of the genuine kind.

In the first place I shall quote the opinions of Dr. DAVIES, lecturer of medicine to the London Hospital, and one of the most ardent and intelligent of the many who are occupied in extending and improving the ideas of Laennec. He states, that, as far as *local* symptoms are concerned, the *respiratory murmur* * is, when the disease is far advanced, completely lost upon those points

* This is a murmuring noise produced by the ingress and egress of the air when we breathe. It is heard by putting the ear in contact with the chest, or by applying the stethoscope to the same.

where the tubercles are accumulated; and the tubercles are usually formed in the upper part of the lung, before the middle or basis of the viscus becomes affected. Hence the absence of the murmur is first manifested in the hollow below the clavicle, and in the axilla. He likewise observes that, in the same situations, and above the blade-bones, *bronchophony*, or the sound of the voice through the chest, is audible. These signs vary much at different periods, and with some complications, but are usually constant phenomena when the disease is fully established, but at the same time has not arrived at its last stages. Dr. Davies dwells upon the difficulty of breathing, debility, hectic fever, night sweats, urinary sediment, diarrhœa, and suppression of the catamenia, as symptoms assisting us to detect the disease; but not, at the same time, insisting that any one of them is diagnostic. The same may be said of the pearly lustre of the eye, and the expectoration of curdy mucous and pituitous matters streaked with blood.

With this description the account given by Louis (one of the first, if not the first, of the Parisian physicians) tallies very exactly. He describes the respiratory murmur as present, or but little obscured in the very commencement of the disease, but soon becoming lost under the clavicles. The cough, at first dry, or attended

only with clear frothy expectoration, produces, after some weeks, or months, sputa of a greenish yellow colour, tinged or streaked with blood; difficulty of breathing, pain in the chest, hectic fever, with exacerbations chiefly in the evening, are also enumerated. Our author considers the spitting of blood, and the expectoration of rounded masses of tenacious matter, strong indications of phthisis, although a few exceptions have been found; and he thinks that the bronchial membrane is capable of producing, though rarely, the same secretions as those derived from the consumptive lung. He remarks that the night sweats, so frequent and characteristic, do not alternate with diarrhœa, but usually coincide with it. Emaciation is always found towards the advanced stage, and is present in one-half of the cases from the commencement of the first symptoms.

I have quoted these accounts, which are consonant with the observations of all experienced persons, because I wish to show the high degree of probability that the cases I have successfully treated were really those of consumption.

From a vast number of letters from patients who were presumed by their friends and medical attendants to be labouring under consumptive symptoms, I have selected, at random, three. The first, Miss Ledger, had all the symptoms mentioned by Louis, except bloody expectora-

tion, in a remarkable degree. The local examination of the chest, and a review of the general symptoms, were to my mind perfectly conclusive as to the nature of the malady. It remains only to speak of the treatment. The efficacy of the plans of friction and inhaling may be best appreciated by the following letter from the father of the young lady :—

"To J. P. Holmes, Esq.

"Dear Sir,—In reply to your inquiry respecting my daughter, and my opinion as to the efficacy of your remedy, I do not feel qualified to venture an opinion as to the nature of her complaint, but have always believed it to be similar to that which proved fatal to my younger daughter in March last (*viz.* consumption). My daughter had not good health for the last two years, being troubled with cough, great expectoration, and general debility, which was only temporarily relieved by medicine, and shortly after the death of her sister she became much worse, so that we were extremely anxious and fearful of the result. Upon the application of your remedy, by friction and by inhaling, she has in a very short time been most wonderfully benefited, has recovered her health and spirits, and we have every reason to believe her cure is effected.

"With such a result, I cannot but have a most highly favourable opinion of the remedy you have applied; and likewise of your great skill and attention manifested during the progress of its exhibition. And I remain, dear Sir,

"Most gratefully,

"And respectfully yours,

(Signed) "GEORGE LEDGER."

"*Stockwell Place, July 4th*, 1835."

The symptoms in the next cases, though they were different in many points from the former, had a strict resemblance to the general description of Louis and others.

"To J. P. HOLMES, ESQ.

"DEAR SIR,—It is with pleasure I give you this certificate of the extraordinary cure you have performed upon me, by the external remedies you have used. My cure was hopeless, and I considered myself, as well as did all my friends, past the hope of again resuming any business. I was reduced by a continual cough, with great expectoration of yellow matter frequently streaked with blood, to such a state of emaciation, that I could not walk up a flight of stairs without resting several times; a complete loss of appetite, night sweats, a constant action on the

bowels, and every distressing feeling I can describe. In a few weeks after you attended me, I experienced great relief; *entire restoration of my health in a few months;* and I am now able to walk many miles or drive in my usual manner. My appetite is perfectly good, and my strength restored.

"I am quite willing to certify this to any person who may be anxious to know the particulars. I was attended by Mr. Simple and Dr. Sir C. Scudamore previous to your seeing me, but was gradually sinking under all their efforts.

"I am, Sir,

"Your most obedient servant,

(Signed) "WILLIAM WHITTLE."

"*Archway Cottage, Upper Holloway, August*, 1836."

"MR. HOLMES.

"SIR,—Having in September last taken a severe cold, which lasted for some weeks, and brought on disease of the lungs, with a cough and shortness of breath, expectoration, with much weakness, and the loss of appetite, occasioned me to try means for relief, but without effect; and at last my friends considered me in a precarious state, (this was the latter end of March,) they advised me to apply to you for medical assistance; and the means that you used

have brought me to perfect health. I therefore feel it my duty to return you my sincere thanks for your kindness, and the speedy recovery you effected, which took place after only a month's application of your liniment to my chest.

"I hope, if any of your patients are labouring under the same complaint, they will not fail to use the same means, which I feel confident will speedily restore them to health.

"I remain, Sir,

"Yours most respectfully,

(Signed) "E PETERS."

"32, *Old Change, June* 2, 1835."

Notwithstanding the success that has crowned my practice in this complaint, I do not wish the reader to believe that all cases are to be relieved by this method. The latter stages, when marked excavations and loss of substance are manifest, are beyond the reach of art. At the same time I think even these admit of much palliation; for it is found that in the majority of phthisical cases life is destroyed not so much by the disease itself as by inflammation, diarrhœa, and other secondary causes; and these may be effectually controlled, although the primary disorder may continue stationary, or even proceed to get worse. In no case, however, should we utterly despair; for it has happened that we have in several instances

had the gratification to find our prognostic unfulfilled, even where the symptoms seemed to warrant us in holding out no hope.

I am aware that this opinion will be considered too sanguine by many very profound pathologists. Some of the best informed men in our profession have taken the most sombre views of this disease. Whoever examines their works will find, however, that although the accuracy with which they have noticed the symptoms, the care with which they have traced its causes, and the laborious manner in which they have conducted *post mortem* examinations, are beyond all praise, they have not followed up experiments in treatment with correspondent diligence. Looking at the very uniform manner in which, in most instances, nature proceeds to establish those great changes in the lung which form the essence of phthisis, they have forgot that of which their own works supply such clear evidence, namely, that the disease in question sometimes disappears spontaneously. Now these cases, however few, being enough to prove that there is nothing necessarily fatal in consumption, I think it behoves us to try every method by which we may assist the natural efforts in this as we do in other diseases; and that we ought not to confine ourselves to the use of a few agents that have failed, but should constantly

employ ourselves in searching for new agents, and new methods of exhibition. It is true that there is a weighty objection to mere experiment, because if not cautiously conducted it may do harm, especially to the delicate subjects of phthisis; and, moreover, if nothing is likely to be effectual, it is wrong to *torment* the patients by subjecting them to the pain of applications, or even to the nausea and inconvenient effects of remedies. I have always kept this in mind; and only persist in the mode of inhalation and medicated friction, because I know that they cause no inconvenience, but palliate symptoms, and render life more comfortable, even when there is little permanent effect to be anticipated from their employment.

In cases where the disease is not so far advanced, but that we may hope for its ultimate removal by steady perseverance, I do not, nevertheless, pretend to trust solely to the methods I have detailed. Various disturbances in the stomach, important morbid changes in the bowels, liver, brain, and other parts, accompany this disease, and, of course, require the use of such remedies as act particularly on those organs. Independently of such concomitants, the diet and regimen of the consumptive patient is of immense importance, and requires the most attentive regulation.

The chances of relieving consumption are much increased of late years by the knowledge we have derived of its *causes;* though it must be allowed, that much of this knowledge of causes has been derived from those whom we have mentioned as somewhat negligent with respect to therapeutical investigations.

Louis has proved very satisfactorily, by an extensive series of observations, that which was pretty generally agreed upon by the most observant practitioners of this country (although their opinions had not been promulgated to a great extent through the press), namely, that our long cherished opinions as to the causes of phthisis are not founded on any positive and carefully sifted facts.

Louis adopts the numerical method, and hence his testimony outweighs that of a host of mere recorders of their own conclusions. He has proved that inflammation, whether of the *bronchial* (lining) membrane of the lungs, of the lung itself, or of the pleura, *i. e.* the investing membrane, has little or no tendency to favour the growth of those tubercular deposits which constitute phthisis. Hence the general opinion, that the disease in question may be often traced in the first instance to a common cold, appears to be fallacious. Inflammations do certainly attack consumptive persons, but these are either acci-

dental and unconnected occurrences, or they owe their origin to the excitation produced by the mechanical pressure of the growing tubercles. Exposure to the open air, and breathing atmospheres impregnated with animal or vegetable substances in a state of decomposition, are so far from inducing consumption, that persons habitually exposed to such influences are remarkable for their freedom from consumption.

Climate and hereditary tendency, although they have some influence, have probably been too much considered.

In fine, impure air, whether the impurity arise from too many persons breathing the same atmosphere, or from its remaining long unchanged in consequence of inefficiency of ventilation, is one of the most frequent and evident causes of phthisis, and a *dry* hot air is also prejudicial. The next great cause is scanty or improper diet. This has been everywhere observed, and may be made the subject of direct experiment with animals.

CHAPTER III.

ON AFFECTIONS OF THE THROAT.

Inflammation of what is called the larynx, *i. e.* the upper part of the canal, or wind-pipe, by which air is admitted into our lungs, is a common complaint. This disease is often attended with the most serious consequences, for the parts affected are very delicate, and are never at rest; every time we speak or breathe, the muscles being thrown into rapid action. Consequently, it happens here, as in all parts that are continually moving, that inflammation is very obstinate and difficult of treatment. It is very apt to get into an established or chronic state; and then ulceration, erosion, loss of substance, and the like consequences, occur, always causing much suffering, and not unfrequently death. The same remarks apply, though in a much less degree, to inflammation of the palate and pharynx.

Ulcerations about this part are very commonly the result of old venereal affections, but may

arise from many other causes. Nor are they difficult to be distinguished by an experienced eye. The redness that attends the inflammation which succeeds syphilitic diseases is uniformly of a darker or more purple hue than that which arises from cold, or ordinary circumstances; and the matter which accumulates on the surface of any ulceration that may occur is of a thinner consistence and browner hue than the white tenacious matter which covers a common sore.

It was some time before I ventured to treat cases of this kind by counter-irritation near the part. The opinion was very general amongst the profession, that from the proximity of the skin covering the throat and the internal membrane, the excitement created by friction on the former might be communicated to the latter, and so render matters worse. I believe with ordinary blisters I have seen something of the kind, but after many cautious trials I have disabused myself of this opinion as a general rule; and have found that mercury, belladonna, and other irritants, if their action be corrected by opium, may be usefully employed in the endermic method. In syphilitic cases the action of mercury in this way is very satisfactory.

Inhalation is however of the most consequence in affections of the palate and larynx. It is not admissible at the commencement of the

inflammation, for then, however mild may be the substance employed, the mere mechanical action of the smoke will cause cough and convulsive movements, which are injurious; but as soon as ever this stage has passed, whether into a chronic state or ulceration, the use of the inhaler is imperatively called for. The matters to be inhaled must vary with the particular case;—for mere chronic inflammation, gentle astringents; for ulceration attended with high action, emollient and soothing remedies; for syphilitic sores, mercurial fumigations are to be respectively employed.

I select from my correspondence two cases, to testify the salutary effect of the method:—

"To J. P. Holmes, Esq.

"Sir,—I take this opportunity of thanking you, and recording the following statement:—I was attacked with a sore mouth, tongue, and palate (from what cause I cannot ascribe), which I had upon me for upwards of nine months; during which time I consulted many of the leading men in the medical profession with little or no effect, and which gradually got worse. At length I consulted you; and after inhaling and using one small phial of liniment, which I applied with a camel-hair pencil to the parts

affected, and taking a little alterative medicine, in ten days you effected a most perfect cure, for which I shall always feel grateful.

"I am, Sir,

"Your most obedient servant,

(Signed) "JOHN SCARBOROUGH."

"19, *Tokenhouse-yard, 26th July*, 1836."

"To J. P. HOLMES, ESQ.

"DEAR SIR,—Having lost my voice for three months previously to my applying to you, and during that period been under the care and advice of several very eminent physicians, who entertained no hopes of its ever returning, I feel great pleasure in apprising you, that by inhaling from your apparatus, and rubbing my throat once a day for ten successive days, I have recovered my voice, and proved the great efficacy of your remedy. I am therefore greatly indebted to you for this most wonderful cure.

"Most truly yours,

(Signed) "J. E. Moss."

"35, *Bishopsgate-street Within, Jan.* 30, 1836."

CHAPTER IV.

OF RHEUMATIC AFFECTIONS OF THE CHEST.

There is a considerable number of anomalous affections connected with the respiratory organs, which can scarcely be referred to any other source than a rheumatic tendency in the constitution. And their complexity seems to be due to the particular structure upon which the rheumatism happens to fall, or upon the secondary effects, which, in so complex a machinery, a very simple disturbance may produce. For example, it is pretty well established, that whatever the nature of rheumatism may be, it is not confined in its actions to the muscles and joints of the limbs, when its ravages are so conspicuous, but that it often invades the *pleura* (the membrane investing the lungs), or the pericardium (the bag containing the heart). Of course, when the former is attacked, the movements of the lungs are impeded, and in such cases we have violent darting pain in the side. When the latter membrane suffers, it follows as a consequence that the

action of the different cavities is impeded, and irregularity of pulse occurs; and if this state be suffered to continue long, the heart itself becomes positively diseased.

Even in cases where the rheumatic affection is confined to the intercostal muscles, it is not altogether unlikely that its long continuance may bring about morbid depositions in the lungs, by preventing the free play of the chest, and therefore keeping the contained organs in a state of unnatural contraction.

In no cases whatever are the good effects of medicated frictions better seen than in these. Partial relief is frequently the immediate consequence, and I have never known their employment for a proper length of time fail to remove all symptoms.

Mere counter-irritation is very useful in these attacks, but by combining it with the inunction of colchicum we are enabled to secure the agency of this great specific for rheumatism without subjecting the patient to the disagreeable effects which follow its administration by the mouth.

The following letter refers to a case of the above-mentioned kind:—

"My dear Sir,—I have been so much engaged since I left England, that I have hitherto been unable to write to you; but as I am sure

you will be anxious to know how my head gets on, I now write to inform you that in spite of the voyage, the bustle, and the eternal rustling of the diligences and rough roads of Flanders, I have, thanks to you, not even once had a return of my old and inveterate complaint; and, really, when I look back and remember that the change took place after only five applications of your liniment, during which time I was scarcely ever in bed before two or three in the morning, and paid no attention whatever to my diet, but, on the contrary, drank beer, which I had been obliged to discontinue, and much more wine than I had done for two years,—I say, when I consider these things, no less strange than true, I am myself quite astonished, and feel certain you will be pleased to hear that I have not once had occasion to apply to the bottle you were kind enough to give me, though I still continue to take half a pill per diem. I hope your efforts to bring poor Sarah about have been successful; and I assure you I shall feel much obliged if you will have the kindness to let me know if all is well. If she is still in town, please to remember me and Mrs. Carr most kindly to her, and tell her she has our united best wishes; the children and Hamley are quite well, and send their best loves to her. Again I beg you to accept my warmest thanks for your attention and kindness

to myself and the poor girl, and with my best wishes, believe me

"Very truly yours,

(Signed) "WILLIAM CARR."

"*Courtray, June* 8, 1836."

"Please to direct (by the first foreign post, if possible), A' Mons.

"Mons. William Carr,

"Poste restante,

"A' Frankfort sur la Maine."

The two following communications are interesting, as showing a very severe complication of disease of the chest, with other complaints. I owe my readers an apology for copying such detailed statements; but by the afflicted they will not be read without interest, and perhaps advantage:—

"To J. P. HOLMES, ESQ., SURGEON,

"21, *Old Fish-street, Doctors' Commons.*

"I, Joseph Snelling, solemnly declare, that what I am going to say is the simple fact.

"My first illness began with a fit while at work, which left me in a very weak state; and I continued to suffer from pains in my limbs, great weakness, and faint sweats at night, accompanied by a husky cough. I then had a continual pain in my chest, more particularly the left side, and I became more like a walking skeleton than a

man; and if I attempted to walk up a hill, or put myself in the least out of the way, I was obliged to pant for breath like a robin.

"I first applied to the parish surgeon, who on examining me told me I was in a consumption; and he ordered me to be in the country, and live upon bread and milk, mutton chops, and any thing nourishing; not to drink porter, or any kind of spirit;—and he gave me some pills to take.

"I firmly believe, had I continued that plan much longer, I should have been in my grave long before this; for instead of getting better I found myself getting worse; until a gentleman took me to Mr. Holmes, who examined me, and told me that he could cure me. During the first three days of using his remedies, I found relief, both in my breathing and in the pains in my chest; and I solemnly declare, Mr. Holmes has made a perfect and sound cure of me;* and people who knew me said, they never knew such a perfect cure of consumption in their lives.

(Signed) "JOSEPH SNELLING."

"21, *Chapel-street, Stockwell, Surry, Feb.* 25, 1837."

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* "I hereby certify that Joseph Snelling, of 31, Chapel-street, has applied to me to give him a certificate of health.

"In my opinion he is at present (although not robust) in good health, and capable of following his daily avocations.

(Signed) "GEORGE R. HILLIARD,
"Surgeon, Clapham Road."

"*February* 18, 1837."

The reader will observe that Mr. Snelling merely states that he received *relief* in three days; for the cure occupied, it must be confessed, three months or more.

"To J. P. Holmes, Esq.

"Respected Sir,—Deeply imbued with a sense of gratitude for the kindness and attention which you displayed towards me, during a long and tedious illness, and firmly convinced that it was owing to your new system of treatment for that insidious and hitherto-termed fatal complaint —consumption—which has enabled me this day to appear in 'the land of the living,' I conceive that I should not be discharging my duty towards you, as well as one which I deem due to society generally, did I not place in your hands a detailed statement of the extraordinary cure, performed upon me by your novel, though eminently successful mode of treatment for consumption, with full power to make what use of it you may deem necessary. And if happily the subjoined statement should be the means of snatching but one unfortunate individual from the jaws of an early tomb, by pointing out the timely means of safety and succour, it will at all times be to me a source of the highest gratification, and I am sure with you an ample apology for this lengthened intrusion upon your notice.

"About the latter end of August (1835) I caught a violent cold, accompanied with hoarseness and a more than ordinarily severe cough; but as I had never been much in the habit of caring for these things, I took little or no notice of it; the hoarseness soon left me, and soon after, as I expected, all effects of the cold; however, I soon found that it had bequeathed to me a tedious, dry, hacking cough, which continued to get worse with me until November, when I began to expectorate a thick, greenish substance, particularly disagreeable, the more so as it disturbed my rest; this was speedily followed by the most violent perspirations during the night, horrible dreams, short, unrefreshing sleeps, a strong disposition to vomit, and a violent nervous excitement in the mornings, accompanied by a most intolerable thirst, which no liquid seemed to have the slightest effect upon. These symptoms were succeeded by general debility, an oppressive languor took complete possession of my frame, my flesh wasted away with amazing rapidity, my colour became of a sallow, sickly hue, my eyes sunk considerably into my head, my tongue and mouth assumed a nasty, brownish yellow appearance, my extremities became cold and powerless; in fine, in the February of the present year I shrunk as I viewed myself in the glass, as from a spectre too unsightly to behold; and my friends

elicited from me a reluctant consent to send a preparatory letter to my parents (who were 300 miles distant) so firmly were they convinced that I could not survive another month. I think it might be about a month previous to this awful prostration, that I first saw and was examined by you; I remember distinctly your saying—'You have been far, far *too long* in coming; but I have cured a man who was in a worse state, if possible, than you are; and if you will strictly attend to my instructions, I have no hesitation in saying, I will cure you.' This was cheering; but I almost despaired; however I determined to persevere, let the consequences be what they would; indeed I had no other alternative, save tacitly submitting to an inevitable fate. After inhaling about a month, my general debility became so great from the preceding causes, that I began to despair of the efficacy of the system, though there were times when I thought myself easier from it, and I gave vent to my fears upon the subject, thinking, from the immense quantity of gross matter which I now expectorated freely, that my constitution was completely broken up. Your reply was—'If this will not cure you, nothing on earth will. Persevere, and I will answer for the result.' After persevering a few weeks longer, I soon had abundant reasons for supposing that I had not been spending my time uselessly, and the result has

verified my supposition. It was about this time that I underwent another course of your system-embrocation; and I am firmly of opinion, that it was owing to the excessive discharges of matter from my chest, which this effected, that I experienced such a sudden and beneficial change. In a short while the violent perspirations gradually subsided, and ultimately ceased altogether; my spirits became more buoyant, the thirst left me, and the expectoration slowly but surely became less in quantity, and not so disagreeable to the taste.

"I now, in accordance with your order, changed my diet; and from this time, I may say, my strength gradually returned, my complexion regained its natural colour, and after having been near six months under your hands, I was pronounced in a state of convalescence. Subsequently to this, I spent a few weeks in the country, but still was most rigid in observing the diet so frequently and so emphatically urged upon me by you; and I thank God, that through your instrumentality I am this day as healthy and hearty as ever I was, to the no small surprise of my friends, nearly all of whom had, in their own minds, quietly consigned me to the tomb in the March preceding.

"It is but justice here to add, that being connected with the printing business, I was of

necessity compelled (when my strength permitted) to follow my occupation in a very large office, which was over heated with steam during the day, badly ventilated, and had from forty to fifty gas-jets burning every evening; and I am firmly of opinion, that the noxious effluvia arising from this combination of causes, materially retarded my recovery, if it did not foster and nurture the disease itself.

"In conclusion I have only to state, that I am ready and willing at any time to testify to the truth of what I have written respecting my extraordinary cure—a cure accomplished without my having taken even as much as one tea-spoonful of medicine,—and I can refer any inquirer to at least twenty respectable residents in the neighbourhood, who were acquainted with my case, any of whom will, I doubt not, vouch for its authenticity.

"With every feeling of gratitude for the kindness you have shown me,

"I remain, Sir,

"Your most devoted humble servant,

(Signed) "WILLIAM CRANMER."

"17, *Old Change, Cheapside,*

"*Dec.* 25, 1836."

CHAPTER V.

ON BRONCHITIS, AND SOME OTHER AFFECTIONS OF THE MEMBRANE WHICH LINES THE INTERIOR OF THE LUNGS.

THE commonest affection to which the organs of respiration are subject is denominated, in medical language, BRONCHITIS. It is described popularly as a *cold*, attended with cough. The term cold indicates a very slight degree of inflammatory action going on in the membrane which lines the lungs. It usually terminates spontaneously, in consequence of the extra secretion which nature effects. But from this mild state there are various gradations of morbid intensity. Hence in some cases bronchitis becomes a most serious disease, threatening to disorganize the structure of the lungs by violent inflammation; or by the copious and tenacious secretion which attends its progress, so far clogs the membrane as to impede the action of the air on the blood, and thus produce suffocation. In other cases the disease becomes chronical, and the

patient is destroyed by its consequences, which are copious secretion of expectorant matter, or thickening of the membrane, both of which impede respiration.

Authors usually divide the disease in question into two kinds,—acute and chronic bronchitis; and these, again, are variously subdivided, according to the experience of different individuals. For example, the acute bronchitis is divided by some into a *sub-acute* species, and an asthenic, or highly inflammatory one; while the chronic kind has one variety simply *pituitary*, another *suffocative*. The symptoms of the acutest form of bronchitis are well marked. It is frequently ushered in by sore throat, and the common sensations of having taken cold. At other times it begins with a feeling of stuffing and fulness in the chest, hoarseness, or even loss of voice, frequent cough, with no expectoration. This condition is at other times preceded by chilliness or rigour. Next follow difficulty of breathing, and sometimes sharp pain; at others only a dull aching sensation at the sternum, increased by the act of coughing. The pulse is full, hard, and frequent. The tongue is dry and furred, and there is no appetite. Pain in the limbs or head (of an evanescent character, however,) is often met with as a concomitant symptom. The bowels are usually costive, or at least soon

become so, even if not at first affected, and the urine is thick, high coloured, and deficient in quantity. These symptoms increasing, especially the pain and constriction of the chest, great anxiety is depicted in the countenance, and the patient complains of much general uneasiness.

After a short period a change appears to occur in the disease, more or less marked, and much dependent on the treatment that is adopted; but even when the sufferer has not taken medicine, or has mismanaged himself in respect to diet and treatment, there seems a spontaneous effort made in the constitution for his relief. This is *expectoration*, which is abundant and early, in proportion to the chance of recovery. The matter expectorated is watery and frothy. If this be thrown up with vomiting at the same time it is a very favourable circumstance. The face, at first red, often, especially in plethoric persons, in those who are deformed in the spine, or in those who have not been treated by depletion, assumes a purplish hue, especially about the lips. This is a very fearful sign; for few in whom it is well marked survive, particularly if old, or of a lax leuco-phlegmatic temperament.

When this intense form of disease is fatal in the first few days of its accession, we find after death extreme redness and vascularity diffused over the whole lining membrane of the air

passages, with accumulation of mucus. In proportion as the fatal event is postponed these appearances change, the redness is of a darker hue, and less extensively diffused, being often little marked, except in the larger ramifications of the bronchi, and even in them intervening patches of a whiter colour intermixed show an attempt, however partial and ineffectual, has been made by nature towards the curative process. Now, however, we find that the mucous accumulation is far greater, and there is little doubt that its abundance and tenacity, by clogging the air passages whilst the system is too feeble for its expulsion, mainly produces the dissolution of the patient.

In the treatment of this violent species of disease I have little to offer of a novel character. The usual treatment amongst the most intelligent practitioners in this country consists in general and local bleeding, purging, nauseating doses of antimony, and counter-irritation. To the propriety of this practice I fully subscribe. In such cases friction, or any other means of producing external irritation, would be useless if tried alone, and inhalation, even of the mildest kind, cannot be borne. But I am desirous of pressing on the attention of patients and practitioners the importance of a principle I have before adverted to,—namely, that in all counter-irritation, but

more particularly as regards the chest, the *extent* of surface over which our applications are made should be considered. It is not uncommon to see a small blister placed just in the centre of the chest, and the attendants expecting this to relieve an inflammation which attacks the whole lung. On what principle, I would ask? If we put on a blister in accordance with the customary impression, that the contiguity of the part artificially irritated to the part affected is a most important point as to the efficacy of this kind of treatment, why should we expect that the lower and back parts of the lungs may be relieved by irritating a small portion of the skin which covers the sternum?—the two are very remote. By extending our applications over the whole chest we naturally influence the whole lung, that is, presuming the principle of practice to be a correct one. It is to be remembered, however, that in proportion to the extent of surface operated upon so will be the effect on the system. It is a fact familiar to all, that a slight scald over a large surface is as formidable in its constitutional effects as a deep burn on a confined spot. Hence while we extend the sphere of operation of the system of counter-irritants we must diminish its severity. Thus, I prefer the plan of rubbing the whole chest with warm spirits of turpentine, to which a very small quantity of tincture of

lyttæ has been added, to that of applying the small blisters, kept on so long as to produce vesication. This remark applies particularly to children, especially such as are of a weak constitution. It is often difficult, and sometimes altogether impracticable, to heal a blister which has acted very strongly in a weak, scrofulous child, or in one in whom bronchitis has accompanied or supervened on measles.

Of the least violent forms of the acute bronchitis it is enough to remark, that a more moderate use of the above-mentioned treatment is obviously indicated, and that the plan of acting extensively over the integuments of the skin may be more exclusively relied on.

The chronic kinds of bronchitis vary very much, because we find the disease itself displaying innumerable degrees of intensity, differing on account of the temperament and constitution of the patient, and according as it makes its attack for the first time, or after several previous inroads on the system. Taking two cases exactly similar in symptoms, we find on inquiry that one has been caused in the first instance by a sudden and sharp attack of the acute inflammation, and has *declined* into the chronical state in which we find it; whilst another has grown up, as it were, from a slight catarrh, gradually increasing in severity as it continued. Then, again, these

tardy affections are complicated with the consequences which follow them, such as various morbid alterations of structure, or they enter into combination with diseased conditions of other systems, which conditions are sometimes causes, sometimes consequences, of the pulmonic malady. On all these accounts, the chronic affections of the lining membrane of the lungs appear to demand a more lengthened notice than I have had space to bestow on other affections.

The chronic bronchitis, when it is a consequence of the acute, is marked by a slight approximation to the inflammation whence it derived its origin. Thus, there is generally tightness, and often dull pain in the chest, some fever increasing towards night, and more or less difficulty of breathing. But the main symptom is the frequent expectoration of mucus, and the great abundance of the matter constantly being secreted from the membrane, and clogging the air passages. It differs from that which is thrown up in the acute disease—being opaque, of a yellowish green colour, or sometimes blackish. In chronic bronchitis, when uncomplicated, the face is always pale and transparent; and in old persons, before it has materially reduced the muscles, this has a somewhat bloated appearance. There are accessions of fever towards night in

the chronic forms of bronchitis in young people, but these are less marked with the aged; and, generally speaking, there is little alteration in the pulse or temperature of the body. Much attention is bestowed by some on the quality of the expectorated matter. I have remarked in another place, that great reliance cannot be placed on the physical characters of the secreted substances, particularly as regards their floating in water, or becoming easily mixed with that fluid. I may remark, however, that the miscibility of what is thrown up is an unfavourable circumstance. It is often attended with streaks of blood, and with an offensive odour; both of which are very formidable symptoms, and lead to strong suspicion that the lung is affected by ulceration, or some other serious organic lesion.

Bronchitis becomes established frequently without any previous acute attack; nor is this insidious formation of the disorder confined to the aged,—it attacks often young persons of the leuco-phlegmatic habit. A slight cough with scanty expectoration occurs, subsides, re-appears, the expectoration becoming more copious, and the patient finding a greater susceptibility than ordinary to taking cold.

The application of the stethoscope, or the ear, to the chest, aided by percussion, is the most accurate method of distinguishing bronchitis

from asthma in the old, and from phthisis in the young. It is needless to say that these are the points of distinction of vital consequence in treating disease of the lungs. In pure bronchitis a sound of air rattling through mucus is heard. The sound is confined to the situation of the bronchi in mild cases: it is evident over the whole lung in severer ones. On percussion the sound is generally but very slightly duller than ordinary, and this only in severe attacks, and it is more remarkable on the lower part of the chest than on the upper.

But in phthisis percussion is attended with dulness in patches, as it were—one part being resonant, and its immediate neighbourhood dull, the most constant place at which this want of sound occurs being usually under the clavicles. The mucous rattle is heard in consumption as well as bronchitis; yet it is not so well marked, and indeed is seldom apparent in the early periods of the disease, but comes on and obscures the diagnosis towards the termination, when in fact a bronchitis is superinduced by the pressure and irritation of the tubercles.

The distinction that auscultation enables us to make between bronchitis and asthma is evidently an important matter for investigation, especially to those who consider the latter a functional disorder, and therefore to be strongly contrasted,

as far as treatment goes, with inflammation of a mucous membrane. But the distinction is more difficult to be made, because the violent and suffocative action of the respiratory muscles in asthma tends to stretch and otherwise mechanically irritate the mucous membrane, which is the seat of the bronchitis. Those, however, who observe closely, will find that where the asthma is not complicated with other complaints there is no mucous rattle, and the sound on percussion is very clear. It must be observed that in making these observations, I intend to apply them to the forms of asthma which are called nervous or spasmodic, and not to those affections of the respiratory organs which have obtained the same name from some authors, and which are attributable to organic disease of the heart or great vessels.

The morbid appearances that are found after death from chronic bronchitis, are of course very various, on account of the circumstance that they are frequently secondary effects of the inflammation. Otherwise I believe the commonest morbid alteration which occurs in old or middle aged persons is simply thickening of the mucous membrane which lines the bronchial ramifications. Contrary to what might be expected, and indeed to what is said in many books of standard authority, the reverse happens in young persons and

those of a scrofulous constitution. In such, although often much secretion takes place, the membrane is literally thinner and actually less vascular than usual.

The treatment of such a disorder is evidently one of great difficulty. Where it is complicated with other disorders (which I have before mentioned it is liable to be), the main point for consideration is, whether the disease superadded to the bronchitis, is of more consequence than the original complaint, or whether, however serious the consequential disease may be, its removal may not be most surely effected by removing the original malady. I acknowledge I am not prepared to give any precise directions on this point; the nature of the investigation is such that every thing must depend on the judgment of the practitioner in each individual case.

But taking up the broad principle of the method of treating bronchitis, the commonest, and when considered in its remote effects, the most fatal disease to which the people of this country are subject, I am desirous of laying down the following propositions. Firstly, there is so great a sympathy between the skin covering the body and that lining the lungs, that although these structures are very distant, they have much influence on each other. Secondly, the experience of all times has shown the little effect

produced by remedies given by the stomach on disorders of the lungs, while the familiar fact that any local application to the bronchial membrane causes the most active effects, indicating that the application to the mucous membrane of appropriate remedies by *inhalation* promises the greatest chance of success.

The experience I have had fully bears out these conclusions. The plan of friction is of chief use in that state which succeeds the acute bronchitis; that form of chronic disease of which the main feature is, as I before explained, a thickened condition of the lining membrane. Inhalation is of use in such cases, but it must not be employed too early, and the substances administered by it should be of a soothing nature. It is, however, in bronchial affections of old people, affections of gradual formation, where the expectorated matter is discoloured phlegm, thrown up in great abundance, but not without difficulty, that we find the salutary agency of inhalation in a most remarkable degree. It is surprising after a few sittings how the inhaling patient feels lightened as it were about the precordum, relieved as to the breath, and expectorates freely and without difficulty.

OF CERTAIN COMPLICATIONS OF BRONCHITIS WITH SPECIFIC DISORDERS.—It is well known that this inflammation attends often on small-

pox, fever, measles, and hooping-cough; in all which it is a formidable part of the affection; and this is more decidedly the case with respect to the two latter than to the others. More frequently, however, we find the bronchitis developing itself after the first attack of the febrile affection has in some measure subsided. It may be considered surprising that in these circumstances I recommend similar methods of treatment to those just advised for old persons, and in chronic cases. But, nevertheless, I do believe friction quite advisable. In hooping-cough its power over the affection itself is very generally believed in, but of its influence over the accompanying bronchitis there can be no doubt. On the other hand, in measles there is a strong feeling against applying counter-irritation, because if the skin becomes broken (the circulation in the little sufferers, who form the greatest proportion of cases, being feeble,) ulceration and sloughing may result. But this, though an objection of some validity against the use of blisters, antimonial friction, &c., does not apply with any force to the employment of friction where the degree of irritation is far below the point to which they rise, and which owes its power to the extent of surface it occupies. Moreover, let it be remembered that it is rather a general method than an application I am here recommending.

Dilution and modification of the inunction and inhalation are constantly required.

THE COMPLICATION OF BRONCHITIS WITH CONSUMPTION.—This has given rise to much speculation; many supposing that the inflammation was the cause which led to the latter complaint, others *vice versâ*. The more accurate researches of Louis, however, obtain a very different result. He shows, in the first place, that there is not a numerical connexion between the two.

"Out of eighty individuals who distinctly recollected the symptoms they had experienced anteriorly to the origin of phthisis, only twenty-three were subject to catarrh; fifty-two, or about two-thirds, being very rarely affected. What conclusions are we to draw from this?—that phthisis is equally frequent in individuals liable to bronchitis, as in those where no such liability exists; it cannot therefore be considered as a consequence of the latter, no evident relation existing between them.

"Another class of facts will lead us to the same conclusion. Women, who are more frequently attacked by phthisis than men, are less subject to bronchitis, or at least to that kind of bronchitis which is sufficiently intense to require treatment. Out of 149 cases, collected during the last three years, fifty-two only, or about one-third, were women.

" Whether, therefore, we investigated the connexion which exists between inflammation of the substance of the lung or the bronchial membrane, and phthisis, we arrive at the same conclusion, viz. the sex most exposed to phthisis is least frequently attacked by pneumonia or bronchitis; and this in the proportion of one to three."

He next points out, that even were the calculations erroneous, still we are not obliged to consider that the two diseases stand in the relation of cause and effect.

" If, however, by a series of well-observed facts, it should appear that these two affections really exercise an influence in the production of phthisis, it would still be undecided whether they were a necessary cause, and that phthisis depended upon their presence: our observations of acute phthisis seem distinctly to prove the contrary.

" The first is relative to a young woman who was not subject to cold, had never had pneumonia, was in perfect health up to the moment when she was attacked with fever, which was soon followed by cough and expectoration; she died on the thirty-fifth day of her illness, and twenty-fifth from the commencement of the cough; after death we found a large mass of tuberculous matter at the base of the lungs, softened and partially excavated, with grey granulations, &c. &c. These morbid productions

were certainly not the result of bronchial inflammation; to support the contrary idea, we must prove that bronchitis of twenty-four hours' duration could have produced tuberculous deposit, &c. But we respect the reader too much to suppose him supporting such an opinion, or other equally improbable suppositions, and shall consider the fact of phthisis being developed independently of all inflammation, as satisfactorily as possible demonstrated in the instance before us."

Under these circumstances it is impossible to claim for the endermic method more than the effect we have attributed to it in the early stages of phthisis. There is no question, however, that by removing bronchitis, when it does attend the former disease, it removes a source of debility which must have an unfavourable influence on the patient's constitution.

CHAPTER VI.

ON ASTHMA.

Asthma is a disease that for the most part attacks *old* persons. There are some spasmodic affections of the chest which happen in young people—even in children; but they form exceptions to the general rule. They are so seldom met with that they are scarcely worth considering, except on the old and hacknied principle, *exceptio probat regulam*. Asthma is, I affirm, the climax of that state of action of the lungs into which all persons, after a certain age, naturally fall. It is obscured in many by other and more painful complaints, or by others more rapidly fatal. It is retarded by the counter-irritation of diseases different from itself. But it is a disease which time carries on with it to mortality. Those, therefore, who practise medicine on the proper principle, will be glad to learn that methods, which belong to those who do not profess to remove the natural cause of asthma, can nevertheless give comfort and security to declining

years, and often add some brief time to our existence.

Asthma is generally slow of formation, and its character differs from any other pulmonary affection, in the circumstance that it can seldom or ever be traced to an inflammatory attack as its source. It is usually formed by tardy, and, indeed, imperceptible steps. It is so intimately associated with the condition of the alimentary canal, that we universally find a deranged state of the latter preceding the asthma, and a paroxysm seldom occurs without a similar complication being very strongly marked. It is remarkable with respect to symptoms, the patient being at one time afflicted with a difficulty of breathing, amounting nearly to suffocation, and at another remaining perfectly calm, without cough or shortness of respiration. The causes of the disease are not less difficult of investigation. Bad air is the frequent source of most pulmonary disorders, but the growth of asthma is not traceable to any atmospheric changes. On the contrary, many asthmatic people breathe better in London than in the country; some even respire with greater freedom in close and damp apartments than in the open air. The occurrence of the paroxysms of difficult breathing observes not regular periods. It is true some authors have mentioned that they have

observed its recurrence to take place from ten days to a fortnight; that it occurs in connexion with the full moon, or in women just before or after menstruation; but I believe all these observations are inaccurate.

The first fit of asthma usually comes on at a period of life when the system is in a state of plethora; in middle age therefore, or when the middle period is terminating; in both cases when the patient has become more corpulent than before. Hence arises its frequent complication with disease of the heart and great vessels, or with organic changes in the lungs—affections which complicate the symptoms in so marked a degree, and so frequently, that many pathologists of good reputation have considered such changes as forming the essence of the disease. Asthma is, however, in itself a spasmodic disease; like all spasmodic diseases presenting the most terrible and distressing symptoms while it lasts, and then leaving the patient perfectly free from inconvenience, and that so rapidly as to forbid the supposition that it depends on any physical alteration of the structures it occupies.

With respect to the spasmodic affection, there is some difference of opinion as to the exact part of the frame it occupies. Generally spasm is an affection of the muscles, but it is not agreed in which class of the respiratory muscles asthma

resides. Those who suppose that the air passages contain muscular fibres, capable of contracting or expanding their cavities, conclude that it is in these bronchial muscles (if I may use the expression) the disease is seated. But I rather conceive that it is the ordinary or external respiratory muscles that are at fault; since by what is known and determined of their action, all the symptoms of the disease in question may be accounted for. This opinion I adopt without reference to the question, whether the bronchial membrane is furnished with muscular fibres or not; because it by no means follows that their existence proves that they are necessarily the subject of the particular spasm of which I am treating. In fact, Dr. Copland, who adopts the idea that the muscular fibres of the bronchia are the seat of asthma, furnishes an observation derived from the symptoms (with which observation I fully coincide) that destroys his hypothesis. He says, when speaking of what he calls the humid asthma, "In estimating, however, the nature of this as well as the other varieties of asthma, the difficulties opposed to *expiration* by the spasm of the air tubes, and the accumulation of viscid mucus in them, have been too generally overlooked in our eagerness to ascribe all the morbid phenomena to impeded *inspiration*." Now, no one can understand how contraction of

the bronchial muscles can prevent expiration, unless those in the larger tubes contracted, while those in the smaller ramifications were relaxed; but such as are presumed to exist in the former, are evidently so obscure that they could offer no resistance to the combined action of the numerous minute muscles. Therefore, no opposition to the expiration of air could be made by such means; and, consequently, if we are wrong in ascribing the phenomena to impeded inspiration, instead of difficult expiration, we must adopt the opposite theory. I am of opinion that the phenomena of spasmodic asthma are to be referred to an irregular action of those respiratory muscles, about the existence of which there is no dispute, namely, the intercostals, diaphragm, levatores, costarum, &c., antagonized by equally irregular action of the muscles that close or open the larynx.

Whatever may be the seat or remote cause of the spasmodic condition which constitutes asthma, there is little doubt that it is immediately excited by a morbid secretion from the bronchial membrane. This was the idea of Dr. Bree, who wrote many years since an excellent treatise on this disease, and who justly observes, that the long continued and violent suffocative efforts terminate as soon as they succeed in expectorating the accumulated secretion, and that the

class of remedies which determine expectoration are the most effectual. Hence to this secretion he attributes the disease, at least as its immediate cause. The remote cause is, according to the same author, indigestion, or a morbid condition of the stomach and bowels. To the latter opinion I cannot subscribe, although I have little doubt the influence its propagation from so weighty an authority has had on practice has been useful; since it directed the attention of the profession to a connexion between the pulmonary and gastric symptoms, to which it is very important to pay attention.

With respect to the morbid appearances which are met with after death, it is unnecessary to enter into any detail on the subject, since I am not attempting to investigate any other variety of asthma except the convulsive or irritable, for, as I before stated, the term is improper when applied to the organic changes which occur in the viscera of the chest. These should be named according to the particular viscus they occupy—emphysema of the lungs, ossification of the great arteries, induration of the valves, &c.

The established treatment of asthma is very complicated, and upon the whole not very satisfactory. When unconnected with repletion, in which case an antiphlogistic regimen is required,

the remedies in use are nearly all of the class called *antispasmodic*, i. e. such as are presumed to have the effect of relaxing and abating the spasm of the muscles. The mode of action of all of them is, however, obscure. They are many of them stimuli, such as musk, valerian, assa-fœtida, camphor, &c. Others have a narcotic influence, such as opium, stramonium, bella-donna, &c.

These and fifty other remedies have been lauded as specifics, but not one of them is to be selected which does not frequently disappoint our expectations. For my own part, I abandon nearly all of them, finding that the continued influence of friction and inhaling is attended with the most gratifying results in all the cases in which I have had recourse to them.

Inhalation is chiefly useful before or during a paroxysm. It had been practised long before my time. Even Aurelian recommended it, and since him various practitioners have successively revived and abandoned the practice. Dr. Scuda-more, one of the latest writers on the subject, has treated of it at length. The anti-spasmodic substances, which had gained a reputation by their internal exhibition, have been commonly used. The last-mentioned author urges the em-ployment of the vapour of iodine. I have not found the same beneficial results to have

occurred. It is useful in some pulmonic complaints, but my experience is against the opinion that asthma is one of them.

My method of inhalation varies according as it is requisite to treat the patient *between* the paroxysms, or while they continue. In the former case, the medical substance by which the vapour is medicated may be used of much strength; in the latter considerable dilution is required.

Friction in asthma is also of utility, both intermediate to the attacks, and during their accession: and in this disease the strength of the substance used for inunction may be raised higher than in many other affections. The skin of asthmatic persons is not easily excitable.

Although I have little faith in the internal employment of the ordinary anti-asthmatic remedies, I must take this opportunity of observing, that, independently of inhalation and friction, such remedies as regulate the bowels and give tone and gentle stimulation to the stomach are indispensable. Nor can too much attention be paid to diet, which should always be sparing, but nutritious, and easy of digestion. It is astonishing what slight deviations from regimen bring on a paroxysm. The extreme strictness with which this point is enforced by the homœopathists accounts for the circumstance that they sometimes

perform cures which would obviously be impossible if they depended only on their ridiculous doses of medicine.

The cases of asthma which have fallen under my care have been numerous, but my limits will not permit me to narrate them, which indeed I decline where I have not a direct voucher from the parties mentioned as to the accuracy of the account. There are three, however, I am requested to mention as being very severe, and being complicated with some other affections of the chest, they form forcible illustrations of the powers of the method.

Mrs. ALDERMAN, of Bishopsgate-street, was affected for a considerable time with asthmatic symptoms of the humid kind, attended with great difficulty of breathing in general, and occasional paroxysms of great severity and much expectoration. The examination with the stethoscope indicated a very engorged state of the lung, with thickening of the bronchial membrane, and impeded and irregular action of the heart. Notwithstanding this formidable array of symptoms, the endermic and inhalent methods triumphed over all in the course of a few months.

I may mention here that I attended at the same time the daughter of the above-mentioned lady, in whom the pulmonary symptoms were so severe that she was considered in a consumptive

state. It was, in my opinion, a severe chronic bronchitis, attended with irregularity in the action of the heart, and was, perhaps, in some measure hereditary; but it disappeared rapidly under a similar method.

Mr. Joseph Papps, 12, St. Andrew's-hill, Doctors' Commons, states that he had asthma for twelve years, when he was attacked in the spring of the year 1837 by the influenza, which increased the fits of attack astonishingly. He sat in an old arm chair upon a pillow for three nights and four days. He did not expect during all that time to live an hour. His feet and hands were cold, and lips and nails blue. He had cold sweats. His wife having sent for Mr. Holmes, he told her he feared it was little use attempting any thing. But his wife urging Mr. H. to do something, he told her he would employ a liniment he had invented that had performed surprising effects. He did so, and twelve hours after the deponent was able to lie down and sleep, and since that, by its use for two months, has got as well as ever he expects to be.

(Signed) Joseph Papps.

"15, *Huggin Lane.*

"Sir,—Being troubled with an asthma of several years' standing, and having caught the influenza very prevalent in the beginning of this year, it attacked me with such virulence that very soon I was reduced to a mere skeleton. My breath was such that I was obliged to stop every two minutes to regain it; excruciating pains in the head, and extreme weakness, with pains in the joints. My coughing was dreadful, with expectoration of a thick mucus. In fact, I was in such a state, that my friends gave me up for lost. After inhaling, I experienced a sudden and beneficial relief; and, continuing it for two months, I found myself quite another being; my flesh began to get firmer; my cough left me, and my breath was as free as ever it was. After such a wonderful cure, I cannot but feel grateful, and ever shall be obliged to you for your skill and attention to me.

(Signed) "George Gamble."

To Mr. Holmes.

"14, *Huggin Lane, Aug.* 16*th*, 1837.

"Sir,—I have much pleasure in informing you, that, after suffering under that direful disease, "asthma," and having had recourse to

almost every remedy, without success, the lotion I have been using for these last two months has been of such signal benefit, that I consider it my duty to make this acknowledgment for the satisfaction of others who may be labouring under this malady.

"I am, Sir,

"Your obedient servant,

"J. EVERELL."

CHAPTER VII.

OF HÆMOPTYSIS, OR HÆMORRHAGE FROM THE LUNGS.

This disease, commonly designated by the term *spitting of blood*, is of two kinds.

The first arises from the rupture of a large artery, owing to some violent strain, or the sudden development of some old but latent tumor: it is attended by the sudden and violent ejection by coughing of a considerable quantity of red or arterial blood.

The second species of hæmorrhage is owing to the relaxation and partial giving way of the minute arterial branches which ramify over the extreme terminations of the bronchi and air cells. The blood is, therefore, slowly and gradually expectorated, is mixed with the mucus which is the natural secretion of the bronchial membrane, and undergoes those changes which all arterial blood is apt to do when ejected from its proper vessels, namely, loss of colour and increase of consistence. Of this latter species

there may be enumerated two varieties, which conform to the ordinary division of all hæmorrhages into active and passive; the former term indicating a state which is brought on by an excess of action in the system, and which is attended therefore by the usual signs of fever and inflammation, namely, redness, heat, or flushing of the skin, especially the face, burning sensation in the chest, oppression and difficulty of respiration, palpitation of the heart, quickness and hardness of the pulse, the hæmorrhage being often scanty. The passive hæmorrhage is more obscure in its symptoms, and is usually a mere symptom of some other disease of the lungs—commonly consumption. The degree of obscurity is so great, that in consequence of the absence of violent cough, or of difficult breathing, the practitioner is sometimes deceived as to the source of the disease, and doubts whether the bleeding comes from the stomach or the fauces.

The hæmorrhage which results from the rupture of a large vessel, as well as that which arises from inflammatory action in the smaller ramifications, require no further particular detail either of symptoms or causes in this place. It is enough to observe that my methods of inhalation or friction have no place here. The cases must be treated according to the established mode,

viz. by *bleeding*, general or local, according to circumstances, and regulated by circumstances also as to the quantity of the blood to be taken, and rapidity of its abstraction; by *astringents*, internally administered, and applied also externally by lotions or sponging; by *rest*, by *purgation*, and by abstinence from motion, eating, or speaking.

I confine myself, therefore, to speak of that kind of hæmorrhage of the lungs which arises from debility rather than excess of action. In this passive kind of bleeding the sanguineous fluid is sent up occasionally, and with a slight cough, nearly pure, though grumous; at others, after a cough of more difficulty, with mucus of varying quantity. The kind of patients whom it affects are usually those of a lax fibre and delicate complexion, who often inform us they have been subject to long-continued hæmorrhage from other parts, as the gums or throat, induced by slight causes. When the sputa are the receptacles of the blood it is a serious sign; but otherwise, the debility and pallor of the patient are not so extreme as when the blood is ejected by itself. Nevertheless, the streaked appearance of the expectoration is a not unfrequent symptom of the existence of advanced tubercular deposition, or, as I have before explained, of consumption.

When the existence of the last-named disease is established by the modes of investigation I have described in the Chapter on Phthisis, the hæmorrhage may be considered a mere secondary affection, the relief of which depends entirely on the primary disease. When such a complication does not appear to exist, passive hæmorrhage requires to be treated by a tonic system of medicine and diet, namely by bark, steel, port wine, nutritious but light food, not however of a watery consistence, such as broths and soups, but puddings and fresh vegetables. Many of the balsamic remedies are also of utility, but it does not belong to my purpose to enter into any minute directions as to the use and modifications of this plan of treatment; indeed, they are so well established by the best authors, that the task would be superfluous. I have merely to offer a few remarks on inhalation. And here, I freely confess, that the application of my own remedies would be totally misapplied. Friction of all kinds promises nothing, either according to analogy or experience; and the substances I usually employ for medicating an inhalation are useless, if not misapplied—I do not know that they are mischievous; but that is more than I can assert of many substances which have been recommended by speculators from very loose analogies. Such are vinegar, tar, and camphor. I have

seen very serious consequences result from the use of assafœtida in this manner. But there is one substance from which great advantage may be derived: this is the fumes of lead. These having been passed through water are deprived of those irritating properties which depend on the heated air that accompanies them, unless a proper apparatus be used; when thus managed they no longer excite cough, and produce powerful anti-hæmorrhagic effects. I have treated three cases in this manner with immediate success; that is to say, immediate, because in each the hæmorrhage diminished on the first inhalation, and ceased after from three to eight or nine applications. There is only one fear I have as to its use, or caution I have to impress on others, that is, that it *may* be imbibed into the system, and produce the usual poisonous effects of the mineral; but I apprehend, if our eyes are open to the possibility of this occurrence, it will not be difficult to combat the danger by the appropriate remedies of calomel and oleaginous aperients.

CHAPTER VIII.

ON AFFECTIONS OF THE HEART.

Diseases of the heart, whether of its intimate structure, of its investing membrane, or of the vessels which branch from it in the chest, are very frequent. For many a century the comparative frequency of such diseases has passed over unobserved and unregarded. While the warmest disputes prevailed, and the most anxious investigations were conducted, as to whether all diseases inhabited the liver or the stomach; and while some sought in the condition of the bile or other secretion the causes of mortal ailments, and others examined and exaggerated the power of sympathy in driving its lethal course through minute nervous fibrils;—the HEART, the main organ of the body, the *punctum saliens*, *primum movens*, *ultimum moriens*, was almost entirely overlooked.

It is but very recently that we have begun to correct this serious error. Late researches have shown us there is scarcely a death occurs, after a certain age, in which some change in the heart

may not be detected. Such change is often the cause of maladies which have been referred to distant organs. Many cases of sudden death which had been considered as apoplexies, have been discovered to be lesions of the circulating organ ; and many disorders and diseases of the head, which had been supposed to have their primary origin in that situation, are found to be secondary to the morbid condition of the same viscus.

I shall treat of these diseases in the following order :—first, of affections of the investing membrane of the heart ; secondly, of its lining membrane ; thirdly, of its muscular structure.

Inflammation of the membrane covering the heart.—This membrane, technically denominated the *pericardium*, closely covers the heart by one layer, and forms by another a bag around it containing liquor to allow of a free sliding movement. It is very frequently the seat of inflammation, both of the acute and chronic kind, and of the various shades that unite the two. The acute kind is generally attended with sharp, severe pain under the left breast, shooting over the anterior part of the chest, and, at the same time, deeply backwards, and extending, in some instances, towards the other extremity. This pain is increased by any thing that agitates the chest, such as pressure, percussion, coughing, and the

like. When this occurs, the practitioner's attention becomes directed to the proper seat of disorder; and the detection of the disease, from the accompanying symptoms, is not difficult. But often this pain is dull, obscure, or even entirely absent; and this happens even when the cases are of a most serious character; and it has been observed by some, that this absence of pain is more common when the disease is confined to the pericardium, than where it involves in the common inflammation a considerable extent of the pleura. The pulse is for the most very rapid, but irregular, sometimes hard, then soft, and altogether variable, having no exact character except that of perturbation, and almost incessant quickness. There is heat of skin and thirst, succeeding to chilliness and rigours; anxiety; difficulty of breathing; blood cupped and buffed. There is want of sleep; if he dozes, he generally dreams of falling, and starts, and awakes in great alarm, and with a sense of suffocation. The disease, when not terminated by resolution, exhausts the power of the heart, by the intensity of action which it keeps up, and is attended by delirium, convulsions, &c. or more frequently declines into a state of chronic disease, tending to the disorganization of the structure. There is a tendency to faintness on motion. The latter has also the effect of accelerating the pulse in an amazing

degree when it is comparatively tranquil, and hence the well-known danger of a relapse, from rising too early from bed, after the disorder has been apparently subdued. During this acute stage there are no particular signs to be observed by the stethoscope or ear, except that the action of the cavities of the heart is tumultuous ; that is, its sounds now follow according to the normal rule, and at another moment deviate from it.

The acute pericarditis usually terminates in more or less effusion into the cavity of the pericardium. Where the effused fluid is serous and small in quantity it may be presumed to be absorbed on recovery : but when it is so copious as to fill the cavity completely, the action of the heart is stopped and life extinguished. In such cases masses of flocculent or adherent matter cover the surface of the cavity or float in the serum. Occasionally no fluid is effused, but the adherent matter is coagulated firmly, and unites the two surfaces of the membranes ; a change of structure which afterwards leads to serious and anomalous diseases of the heart.

Now with regard to the treatment of pericarditis, it might appear to many surprising, that unless I entirely absolved myself from the established rules of practice, for which I have always professed and entertained respect, I should recommend and adopt a method of treatment entirely

different from them. Yet experience compels me to assert, that the plan of extensive friction, which in such cases must also be powerful and severe, is often far superior in effect to the ordinary plan of bleeding, purgations, &c. which, however useful as adjuvants, do not always act with sufficient rapidity on the original source of disease.

There are perhaps no diseases of an equally formidable character which yield so readily to extensive external friction as those affections of the pericardium which are commonly designated rheumatic. It is not my purpose to inquire whether this be the most appropriate term, or whether the word rheumatic being exclusively confined to the muscular or synovial structure, some other word should not be applied to apparently similar affections of the visceral membranes. It is enough for my purpose to enunciate, that in correspondence with the opinions of the best observers, a state exists clearly affecting the pleura and pericardium, which alternates with rheumatism of the limbs, which often accompanies rheumatism of the limbs, which occurs chiefly in subjects prone to such a malady either by constitution or circumstance, and which is relieved also by the same remedies as relieve the articular affection. Without pretending to define the essential nature of rheumatism, I contend here

is sufficient analogy to justify any one in treating the sudden and vicarious inflammations of the pericardium on the same principles as he would treat a common rheumatism of the knee-joint, or contiguous muscular or tendinous structures.

Now whoever has watched the phenomena attending on rheumatism, will at once agree with me, that it differs very much from common inflammation. In the first place, the pain is more annoying and distressing in the former, is less controlled by depletory measures : it leaves and returns abruptly to a part which ordinary inflammatory attacks never do. These characters agree with the majority of inflammations of the pericardium. And the treatment of such affections by counter-irritation assists in proving the identity of rheumatism of a joint or limb with those pericardiac affections. A most violent pain and swelling of a rheumatic limb is often rapidly translated to a distant part spontaneously, and in the same way an apparently confirmed pericarditis is cured by external friction for a few hours.

Theoretically, therefore, and practically, (deducing the practice alike from my own experience, and the acknowledged experience of others,) I affirm that the most successful mode of treating the majority of inflammatory affections of the pericardium is by external friction. In

making this statement, it is nevertheless to be understood that the adjuvant remedies—depletion occasionally—diaphoretics, colchicum, &c. cannot be altogether dispensed with.

From the histories of cases of inflammation of the pericardium which stand upon record in the writings of the best observers, we cannot avoid observing that by far the greater part are complicated with other affections of the chest, but especially with affections of the pleura or diaphragm. Hence we arrive at the practical conclusion, that the surface to be exposed to counter-irritation should be very extensive; and, as I have hinted before, pericarditis is most effectually treated by counter-irritants. Here again we have deduction and experiment going hand in hand.

In cases of pericarditis, unconnected with rheumatism, counter-irritation is still useful, but it must be employed only as an auxiliary. The lancet and cupping-glass cannot be dispensed with.

The effusions and depositions of lymph which follow the acute disease, are most effectually prevented by putting the patient under a course of mercury, and in doing so it is of great importance to secure a slight affection of the mouth as early in the disease as possible. Hence, it is not sufficient to rely on the medicine internally

administered. Inunction with the mercurial ointment, or its endermic application, through the medium of a blister, become indispensable.

There are some very painful affections which seem to have their seat in the pericardium and the pleura; when in the latter situation obtaining the name of pleuralgia. Such disorders do not appear to be connected with any inflammatory affections; they are frequently produced by disturbance of the digestive organs, coming on regularly in some persons if they partake of any acid or indigestible substance. Sometimes exercise induces an affection of the kind, of which we have a familiar example in the *stitch* of the side, which occurs after running. The pain is sometimes dull, and is then long-continued; at other times so sharp that the patient is impressed with the idea that its continuance must suspend the functions of life, but in such cases it is instantaneous, and immediately subsides.

These affections are probably owing to some morbid condition of the nerves, only that it appears surprising that the pleura and pericardium should be their commonest seat, since their membranes are neither of them so amply supplied with nerves as some other of the parts contained in the chest. Whatever be the seat or source of these neuralgic species of disorders, I have found them amenable to simple friction in

some cases, and to the medicated inunction in all I have met with.

The affections of the internal or lining membrane of the heart and its vessels are numerous, but are probably nearly all the results of primitive attacks of inflammation. The more chronic diseases consist chiefly of depositions of morbid materials, or thickening of the natural structure; but as the lining membrane forms part of the valves orifices, and the rest of the complex system of machinery, by which the action of the heart is regulated, these morbid alterations lead to various and discordant symptoms. As those are all of a mechanical nature, and are such as neither friction nor inhalation, nor indeed any other means, can be expected to control (unless, indeed, by a process of absorption something might be affected), I shall not dwell upon them further than to remark, that they are often associated with pericarditis and rheumatism, complications in which, as is obvious from what we have previously stated, such methods are likely to be serviceable.

Inflammation of the lining membrane of the heart is denominated in technical language *endocarditis*. It is a condition which has only been recognised of late years. When fatal in its early stage, it leaves no other morbid appearance than a very intense redness of the interior of the

heart, which is found to extend to the lining of the arterial trunks for a greater or less distance. It seldom, however, spreads far, or shows much intensity in the pulmonary vessels.

With respect to its symptoms, these differ little from those of pericarditis, and like those are obscure: in fact, the internal inflammation is more difficult of discrimination than the external. There is seldom much pain. Oppression, a sensation of fulness, and a vague feeling of alarm, are symptoms generally present, and in this respect presenting an identity with pericarditis. A sensation of faintness, and a tendency to actual syncope, form the strongest diagnostic mark, but even that is fallacious in numerous instances. The pulsations of the heart and arteries are likewise tumultuous and irregular, the pulse rising and falling with extraordinary rapidity, sometimes beating at the rate of 140 or upwards, and in a few minutes declining to nearly the natural standard. Percussion and auscultation have been resorted to, and there are not wanting practitioners who rely on this kind of evidence implicitly. For my part I think there is scarcely a disease of the chest in which they are so useless. I speak of course of the early stage of endocarditis and of its simple uncomplicated condition. When depositions or thickening have taken place, and the motions of the valves

are impeded, regurgitations and other irregular motions of the blood through the respective cavities will take place there, therefore we must look for morbid sounds; but it is improbable in theory to suppose that the passage of blood over an inflamed membrane can produce phenomena different from those elicited by its transmission over one in its natural state; and I think experience has not yet produced sufficient evidence to overturn so improbable a supposition.

Very intense fever attends this affection, and there is great discrepancy in the action of the heart and arteries; for while the former presents a forcible impulse diffused over the whole chest, the latter is small, hard, and contracted. There is difficulty of breathing in many cases increased by the recumbent posture, and much restlessness, terminating usually in delirium. The countenance is at first pale, but afterwards often becomes of a dark hue. As the disease advances, and effusion is taking place, sounds produced by obstruction are discoverable by the stethoscope; but, as I have before remarked, this is a secondary condition of the membrane. It will be observed that the utmost difficulty prevails in distinguishing the inflammation of the lining membrane of the heart from the pericarditis; yet the treatment being somewhat at variance, the diagnosis is important. When I say the treatment is

different, I mean to imply that the plan of counter-irritation, which is so important in the latter disease, is almost useless in the inflammation of the lining membrane. In this complaint, bleeding, local and general,—rest,—and a strict abstinence from all meat and drink except diluents, form the basis of treatment, and our next care should be to excite ptyalism by inunction. The object of inducing this action is to prevent the effusions and depositions which disorganize the membrane in the second and concluding stages: and the employment of inunction, in preference to administration by the mouth, has reference to the circumstance, that any excitement of the stomach is soon propagated to the lining of the heart.

When the remote consequences of the inflammation, such as thickening of the valves, or contraction of the auricular openings are established, it is obvious that nothing material can be done towards the removal of such grave affections. We have only to palliate the more violent symptoms by moderating the volume of blood, and avoiding either exercises or articles of diet which have a tendency to accelerate the circulation.

In *inflammation of the substance of the heart*, or true *carditis*, we have symptoms closely analogous to those of the same action when affecting the pericardium or the lining membrane; and

indeed it is almost always connected with affections of one or both of those structures. We have the same doubtful and uncertain degree of pain. In one case it is severe and lancinating; in another (although the inflammation may be as intense or more so,) this symptom is slightly marked or altogether absent. We have similar anxiety, oppression, and difficult breathing, inability of lying on the left side without increase of the suffocative sensation. There is an extension of pain to the axilla and arms. The action of the heart is at times forcible and diffused over the chest, but this always alternates with depression of action and quiescence of the organ. The pulse does not correspond with the violent impetus which the heart seems to be exercising in the chest. It has little volume, but is very rapid and small; it intermits likewise. Its rapidity corresponds, of course, with the state of the central organ as to quietude or excitement.

The class of persons who are subject to carditis may be resolved into three kinds. First, those of an irritable temperament, who from real or imaginary sources of sorrow undergo deep mental emotion of a depressing kind. This cause does not rapidly operate; at first it rather seems to depress the movements of the heart; but, after a time, reaction takes place, the muscular fibres undergo an inflammation which excites their

mobility, while it destroys their power, and the disease in question becomes established. Such cases are more obstinate than those arising from other causes.

The second class are those who labour under plethora. The effect of too great fulness of the circulating system in disturbing the functions of the heart, has been proved by direct experiment. The injection of much more blood than natural into the veins of animals, has been invariably found to destroy the heart's action; a more moderate quantity disturbs it. It follows, that whatever tends to disturb the regular movements of that organ, must stretch and injure the fine texture of its fibres, and thereby tend to inflame them. Many persons are habitually in this plethoric state, especially in large towns, where the want of active exercise encourages accumulation of blood by restraining the abundant discharges by the skin, bowels, &c. which it is the well-known property of muscular exertions to promote very largely. Plethora is no less common in others from living on too stimulating food; for although such diet may seem to agree with them, since it causes no disturbance or uneasiness in digestion, yet, by engaging them to take too much, and by being more readily absorbed, it creates, to use the common but not inaccurate expression, "too much blood."

It is to be observed, however, that the mere condition of plethora seldom produces active inflammation, unless the patient be young, and of the sanguine temperament. In older persons, and those of a phlegmatic habit of body, it excites little immediate effect, but gradually tends to establish, by a chronic process, the formidable diseases of dilatation and thickening.

The third series of patients who suffer from this serious disease are those subject to rheumatism. I have before mentioned the difficulty I feel in defining this inscrutable affection. Whatever, however, may be its essence, it appears to connect itself frequently as a cause with all the affections of the heart. The connexion has at all times been so evident, that it did not escape the notice of the older writers. It was long considered that carditis was the effect of a translation of the disease from the extremities to the central organs. Modern observations have established two important practical facts in reference to this matter. The first is, that without translation, *i. e.* without any diminution in the articular affections, the heart may be simultaneously affected; and this is most frequent in the severer cases of rheumatism of the limbs. The second is, that the rheumatic affection often seizes on the heart from the first, sometimes affecting the

limbs secondarily, and sometimes leaving them perfectly free.

It is obvious that the treatment of carditis, of a disease arising from so many various causes, must require some modifications. The basis of our therapeutical arrangements must rest upon the active antiphlogistic treatment, which is applicable to all other inflammations. But where mental irritation appears to be the predisposing cause of the disease, we shall not expect to find the same good effects from mere bleeding as we hope for in other instances, nor shall we observe that bleeding can be well borne if carried to a great extent. Here we derive the greatest advantage from the exhibition of narcotics, and such remedies as diminish nervous excitement. Out of this class of remedies, we must except, however, digitalis. Induced by the reasoning that this remedy lowers the action of the heart, which is excessive in carditis, it has naturally appeared to many obviously indicated. I believe, however, that I have seen death, in one instance, produced by its use in ordinary doses; and, in others, I have observed the faintness which alternates with high action carried to an alarming point during its employment.

In managing cases arising from plethora, the necessity becomes apparent of evacuating the

system by large general bleedings; local bleeding and derivatives being in such cases of less importance than in the more irritative forms of disease. When the plethora exists in the sanguine temperament, the blood can scarcely be abstracted with sufficient rapidity; but in old and cold constitutions, if a very large bleeding be effected from a large orifice, it is apt to induce formidable collapse. It is better, therefore, to repeat moderate venesections, and diminish the quantity of blood, which in the patients under consideration is somewhat watery and pituitous, by hydragogues and diuretics.

When carditis owes its origin to rheumatism, the depletory system, though not to be abandoned, must be regulated by considerations founded on the strength and temperament of the patient. It is useful to add to it the employment of diuretics, of warm baths, and of colchicum, combined with guaiacum. But it is in rheumatic affections especially that my endermic method is of the greatest utility. Comparatively in abeyance in the two first series of carditic cases, in this last it has exceeded my most sanguine expectations. It requires (contrary to what might be supposed) to be applied over an extensive surface. We often confine counter-irritation to the præcordial region; and with so much advantage in pericarditis, that we are hardly apt to suspect that

a wider application could be necessary. But it will be found requisite, in the deeper seated rheumatic affections, to apply the liniment over the whole front, sides, and back part of the chest; indeed, I have an idea it might usefully be extended still further, for the remedy appears to act more by removing the rheumatic diathesis from the system at large, by its action on the skin, than by any direct operation it exerts on the inflammation of the muscular fibres.

The more *chronic affections of the muscular substance of the heart* demand from me some brief notice; since their relief may be effected, as I believe, by the methods I have adopted.

According to the classifications of authors, the more important and frequent of these, are:—1st, Thickening of the muscular fibres; 2d, Atrophy, or diminution of the substance of the muscle; 3d, The complications they exhibit, which are several, as follows:—*a*, Dilatation of the cavities, with thickening of the parietes; *b*, Dilatation of the same, with atrophy, or thinning of the aforesaid parietes; *c*, Contraction of the same, with thickening, or hypertrophy; *d*, Contraction of the walls of the heart, with diminution of substance, or, in other words, with atrophy.

The disease of which the essence is thickening or enlargement of the heart, is one long since

observed, although only of late accurately described, or fully understood. In the obscurity of early discovery, it acquired the denomination of *active aneurism*. This expression appears to have arisen from two errors:—one of these was, that wherever in the circulating system violent pulsation was perceived, it seemed a natural consequence that the part was dilated or enlarged, because dilatation or enlargement was found, by anatomical examination, to correspond with extraordinary pulsation during life; and the second was, that the heart was believed (on the most hypothetical grounds) to follow the same laws as the arteries.

We now understand, however, that the causes, whatever they may be, which produce expansion or aneurism of an artery, are not the same which produce enlargement and thickening of the heart; at the same time, it must be confessed we know very little either of one or the other. Our conclusions on the subject are therefore derived solely from observing, that neither in respect to age, general habits of living, or other circumstances, do the two classes of disease correspond.

With respect to the particular symptoms attendant on the diseases of the heart, before adverted to, in the first case,—*i. e.* where the muscular fibres are thickened without the cavity

being enlarged,—auscultation shows a violent pulsation over the immediate situation of the heart, and the pulse is quick, regular, and incompressible. The pulsation is not, however, extensive over the chest; that is to say, it is not more perceptible than ordinary (indeed hardly so much so) over the upper and back parts of the cavity.

In the second case, where the organ is diminished in volume without dilatation of the ventricles, the pulse is feeble, easily compressed, usually slow, alternating with brief periods of quickness; and the pulsation in the chest is confined in extent, and not strongly marked, even over the site of the circulating organ.

With respect to the complications of these states, when dilatation and thickening are combined, we have a more violent impulse over the heart itself; and this impulse is largely diffused over the chest; it causes evident beating of the arterial system in general, and, indeed, presents that well-marked condition of cardiac disease, in which the chest is seen to tremble with vibrations, and even the bed on which the patient lies manifests a shock correspondent with the contraction of the ventricles.

When, on the other hand, the dilatation of the cavities of the heart is accompanied with diminution of its walls, we find that the impulse is diffused extensively over the chest, but that it

is feeble comparatively over the heart's particular site; and the pulse at the wrist, though variable as to quickness, has little strength, but great volume, and is liable to frequent intermissions.

The two last cases referred to, present, as might be expected, an exaggeration of the symptoms peculiar to the two first mentioned.

I have little to boast of as to the merits of my method of treatment in diseases of the kind just referred to. They are not very common. They are readily palliated by the ordinary plans of treatment. I have had the pleasure of obtaining very satisfactory results, even in cases apparently desperate, by friction and inhalation; but I believe these cases were due rather to the removal of nervous irritation, rheumatic diathesis, or complications with pericardial inflammation, than to any direct agency my measures are capable of exciting on the growth or diminution of the fibres of the heart. At the same time, when we find particular remedies produce beneficial effects, in a great and practical point of view, it would, perhaps, be hypercritical to abstain from the use of innocent remedies, on the mere grounds that we are ignorant of the *modus operandi*.

There is a numerous class of affections of the heart which resembles, in some points, and often altogether, very closely the serious diseases above mentioned; and they are more frequently

met with than the latter. They arise, apparently, from neuralgia, distension of the stomach, irritation of that viscus or of the intestines; and, what is surprising, are attended by some of those symptoms, which reasoning would induce us to believe could arise only from the physical alterations of the circulating organs. In all these cases, the application of my endermic method is appropriate; and, in fact, there are no diseases in which it is more useful.

CHAPTER IX.

ON THE APPLICATION OF THE METHOD TO THE BODY AT LARGE.

There are instances in which the method I adopt has produced effects in obstinate diseases of the body, even where there did not seem any connexion between the general disorder and the pulmonic affection. I have not followed the application very extensively, for the obvious reason, that patients do not like the trouble of rubbing and inhaling, when medicines answer taken by the mouth; but when the common means fail, after due trial, I recommend my endermic method to be resorted to. The following cases furnish the strongest testimony in its favour.

Miss Webb, of the Half-moon, Dulwich, has kindly given me permission to mention the particulars of her case. She was aged eighteen years, and had been ill eighteen months; during

which period she was under the care of an experienced physician of considerable reputation. I attended her from March to July, in the year 1835. She had violent cough with much expectoration, together with loss of flesh and want of appetite; but the most distressing part of her complaint was violent headaches, with lancinating pains extending from the head through the limbs, especially on the left side. She was completely recovered from all these symptoms by friction with the liniment only.

Mr. L., middle-aged, had been afflicted for several years with rabid appetite, lancinating pains over the region of the kidneys; his hands and feet were always cold, even in the heat of summer; he was subject to cold, clammy perspiration, and had continued pains, in some measure resembling rheumatism, but more acute, though unattended with difficulty in moving.

He had no internal medicine after he came under my hands. The liniment was rubbed over the *whole* body for several months; and he inhaled for a year, seldom missing a single day. All the symptoms disappeared, and he now continues in perfect health.

This gentleman, at first, permitted me to mention his name and address, but has since withdrawn it, for what are, certainly, very proper reasons; and it rests, therefore, on my own testimony.

To J. P. Holmes, Esq.

"Dear Sir,—I should be wanting in gratitude were I to remain silent any longer, but I am at a loss for words to express my feelings sufficiently, for the solid benefit that I have received at your hands; as I am certain that it is entirely your superior judgment and skill, that enables me, at the present moment, to write this humble tribute of the high esteem in which I shall ever cherish the recollection of your name to the last day of my existence; and I will endeavour to give you a description of my feelings and sufferings for a considerable length of time before I (fortunately for me) applied to you for advice. For the space of three or four years previous, I had never been well for any length of time together, but was continually ailing; and I applied to various surgeons, who relieved me for a short time, and then, in the course of a month or so, I found myself worse again;—and this course continued until I was reduced to a mere skeleton, being more than forty pounds lighter than my usual weight. I had, for a length of time, been very susceptible of taking cold from the least variation of the weather; and had a severe

hoarseness, that ultimately took my voice completely away; and a most severe hacking cough, which would not allow me a moment's peace; profuse perspiration in the night, chiefly from the loins (so much that I could wring the wet from my night-shirt in a morning), which rendered me extremely weak; pains in my joints, and at intervals the most violent pain in my head, accompanied with giddiness, which would remain for some time after the pain had ceased; and great expectoration, of a yellowish, mucous appearance. Indeed, I was so bad, that I began to think, without some wonderful alteration, that I was going very fast to that place of rest, from whence no one ever returns. I luckily sent for you, on the 2d of May, 1836; and after being under your treatment for about a month, I felt myself considerably better: the perspiration began gradually to leave me; my cough was much easier, and the expectoration much less; and by continuing the same treatment of inhaling and friction for the space of nine or ten months, the pains in my head, cough, and perspiration, &c. had entirely left me; and I have quite recovered my usual good health, and am now as well as at any period of my life. You are at liberty to make use of this letter in any way you may think proper; as I am ready, any time, to confirm the truth of the statement here

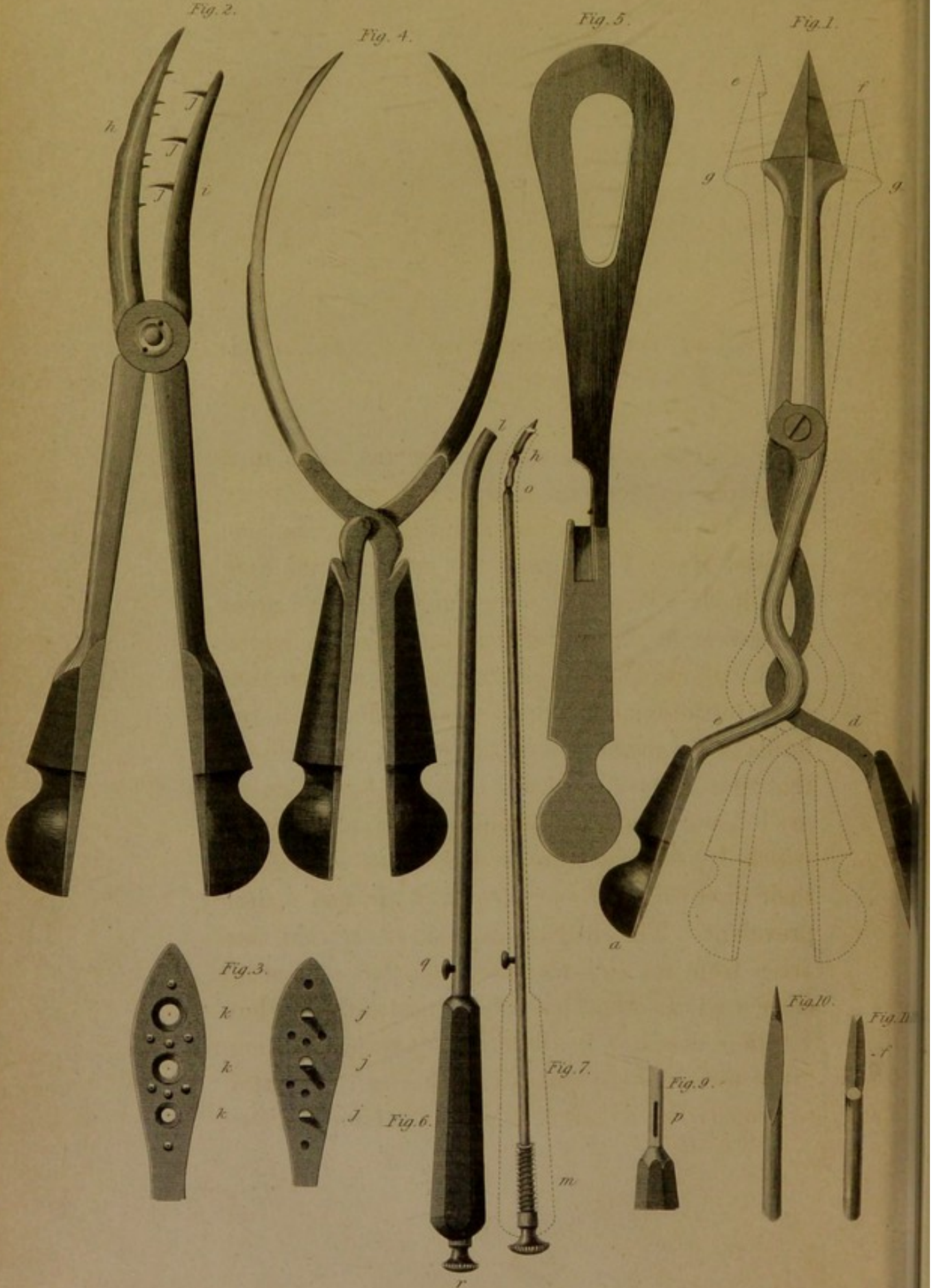
advanced. Hoping that you may long live to have the opportunity of saving many from a lingering state, almost worse than death, is the earnest desire of,

Dear Sir,

Your truly grateful admirer,

JOHN HARGREAVE, JUN.

1, *Ivy Lane, Newgate Street, City.*
September 4, 1836.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APPENDIX.

ON MY IMPROVEMENTS IN OBSTETRICAL INSTRUMENTS.

It may seem somewhat surprising, that, in a work of so different a character, I should reprint the following observations; but many years have elapsed since I invented the instruments here described. That they were likely to form a great improvement in obstetrical medicine, I had a right to anticipate from the warm approbation (*vide* testimonials annexed) they elicited from the heads of the profession in that department. Since that time, a very extensive practice has fallen to my lot, and numerous instances have occurred, in which I had reason to congratulate myself on their discovery. Nevertheless, their use is not prevalent. The instrument-makers say that this arises from the circumstance, that they cannot be fabricated at so cheap a rate as most others; but I rather consider it arises from my not having given them a more extensive publicity. In order to remedy this as much as possible, I have deter-

mined to reprint the observations whenever an opportunity offers.

" The following brief Appendix on the use of instruments may seem misplaced in a work destined for popular readers; but I conceive it is important to familiarise the female mind with this subject, in order to remove the extreme terror with which the use of instruments in midwifery is always viewed. It is fit women should understand that *no* instrument is now ever used to cut or in any other way operate on the mother. It is on the person of the child only that the accoucheur practises. It is also right that it should be understood that there are two kinds of instruments; one (to which unhappily we are sometimes compelled to resort) that can only be effectual by destroying the child; another, in which no injury even to the child is contemplated. Moreover, so far are these operations from causing any *pain* to the mother, that many practitioners make use of instruments *without informing* the patients, who, of themselves, never discover that such have been used. Nor is there any danger to be apprehended, for it is a matter of experience that those who have had bad times, and have been under the necessity of receiving aid from instruments, become convalescent in as short a space of time as those who have had perfectly natural and easy deliveries.

"In asserting, however, that the use of instruments in midwifery is attended with no pain or danger to the mother, nor in many instances to the child, I make the very momentous proviso that the said instruments shall be used by an operator of skill and experience. Those surgeons who are naturally clumsy, or who have had little practice in this department, often injure the child when they do not intend it, and give unnecessary pain to, or may inflict serious injury on, the mother. In this respect also harm may be done by the imperfections of the instruments used,—a circumstance which induced me, some years since, to turn my attention to their improvement; and I shall take the present opportunity of describing in detail what I have done. This appears the more necessary, as I have reason to fear that some of the objects I had in view may have been misunderstood; which is the more probable, because the only description I have given of my instruments is a brief one, which was published in the 46th volume of the Transactions of the Society of Arts.*

"The first instrument I have endeavoured to improve is the common forceps (fig. 4, 5 of the

* The appearance of my description in the valuable work above mentioned, arose from the circumstance of my having received the *Gold Vulcan Medal* and the *Large Gold Medal*, from the Society of Arts, for my inventions.

Plate). These are usually described as substitutes for the hand; for they grasp the sides of the head of a child in the same manner as the two hands might be supposed to do; and it is well understood that the substitution of these steel hands for the natural ones is only resorted to because the latter are too thick to be introduced, and are, moreover, comparatively powerless.

"It follows, then, as a main principle in the construction of forceps, that the part that represents the hand should be made as thin as possible, compatible with strength; secondly, that they should take a firm hold. Now, the second indication, I am free to confess, almost all the forceps in present use fulfil: they lay hold firm enough; but, as to the first point, they are all thicker than they need be; they consequently encroach on that cavity which is already too small for the passage of the child. In my instruments I have been enabled, by diminishing the fenestra, to render the blades much thinner than ordinary, and thus have gained one great desideratum. But then there is another point. In all the common forceps hitherto used, it has been assumed, that the child's head being of a globular form, the blades of the instrument must be curved not only in the direction of their axis, but from side to side. Now I deny this assumption. A child's head out of the body is globular; but when passing the pelvis,

and still more when it is under the pressure of forceps, the head is so flattened that its rotundity is nothing. Hence (and this is the fact) the beveled edges press into the child's head; and by pulling down, that is, extracting, the scalp is sometimes excoriated, and always more or less marked and indented.

"In bringing forward this instrument, I am particularly anxious to have its merits considered in comparison with those of my cotemporaries, because it must be obvious to any one, that of the numerous and varying instruments used by different practitioners, all cannot be equally good. Yet persons speak as if differently constructed forceps might have just the same powers; and they say, 'Such an instrument is very *ingenious*, but I prefer the old one.' Now if a new instrument be different from the old one, it must be in some one respect assuredly better or worse. If it is better, a decided improvement has been made, and it should be adopted; if it is worse, it is not ingenious—it is stupid, and the inventor should be presumed all the more ignorant for having brought it forward.

"Without allowing myself to institute comparisons between my instruments and all those which we see in the shops, and to which I have already taken some general objections that are sufficiently conclusive, I shall proceed to point out especially

in what they differ from a pair brought forward, with no little pretension, by Dr. Davis of the London University.

" In the first place this gentleman has lengthened the shank an inch and a half, in order that the locking of the instrument should not take place ' at the outlet, where the important structure there situated being more or less distended and disturbed by the movements of the instrument is much exposed to contusion or entanglement during either a careless or a difficult adjustment of the lock.' Now as every one knows that by the interposition of the fingers *entanglement* may be prevented, and as contusion or distension can only happen from opening the shanks too wide, which must occur just in the same degree in the modern construction—this is no improvement. Power is lost in the leverage of the handles, steadiness in the holding of the blade, and—*novelty* only gained. In the next place, Dr. Davis has extended the blades, so that he says they ' are much broader than those of any other English forceps, with the exception of Haighton's, and, as far as I know, than those of any foreign specimens without exception.' The object of this separation of the blades appears to be to allow the prominences of the parietal bones to escape through the fenestræ, and thus obtain a firmer hold on the head. It appears to me that this notion,

although sanctioned by many who had preceded Dr. Davis, is entirely erroneous. If the forceps acted by *surrounding* the parietal protuberances, they must of necessity act by pulling the inner *edge* of the fenestra against the scalp; and the invariable consequence must be laceration, or at all events contusion. The true points on which the forceps should lay hold, are all those parts which are beyond the parietal bones; and in proportion to the extent of these regions which they may cover, so will be the power and security of the instruments.

"The enclosing part of the head in the fenestra is not then any improvement. It remains to be seen whether the instruments we are examining are calculated 'to embrace the child's head by many points of contact;' an object which the Doctor is very desirous of attaining. Let any one examine Plate IV. of the *Elements of Operative Midwifery*, and he will perceive that these forceps embrace but a very narrow line of surface; but he will be particularly struck with the circumstance that the cheeks and chin, which form so excellent a point for the action of the forceps, are scarcely touched. In fact the instrument is not sufficiently *curved* towards its termination.

"The great use of prolonging a curve to near the extremity of the blades was well perceived by those who invented the *lever*, a justly exploded

instrument, but still adapted to the erroneous objects of its inventors. The want of observing this simple principle, has obliged Dr. Davis to multiply the number of forceps to an extent that is quite absurd; and in one instance actually to form a *joint* in the middle of the blade of the forceps to obtain a mode of embracing the chin! I have met with the various cases the Doctor describes, but never had occasion to employ any thing but the instrument before described, of which the great strength renders slipping impossible, and of which the broad, flat, and thin blades are so well calculated to embrace a large surface of contact, and to press the head in a direction the most favourable to delivery.

Of the Embryotomy Forceps and Perforator.—There are cases in which no common forceps can be safely or effectually applied—cases where we are obliged to perforate the head of the child, destroy the brain, and remove the child. For these purposes two instruments have been in use; one a *perforator*, and another to draw down the deceased child, either entire or in fragments. The perforator in common use is a very dangerous instrument; for it is sharp-pointed, and cutting both ways; and hence, if care be not taken to guard it in its passage to the child's head, or if it should slip when arrived there, it cuts the soft parts of the mother, and most probably destroys

her. The following are the specific objections to this instrument, as it is commonly made :—First, its perforating point is curved,—which is about as sensible an arrangement as if, previously to driving a nail into a board, we were to turn its point round : secondly, the point is formed of the two blades united; but as no instrument can be made so true but that its points may bend, or its joint vacillate, these two points are never really together: thirdly, when these instruments have been introduced, they have to be opened in order to make an incision. And how are they opened? Either in the same way as a pair of scissors, by the feeble and ineffectual powers that separate the thumb and fingers, or by the use of both hands. In the first case, our power is too feeble to be of any use. In the second, we leave the soft parts unprotected; great exertion is required to open the blades; one slips out, and, perchance, cuts the woman. Now these inconveniences I have thus obviated (fig. 1). I have straightened the points of the instrument, because it will thus perforate easily without much force, and to a certainty without slipping. I have made my point on one blade only, that it may always remain fit for use. By turning the handles across, I have subjected them to that firm, steady, and manageable power of grasping which the hand possesses, instead of leaving them to be

worked by the feeble and tottering movement of the thumb and fingers.

"The instrument which is used to withdraw the child after the head has been perforated, consists of a pair of blades, one of which is inserted into the child's head, whilst the other is on its sides; and one of these is furnished with sharp teeth, shutting into holes in the other. These instruments were a great improvement on the old blunt hook; but they were apt to slip from their hold, partly on account of the smallness of the teeth, and partly on account of the length of blades and shortness of the handles, by which their leverage was much weakened.

"Dr. Conquest endeavoured to obviate this inconvenience by uniting the handles; but, in so doing, he united them by a hinge that, without extraordinary care, may cut and nip the soft parts of the mother, producing great pain and danger. Moreover, he diminished the teeth, already too small to perforate the bone, and consequently, his forceps continually slipped away with portions of the scalp, leaving the bone bare.

"I have united the blades by a joint that will not admit the smallest particle of matter to get into its interstices (fig. 2). I have enlarged the teeth so that they will perfectly transfix and retain hold on the firmest bone; and I have effectually guarded them from any contact with the soft parts of the

mother. My instrument is also more massive than those in use, because I consider the strength of the instrument enables us to use our power more effectually. There appears to be no greater error than to fancy that, with weak and flexible instruments, we avoid using great force;* they slip, yield,—and though we may exert no power, we are sure to exert violence. Now such an instrument as I have invented allows us to abstain from using great muscular exertion to keep it closed, and very slight drawing downwards enables us to use much force; our efforts may be perfectly regulated; we are sure to make our traction in a right direction: in a word, we have a full command of our operation.

"These instruments are available in all cases where it is decided upon to extract the child dead. If there is such a diminution of the pelvis only, that the body will pass when the head is evacuated of the brain, they will bring it forth entire. If the cavity be so small that this cannot take place, they will break down the body into small portions, and remove it piecemeal. If there occur cases where the smallness of the pelvis will not admit these instruments to be applied, I am bold to say no instruments hitherto invented can be used.† We must then have recourse to that

* See on this point the observations of Dr. Blundell.

† I say this in direct contradiction of the dogma laid down

terrible alternative—the Cæsarian operation. But the instrument I am now about to introduce, will, if used in time, prevent the necessity of this cruel operation.

"Of the Stilet.—It has long been established by enlightened practitioners, that when a woman is so deformed that she cannot bear a child without the Cæsarian section, and she is discovered to be pregnant, abortion should be brought on. This is to be effected by puncturing the membranes that contain the child. Now the instrument in use is a common stilet; but the operation is so difficult, that it is very rash to use a bare-pointed instrument in performing it. The mouth of the uterus is not easily discovered, and when it is discovered, is so far closed that it is difficult to avoid wounding its lips; and, while we are examining with the finger, be it remembered, this pointed stilet is left unguarded. I have obviated this difficulty simply by turning the stilet into a trocar (fig. 6, 7). I pass a canula, perfectly smooth and innocuous, into the vagina; find the mouth of the uterus with my finger; introduce the canula into that opening; and now I know I am safe. I press a bolt, which drives a trocar

in the grandiloquent quarto of the Professor of Midwifery to the London University, who has invented some instruments for embryotomy which may be very well used on the phantoms of his class-room, but never on a living female.

out of the end of the canula, penetrates the membranes, and retracts itself the instant my finger is withdrawn. The liquor amnii follows, and labour ensues.

"This instrument may also be advantageously applied to puncture the membranes in ordinary cases of labour, when they are very firm and unyielding.

"These instruments will be better understood by the following—

REFERENCE TO THE ENGRAVING.

"Fig. 1 represents a perforator for opening the head when too large for delivery. While in the act of perforating, the hand is placed between the handles *a b*, and grasps the portions *c d*, by which the handles are kept distended: this keeps the ends *e* and *f* closed together, forming a sharp spear-pointed perforator; the end *e* only is formed into a sharp point, the other *f* fitting in so as to complete the two cutting edges; the top of *f* is notched, as shown in the separated blades, fig. 11, to fit the handle at *e*; it is thereby kept from springing or straining the joint while using it as a drill; then, when by some turns it has pierced the cranium, and entered to the shoulders *g g*, the handles *a b* are closed, as shown by dotted lines: this action opens the perforating points *e* and *f*, as shown by dotted lines, their

sharp edges making incisions on each side of the perforation; it then is grasped again at *c d*, to close the points, which then are to be thrust through the opening; and after breaking down the contents of the cranium, it is withdrawn. The craniotomy forceps, fig. 2, is then to be introduced, while closed, till the point of the concave blade *h* reaches the perforation: it is purposely made longest, that it may slide over the outside, while the convex blade *i* begins to open and enter the perforation: this blade *i* is furnished with three chisel-shaped teeth *j j j*; they enter, while closed, three corresponding holes *k k k* in the opposite blade. They are better seen in fig. 3, which shows the inner faces of the blades *h* and *i*; smaller pointed teeth are also fixed in the blade *h*, with small corresponding holes in the blade *i*; these secure the external integuments, while the three chisel-like teeth pass through the bone of the head, and enter the perforations in the blade *h*, thus giving a very secure hold; and the head may be extracted without any danger of its slipping away. The joints of these forceps are turned and halved into each other, so that they form a round mass, and therefore, in opening or closing, cannot pinch or injure the soft parts near them.

"Fig. 4 represents a pair of common forceps; fig. 5 an outside view of one of the blades sepa-

rate: their slender edge and small fevectræ are here demonstrated. Fig. 6 represents a perforating stilet, for the purpose of avoiding the use of the perforator by procuring, in deformed women, abortion: it consists of a long hollow tube and handle, slightly curved at the end *l*; within this slides a jointed stilet, shown separate in fig. 7; a spiral spring *m* is placed at the lower end, which, acting against a shoulder within the handle, keeps the stilet down safe within its sheath: *n* and *o* are the two joints which allow it to slide in the curve at *l*; a slit is made in the tube at *p*, fig. 8, in which traverses the screw *q*, which is fixed to the stilet; this both keeps it in the tube, and limits the motion: a button *r* at the bottom serves to press up the stilet, and protrudes its sharp point *s*, to make a puncture; then, on removing the thumb, the spring *m* immediately draws it within the sheath. Fig. 9 is an end view of the perforating points of fig. 1; and fig. 10 a section of the blade, fig. 5.

CERTIFICATES.

"*April* 10, 1826.

"I am little a judge in such matters, but the instrument of Mr. Holmes appears to me to be safe and ingenious.

"I am of opinion that it might be safely and

effectually employed to break a stone in the bladder, in the operation of lithotomy.

"ASTLEY COOPER."

"29, *Conduit-street, March* 28, 1826.

"I have examined a pair of craniotomy forceps of Mr. Holmes, and they appear to me to be admirably contrived; and that their application, in cases where they are required, will very much facilitate the operation of extracting the fœtus.

"HENRY DAVIES, M.D.
"*Physician to the British Lying-in Hospital.*"

"*Broad-street-buildings, March* 30, 1826.

"I have been shown a pair of craniotomy forceps, invented by Mr. Holmes, and think them very appropriate to the purpose of extracting a dead child through a pelvis which is much deformed; at the same time the instrument displays considerable ingenuity.

"JOHN RAMSBOTHAM."

"*Broad-street-buildings, March* 29, 1826.

"I think Mr. Holmes's craniotomy forceps, while they display much ingenuity, are calculated to afford the operator great power in his attempts to extract a perforated head through a deformed pelvis.

"FRANCIS H. RAMSBOTHAM, M.D."

"34, *Brook-street, Grosvenor-square, March* 29, 1826.

"I have examined a new craniotomy instrument, invented by Mr. Holmes, and think it possesses great ingenuity. It appears to be a perfectly safe instrument, and will enable the operator to exert great force in the extraction of the head through a distorted pelvis.

"SAMUEL MERRIMAN, M.D."

"*Saville-row, March* 29.

"The instrument which has been shown to me by Mr. Holmes seems well calculated to bring the head of a dead child through the pelvis.

"CHARLES M. CLARKE."

"8, *Hatton Garden, April* 12, 1827.

"SIR,—I have much pleasure in expressing the favourable opinion I entertain of your improvements in obstetrical instruments. In the *perforator*, especially, you appear to me to have shown us that you possess two important qualifications which are rarely united—great mechanical ingenuity in the construction of the instrument, and a minute practical acquaintance with all the anatomical and physiological details of the parts that are the subjects of obstetrical operation.

"W. G. JONES."

"*J. P. Holmes, Esq.*"

"3, *Nottingham-place, March* 5, 1828.

"SIR,—The obstetric craniotomy forceps and perforator which you requested me to use, answered quite to my satisfaction, and were far superior to those which I possessed, invented by Dr. D. Davis. Your perforator being straight, having *one point* only, and the dividing edges opening upon a different principle to other perforators, give it a decided superiority.

"I have much pleasure in stating, also, that the forceps retain their hold much better than any which I have used formerly.

"J. CHOLMONDELY,

"*Of the Queen's Lying-in Hospital.*"

"*J. P. Holmes, Esq.*"

"*St. Saviour's, Southwark, March* 6, 1828.

"SIR,—Your obstetric instruments, consisting of the craniotomy forceps, the perforator, the perforating stilet, and the bow-forceps, I have inspected, and consider the instruments to be simple, effectual, and, in prudent hands, safe.

"The craniotomy forceps I have had occasion to use; and though they are large and heavy, my opinion is, that they constitute one of the best instruments for their purpose which has yet fallen under my notice.

"JAMES BLUNDELL."

"*J. P. Holmes, Esq.*"

"This instrument, contrived by Haighton, and much improved by Dr. Davis, has been still further perfected by Mr. Holmes, of Old Fish Street, a gentleman who, to omit his other instruments, has produced the best pair of craniotomy forceps that I know of, and which I now always use."—*Extract from Dr. Blundell's Lectures at Guy's Hospital, as reported in the Lancet, for* 1828, p. 130.

"Having thus described my instruments, and shown, by the testimonials of the first practitioners, that they are capable of performing the objects I had in view, also that these objects were not attained by the old practice, I might conclude the subject, if I were not aware that as all new inventions are sure to be attacked, so mine have been, and therefore I may be called upon for a defence. The first objections I meet with are from those *who have invented instruments* themselves. They very politely allow that mine are very good, but they manage so well with their own as not to feel any change necessary: and they observe, that in skilful hands it matters not what instrument is used. I allow this truth, but I contend that in inventing surgical instruments, it is our business to look for

and recommend such as are *least liable to do mischief in* ANY *hands.* Every one must know that about nine-tenths of the females in this country are delivered by persons who have not the experience necessary for great skill in obstetric operations. There is something exceedingly selfish in any one saying, because *I* can accomplish a difficult operation with a bad instrument I shall not further any expedients which may enable those less skilful to emulate me. Moreover, this objection will apply to all improvements in surgical instruments whatever.

"A still weaker, but much more annoying objection than the last, has been raised by those who presume that a practitioner cannot be particularly skilful in the fabrication or use of instruments without being prone to employ them where nature might accomplish the parturient process without them. It has often been insinuated to me by other practitioners, that they must have been particularly fortunate, inasmuch as, in the course of a long practice, they have never found it necessary to avail themselves of agents of the kind; and hence they have not only entertained and almost avowed the opinion that very particular attention to the structure and use of instruments is superfluous, but that it is injurious, by leading to more frequent employment of them than is absolutely necessary.

"No one can deprecate more earnestly than myself anything like unnecessary interference with nature, who is, I know, in most cases, all-sufficient; and I have witnessed, on many occasions, the most serious consequences result from the interference of the practitioner with the natural processes. But I have generally found that those who have thus inclined to interfere were not the best calculated to employ instruments, but the reverse; I am perfectly well assured that where one woman is lost from the improper use of instruments, hundreds are sacrificed to the neglect of their employment. The objection against them is one that is extremely convenient to ignorant men, and to those who have had but little experience; but I am contented with knowing that the wiser part of the profession are fully agreed that as no part of surgery requires greater art than obstetric operations, nor demands more mature deliberation, so none requires more accuracy, firmness, and skill."

I think I may, without vanity, quote the words of that great surgeon (Cheselden) in saying, if I have any reputation in this way, I have earned it dearly; for no one ever endured more anxiety and sickness before an operation: yet from the time I began to operate, all uneasiness ceased; and if I have had better success than some others,

I do not impute it to more knowledge, but to the happiness of a mind that was never ruffled or disconcerted, and a hand that never trembled during any operation.

FINIS.

R. CLAY, PRINTER, BREAD-STREET-HILL.