New and original opinions as to the sounds of the heart and circulation, and abscesses, their physiology and treatment; and contagion and puerperal fever, their causes; and the cause of contagion in various diseases / by John Moodie.

New and Original Opinions

AS TO THE

SOUNDS OF THE HEART

AND

CIRCULATION,

AND

ABSCESSES, THEIR PHYSIOLOGY AND TREATMENT;

AND

CONTAGION AND PUERPERAL FEVER,

THEIR CAUSES;

AND THE

CAUSE OF CONTAGION IN VARIOUS DISEASES.

BY

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PREFACE.

The views of the different subjects and the opinions in this Treatise, as generally stated and laid down, are considered by the Author, to be original, (a very few of them, if not wholly original, are partly so,) and are so, so far as he has been able to inform himself by examining, with much care, and trouble, the many different Writers on these subjects, both old, and new; and also from reviews of these subjects, but it is quite possible, that he may be mistaken, as to no other author having written, or given similar views on some, if not the whole of the subjects; but so far as he is aware, up to the end of 1849, he has not seen in any Work, the opinions laid down in this Treatise, be they right, or wrong. The Author has condensed the different subjects, and left out the History, and different opinions on the subjects, which

will be found, and better understood, at length, in the Works of Writers on these subjects, than by extracts, which would fill a volume.

We sent this article last January, almost as it is, to an eminent Medical Writer in Dublin, to communicate, and also to one in London, and also to Glasgow; we sent a copy to a Medical Journal in Edinburgh, with that portion on abscesses, but it was lost, or stolen from the house of the person, to whom it was taken by mistake. A copy is supposed to have been stolen or lost out of the Post-Office, such an occurrence is highly dangerous, destructive, and detrimental to the Commercial interests of a nation, and may cause great loss, and ruin to individuals, (or even the keeping up or delaying of a letter although not stolen.)

GENERAL CONTENTS.

ORIGINAL OPINIONS

AS TO THE

CAUSES OF THE CIRCULATION,

AND THE

SOUNDS OF THE HEART.

In the first part of this Treatise, we will with great diffidence, try to give an explanation, and reasons, and causes, for many movements of the circulation. The opinions, and conclusions which we have arrived at, have not been given, and come to by any writer, that we are aware of, and it may seem foolish in us, to come to such conclusions alone, in the face of others, on the same subject, by first rate, and talented authorities, and when the subject might be said to have been satisfactorily, and without the least hesitation, decided, and proved, by medical men, eminent on such subjects, and as experimentalists, yet it is allowable for us, to give our opinion, as there are so many different reasons, and opinions given

on these subjects, by men highly, and equally talented, and conversant on these subjects, both in the British empire and abroad.

The circulation, which was discovered, by the immortal Harvey, and which first led to the proper treatment of disease, is of vital importance, and the Heart which is the fountain, or centre of the blood, and we see its great importance in disease.

We see the beautiful adaptation of the frame, and the wonderful structure of the frame, in the disease of any part, and how in certain cases, each, and every part of the body distant from, and near the Heart, has a nerve which has a communication with the Heart, and if the diseased part requires strengthening, the action of the Heart is increased, and if it requires depression, the Heart's movement is checked, and the circulation moves slowly; but at times, the Heart loses command over the increased action, and cannot stop it, and destruction is a consequence; at other times, the Heart's action gets so feeble, and depressed, that for want of stimulus, and strengthening, on this account, the part is also destroyed, and the system weakened, in such cases, we must try to regulate the frame, and circulation, by medicines, various in their properties, qualities, and strength, and by other means, so as to depress or stimulate without injury.

Without further remark, we will enter on the

subject of the Heart; the opinions principally arrived at, for practical purposes, and the treatment of disease, and principally written, with a view to explain our opinion, as to the causes of the sounds of the Heart, and which views, have been in the hands of the most eminent medical men, in the three capitals of Britain, and in Glasgow, since the close of last year.

For writers on the circulation, see Hunter, Wedemeyer, the Webers, Poisseuille, Müller, Dr Parry of Bath, Flourens, Dr Carson of Liverpool, Sir D. Barry, Dr Allen Thomson, Spallanzani, Hales, Magendie, Dr Arnot, Krause, Erdle, Dr Marshall Hall, Bichat, Buniva, Guillot, Verschuir, Guilio, Rossi, Thomson senior, Hales, Turner.

For sounds of the Heart, see M. Laennec, Turner, Dr Corrigan, Dr David Williams, M. Pigeaux, M. Rouanet, Mr Carlile, Dr Hope, M. Bouillaud, Mr Bryan, M. Cruveilhier, Dr Williams, Dr Stokes, and M. Despine, (and Dr Carswell had given the opinion of M. Despine previously.)

—Drs Hope, and Spittal say, that the sounds of the Heart are caused, by the collision of the particles of fluid, in the ventricles; Mr Carlile, it is the closing of the mitral and tricuspid valves; M. Rouanet and Mr Bryan, that it is the muscular contraction itself; M. Despine maintains, that the first sound, is the effect of the contraction of the ventricles, the second that of their di-

latation; M. Cruveilhier is led to infer, that both sounds are produced, by the sigmoid valves, the second, by their expansion, and the first, by the opposite movement from the centre, to the sides of the arteries; M. Bouillaud refers the second sound, to the reaction of the arterial columns, against the semilunar valves.

The facts which the Committee of the Medical Section, of the British Association, determine, with regard to the sounds of the Heart, are the following, and tend to confirm the opinions of Dr Williams, regarding the sounds of the Heart. That the first sound, is due to the contraction of the ventricles, and is a muscular sound; and the second, is produced by the reaction of the column of blood, in the aorta, and pulmonary artery, upon the semilunar valves spreading them out, or tightening them, at the ventricular diastole, Dr Williams in his work on the chest printed before the above experiments, says, the first sound is essentially produced, by the tightening of the muscular parietes of the ventricles.

Perhaps it may be considered foolish in us, after the decided, final, and satisfactory manner, in which Drs Corrigan, Stokes, Hope, and others, and more especially, the Heart Committee, have set at rest to the satisfaction of most, if not all, the causes of the sounds of the Heart, to attempt to suggest different causes for them.

We could not agree, or feel satisfied, with the

reasons given by Dr Hope, although they might be said to have been seen openly, and not deduced from unseen evidence.

We had at one time, some difficulty, in distinguishing the first sound, from the second sound, and thought the first, the second, and *vice versa*, it was this, that led us to inquire minutely, into the cause of the different sounds.

We at first thought, that the sounds were produced, by the first jet of blood, touching the opposite side of the cavity, and thus causing the sounds that we hear. We also believed, that one of the sounds was caused, by the auriculo-ventricular opening.

We again supposed, that the first sound arose, when any of the cavities were just emptied, and gave the crack of a whip, or a softer sound, according to the force exerted, we know that there is such a sound produced by such means, and it is more likely to happen where there is a vacuum before the outlet as there is in the Heart, and the second sound, we believed to be caused, by the closing of the valve after the first sound, as in the aorta or pulmonary artery.

We now hold, that it is the valves, that cause this sound, or sounds, and Monsieur Bouillaud has long ago given forth, that the sounds are valvular, and the Heart Committee it seems, have disproved this idea, and we do not know whether he is still of the same opinion or not, as the

Heart Committee believed they had refuted his ideas. We could not understand, why the first sound was that of the left side, and why the second was that of the right side, and why the first was not Synchronous with the second, and why the first was more sonorous than the second, and also more prolonged, and we set about trying, to find out these effects, and in this way came to our present opinions, with regard to the sounds of the Heart.

—The first sound we consider to be caused, by the closing of the valves of the aorta, closing with a tense-springiness, and elasticity, and at the same time sounding, and this sound is enlarged, by causing a vibratory, sonorous sound or reverberating in an empty cavity: if you take the heart of an ox, and with the tip, or point of your finger, draw the, or a semilunar valve to you, and suddenly let it go, it gives a very audible crack, but owing to its being during life, and the machinery being in full vigour, and elasticity, and in a close hollow cavity, the vibratory sound is great; if you give a very gentle pat, with the point of your finger, on the top of a very small ink-bottle, with a vial-sized opening, (take bottles of various degrees of thickness, and more or less fluid in them, and the opening larger or smaller) then you may judge, of the possibility of hearing the valvular sounds, and you can imagine the elastic, springy, distended, and tense valves (tympani-

tic) quickly closing the entrance of a closed hollow cavity, (suppose the vibrations of a drum, and you will have an idea of the sound, and cause.)

—The greater sonorosity of the first sound, is caused, by the thickness of the walls of the left cavity, or ventricle, and from the quantity of solid substance intervening, between the aortic valve, and the external part of the chest, and also to the length of the aorta, without any impediment, as we see in the pulmonary artery at its bifurcation; and also from the aorta being a great deal thicker than the pulmonary artery; and also from there being at the aorta at each wing, or semilunar valve, a cavity or hollow in the aorta which greatly causes the sound to be heard, and as it is large, or small it renders the sound more sonorous or not: and the cause of the length of the sound, to the action of the ventricle being slow, in comparison to the action of the ventricle, causing the second sound, and from the force of the left ventricle being stronger, slower, and more prolonged than that of the right ventricle, as the force required to carry the blood through the aorta, is greater, than that through the pulmonary artery, to the lungs; and for the same reason, the left ventricle, is thicker than the right.

—Why is the first sound the first sound?

Because the left ventricle is smaller, than the right ventricle, and from there being no impedi-

ment to the free flow of blood through the aorta, as in the pulmonary artery at its bifurcation, which delays the blood to a certain extent, and also from the blood being sent through the pulmonary artery to the lungs slower, and more gently, as they are delicate organs, and as the force required is not so great. There is little doubt that when the left ventricle is contracting, and the valves closing, that a portion of the aorta is open, that is empty, just above the closed valves and even further, and this emptiness, is requisite to cause the closing of the valves, to give a sound; when the orifice of the aorta is reduced to a crevice, of two or three lines in width, no sound whatever is produced, and this seems to show, that the aorta in a sound state, is requisite to produce the first sound, and that there must be a certain degree of emptiness, or hollowness, to produce it, and there is less sonorosity, and length in the sound, as the orifice is contracted or not.

—The second sound we consider to arise, by the closing of the valves of the pulmonary artery, and its being the second sound, is caused, by its taking a longer time, for the left ventricle to expel its contents, than the right, as it contains more blood. and to its bifurcation, which causes the blood, to be sent slower, than if the artery were continuous, and if there were no impediment, and from the thinness of its walls, and its action is also gentler as it is

to the lungs, and the walls being thin, the sound of the right ventricle, or second sound, is not so dull, sonorous, or lengthened, as the first sound, and it also arises from the shortness of the pulmonary artery before it bifurcates; also from the substance of the pulmonary artery being much thinner, than that of the aorta, which gives it a clearer sound, and from the cavities, or hollows at the wings, or at each, or between each semilunar valve at the pulmonary artery, not being so large, or hollow, as at the aorta, and this is owing to the thinness of the pulmonary artery; and also, to the pulmonary artery at these cavities being smaller, than the same part of the aorta; and also from the valves of the pulmonary artery being so near, the external surface of the chest, and thick, fleshy substance intervening between it, and the internal hollow of the chest, which causes a sonorous sound, and from the aortic valves sounding, or striking in this hollow, we have a more sonorous sound.

—Take the heart of an ox, and draw the strong, and powerful tendinous cords of the left ventricle, (in the right ventricle instead of these powerful cords, we have a slight tendinous substance like thread in comparison to strength,) towards the valve, or mouth of the pulmonary vein, and you draw up the apex of the Heart. The right auricle while contracting, has the effect of preventing the right side from being pushed to the right

side by the left side, and *vice versa* the left auricle prevents itself from being pushed to the left side by the right auricle; and the left ventricle while contracting, prevents the Heart from being pushed into the chest, by the contraction of the right ventricle; and the right ventricle while contracting, prevents the left ventricle from pushing the Heart against the ribs.

—The auricles while filling with blood, assist the contraction of the ventricles, by pressing on them as they are distending with blood, and while they are contracting. The auricles while filling, and distending with blood, press against the ventricles during their contraction, and assist them in contracting, and yet just as the ventricles are emptied, the action of the auricles caused by their going to contract, assists the dilatation of the ventricles.

—The impulse of the apex, we consider, to be caused by the systole of the left auricle, and partly by the last act of the diastole of the left ventricle, when the left auricle is fully distended, the force of the beginning, or first act of contraction, elongates the auricle, at the pulmonary vein, or at its upper part, and closes the pulmonary orifice, and the apex is drawn up and back, and touches the ribs.

The apex is also raised, by the expiring systole of the right ventricle, raising as it were the apex of the ventricle.

—The reason why we have so many different, and

plausible opinions, with regard to the sounds of the Heart, by men so eminent, and their not agreeing together, is, that it is quite possible, for such sounds, to occur, in a something, and almost similar situation or formation, out of the human body; but not when combined, by valves and various-shaped cavities, of different sizes, and thickness, and with fluid pouring into some, and out of others, nor have we the different, and various motor powers, and especially, that most delicate propeller, director, and mover of the actions of the human frame, and Heart, the nerves, and brain, to move out of the human body something similar pieces of machinery.

What we have laid down, and considered to be the sounds of the Heart, and the reasons, and causes of these, will greatly simplify the diagnosis of diseases of the Heart; we deduce disease in the different parts of the Heart, from its effect on the first, and second sounds, as we have explained them, but of course we must also be guided by the other signs, which are well known to all.

—It is said, that the Heart is excited to action by a stimulus as the blood; when this is diminished, its action is feeble. We would call the blood an assistant or mechanical stimulus, it is the nerves which are the great movers and vital stimulators of the Heart's action, and where the blood is in small quantity, that is to say, if this diminution has occurred gradually, either by gradual evacua-

tion, or from deficient nourishment, does the Heart's action diminish; from there being a small quantity of blood in the Heart, as the Heart having a small quantity of blood to impel through the system, uses only a force sufficient for this purpose; as the Heart is highly nervous, therefore where there is much blood in the Heart, it touches a larger surface, and presses on, and irritates, or stimulates more nerves, and causes a greater increase of nervous energy than where there is only a small quantity of blood, in which case it touches fewer nerves, and less nervous energy is called into force.

—Where there is a sudden diminution in the quantity of blood, from loss of blood, the Heart's action is not stopt, as it requires a little time for the system to accommodate itself to the new force required. It is curious, and we may say fearful, to see how swiftly the blood flies along, in the case of sudden loss of blood or reaction; its swiftness must be caused, not only from the Heart not accommodating itself to the diminution of blood and force required to propel it, but also by the blood not going carefully, and slowly, to nourish the different parts of the frame, and being in small quantity, and not having nourishment in it; the nerves which propel it, have no counteracting sympathy with it, from the different parts requiring nourishment out of it, (each kind of nourishment is magnetically attracted to a like, as bone to bone,

and muscle to muscle, and what is not required is purged off, or thrown off by perspiration, or evacuated by the bladder, or by the saliva, or the breath, (as we stated in a treatise on the advantages of Delivery in the horizontal position, and the evils of the lateral position) as the nourishing nerves, which stop, and delay the blood to a certain extent, till they separate, and carry off the nourishment to the parts to which they belong, throughout the whole body, do not do it; therefore the blood is driven along in uncontrolled impetuosity, by the nerves peculiar to the general circulation for this purpose.

—Müller says that it is very natural to conclude that the blood contained in the cavities of the Heart, supplies the stimulus during life, he says it is evident the nerves have a great share in the action of the Heart. Haller denied their influence, see experiments of Burdach, Humboldt, Pfaff, Fowler, and Wedemeyer, and also Legallois, Wilson Philip, Treviranus, Nasse, Clift, and Flourens.

Legallois brought forward new facts to prove that the cause of the Heart's action resides in the spinal cord alone. The committee appointed to examine Legallois' statements, believed that these experiments solved all the difficulties which had before existed respecting the motion of the Heart.

Wilson Philip is led to a conclusion the very opposite of that of Legallois from his experiments,

by the Heart contracting after the head is removed, and when the spinal marrow is destroyed, and also when the Heart is separated from the body, he says the Heart's action is especially independent of the brain and spinal marrow.

Dr Marshall Hall allows that the Heart's action is, in some measure, dependent on the nerves.

—We have seen the heart of a fish contract and dilate for fifteen minutes or more, when it was separated from the fish. We know that the whole substance of the heart is studded with nerves, and that the nervous matter contained in the nerves that belonged to, and that were in the substance of the Heart, is still retained in them, and preserves its vitality for a time when separated from the stream, and fountain, and originator, and reproducer of nervous matter, viz., the brain and spinal marrow, and continues to excite the Heart's action, even without the stimulus of the blood to excite and stimulate the nerves of the Heart to contraction, the fluid of the nerves of the Heart, or rather the relation of muscular substance with regard to the nerves of the Heart, must be such (or both) that when the Heart is once set agoing, the substance of the Heart presses on the nerves, and so long as the nervous vitality exists, the Heart is kept in motion. We therefore consider the action of the Heart, to depend on the brain and spinal marrow, and that the blood has no particular stimulating property, and that water

would have the same effect, and that the Heart's action is assisted by the blood, and by the mechanism of the Heart, by respiration, and in fact by the whole machinery of the body working in unison, and one part cannot stop, without stopping the whole, one movement drives on, and sets agoing, and keeps agoing another, and the machinery is first set agoing by the maternal nourishment or blood.

—The dilatation of the Heart was supposed to be a muscular movement by Bichat and some other French physiologists, we would say it was a muscular movement, and no doubt it is, it is in the nature of all muscles which contract, to retract to their former state; press on a muscle, and it is depressed, take off the pressure, and it retracts, or dilates; but muscularity has been confounded with activity, or passiveness of movement, we were ourselves in doubt as to what was meant, but when you say it is an active, or a passive movement, we can understand it, there can be little doubt it is a passive movement, as contraction is the real action of the Heart, and is necessarily an active movement, and dilatation is a passive movement, and is only a return of the organ to its natural state, and its shape, and conformation are such, that it cannot remain contracted; if we contract a caoutchouc bottle, or a willow basket, it returns of itself to its former shape; the dilatation of the ventricles is assisted by the action, or first effort

at contraction, as well as the distention with blood of the auricles (the auricles press on the contracted ventricles), as well as the natural tendency of the ventricles to dilate, and in the same way the auricles are pressed on by the ventricles, distended with blood.

Oesterreicher is generally believed to have disproved the supposition of Bichat, &c., that the dilatation of the Heart is a muscular, or active movement.

—Many physiologists believe, that the power of the Heart is not sufficient, to propel the blood through the capillary system; but it has been said, that it is irrefragably proved, that it is effected solely by the Heart, and it is also said, that the dependence of the circulation of the blood in the veins, on the action of the Heart, has also been proved by Magendie. Treviranus, Carus, Doellinger, and Oesterreicher, have adopted the opinion of Kielmeyer, that the blood is endued with a power of self-propulsion, (we doubt this much, but it is owing to the action of the Heart; and to friction; and also to heat attracting the blood to parts; and also to gases; or irritants having the effect of increasing the circulation; by stimulating the nerves of a part, which communicating with the brain, accelerates the nervous energy there, and thus the whole circulation; and it is also partly owing to the suction of the Heart, with regard to the veins;) which they suppose to be ex-

erted in the capillaries during life; independent of the Heart's action, and to continue after the action of the latter has ceased, (we suspect that this must occur in the same way as the Heart's action after it is removed from the body.) This opinion Wolf and Pander seem to confirm.

—Irritation of the nerves, or rather it is the peculiar function of certain nerves to stimulate, when touched, and being touched, causes them to contract and retract, and this causes a pumping, or sucking action, in a vessel either minute or large, and thus the various fluids are attracted to the different parts of the body, in increased quantity, but if this irritation is continued too long, or excessively, the supply of nervous matter is not kept up, as only a certain quantity in a healthy state is supplied to a part, unless, or until the part, the brain, or spinal marrow, is accustomed by degrees, or gradually, or for a length of time, to send a larger supply to it; the nerve may lose its power entirely, by over-irritation, from the nerve losing its power of conveying this fluid, or from being congested, and its structure destroyed. Müller says, that the dilatation of the Heart, independent of its dilatation by fluid, can be but slight, and therefore suction can have little effect, in the blood's movement, and in the Veins, (see Magendie, and Wedemeyer's experiments, Sir D. Barry's opinion, confirmed by the experiments of Poisseuille, Sir David says, that during inspiration, the venous

blood of the body is drawn into the venous trunks, in the thorax. The effect of expiration on the other hand, in repelling the blood, is prevented by the action of the valves, and by the pressure of the blood exerted, on the blood in the veins, by the muscles; Müller says, Sir D. has estimated too highly the influence of inspiration, on the motion of the blood, and says, that the same power, that moves the blood in the arteries, also effects its motion in the capillaries, and its return to the Heart, through the veins; and that by the effect of inspiration, on the great venous trunks, by the sucking action of the Heart; and by the action of the valves, a *part only* of the resistance which opposes the course of the venous blood is overcome.

—We will give, what we consider to be an explanation of the propelling, or motor power, of the arteries, and especially the veins. The Heart propels the blood, through the arteries, to the capillaries, or arterial terminations, and presses and forces it to the veins, and the suction of the veins, at the capillaries, and before, attract, and draw the blood to themselves, from the arteries, and through themselves.

—Or when fluid touches the extreme points of the venous capillary vessels, the delicate nerve for this function is irritated, and contracts, and retracts, and causes if we may so term it, the imperceptible mouth to contract, and then it retracts, and the fluid is thus drawn into it, by this sucking, or

pumping motion, that is by suction, and it goes on for ever in this way, (and the heart propels through the arteries, the blood to the capillaries, and the blood always pressing behind, forces it on, and the suction of the venous system, also assists in attracting and drawing the blood through the arteries, and capillaries), and up the whole of the vein in the same way; the venous valves may be said to be suction mouths (as well as to prevent, the flowing back of the blood), and to support the column of fluid; and as we go on, the auricle of the heart, is the great suction mouth, which attracts, and draws up, the venous blood, (heat has also a great influence, in propelling the blood, and raising it in the veins, the arteries which are alongside of the large veins, press against, and, as it were, assist in propelling the venous blood at every pulsation, and prevent it falling back). The maternal blood, first stimulates, and sets the suction mouth, the left auricle, in motion; in the fœtus, fresh air has no connection with it; respiration is only one of the assistant mechanical means, which assists the suction mouth; the auricle, in attracting and drawing to the heart the venous blood; the respiratory organs, the lungs, only receive the blood of the veins; the left auricle also assists; so does the right ventricle, as much, and in the same way, as the lungs, and also the left ventricle; the grand vital, and primary movers of the circulation are the brain, and spinal

marrow, and dependent on these, are the nerves of the heart, and the different nerves connected with the lungs, and the external respiratory, apparatus of the chest. We have in certain cases respiration suspended, so far as it depends on the motor nerves, and also for a time, the action of respiration may be stopt, when sensation is lost, and yet the heart's action continues, (this shows the heart, and the auricle of the left side, to be the primary motor, or active propellers, and attracters of the blood, and that the vital power resides in the nerves, that though the heart is separated from the body, yet from its still containing nervous substance, and fluid not exhausted, its action remains, until the nervous matter is wasted, or used, and it stops when this has been used, as it is not replenished from the brain.)

—Pulse is the distention of the arteries with blood, at the close of the contraction of the left ventricle, which is a cause of it, and this is felt; and made more perceptible, by, we say, the brittle nature of the middle coat of the artery, such we consider to be the cause of the pulse. (See opinions of Rudolphi, Laennec, Arthaud, Parry, Doellinger, Bichat, Von Walther, Tiedemann, Meckel, Hastings, Magendie, Wedemeyer, and also Poisseuille).

—Pulsis Cordis or Impulse of Heart.—Müller says, it is not at present known whether it is during its contraction, or during its dilatation,

by the blood entering from the veins, and auricles, that the heart strikes against the ribs, Müller says till latterly, the impulse had been attributed to the contraction of the ventricles, some imagined that the ventricles during the systole become lengthened, and from that cause strike the ribs.

We consider, that just as the valve of the left ventricle is closing, there is a kind of sudden jerk, and it is this that is the cause of the impulse, and the left auricle simultaneously contracting assists this jerk and impulse against the ribs.

Müller says, Dr Corrigan, Stokes, and Burdach, have very recently advanced the doctrine, that the impulse of the heart, against the thoracic parietes, is caused, by the *distention* of the ventricles, the experiments of Professor Albers and Müller did not agree with this opinion, Müller says, the heart lies close to the parietes during life. We therefore consider it must be removed from the chest during contraction, and strike against it during dilatation, at the time we stated above.

—Utero-placental soufflet which was first noticed by M. Kergaradec. It is isochronous, or synchronous with the pulse of the mother. It has been generally believed, that it has its seat in the enlarged vessels of the uterus, and that there seems little ground for believing with Dr Kennedy, that the placental arteries themselves, have a share in the production of the sound.

We consider the sound to be attributable, and

to have its seat in the umbilical cord, and in that part of it named the umbilical vein, which is styled a vein, although it carries blood from the maternal heart. A soufflet we know is caused, in the aortic valves, and in the aorta, when the opening is contracted, or narrowed by disease, or inflammation, or even by nervousness; now the placental arteries resemble we will say the valves, or a narrowing of the opening, and the umbilical cord or vein, the aorta, the bruit in question is caused, by a fluid rushing smoothly along, a smooth surface, or tubes, into a small tube, of dimensions larger than the first, and we thus consider, it is the small placental arteries, going into the larger umbilical cord, or vein, that is the cause of the placental sound, as it is termed. The umbilical artery twisted round the vein, has also the effect of causing the sound, as where blood, or fluid is impelled, from a larger, through a narrower, into a larger space, we have a soufflet.

The character of the sound is *changed*, by the cessation of the fœtal circulation, as by the removal of the placenta, the death of the fœtus, or tying of the cord, so it is said—(Dr Kennedy denies M. Ollivry's statement, that it is immediately extinguished.) The real sound, we consider to be caused by the umbilical cord; the sound after removal of the placenta, we consider to be possible to be heard; as the nerves, or as it is termed, nature contracts the arteries, before they

come to, and at the uterus, and this takes place before, and after the placenta is removed, (as there is no use for such a large supply of blood after the fœtus is removed,) and the arteries of the uterus are larger, and more loose and flaccid than these, and this causes a bellows sound, of a short kind, for a short time, until the uterine arteries contract, and until the next pregnancy, (it is something like bronchial respiration, in bronchitis, of a severe kind.) We hear when the lungs are condensed, a sound is produced, and heard in the bronchial tubes, when a bronchial tube is stopped, pressed on, or slightly choked up or impeded, it gives rise to a sound; in the first case, or in condensation, the air being suddenly stopped, and also the free flow, rushes back as it were, or to the sides, or in another direction, and this causes the sound; in the second case, to its rushing impetuously from a wide tube through a narrow space into a wider space or tube. In a dilated bronchus, or cavern, the air during inspiration rushes quickly through the hollow, without resistance, and the air seems drawn from the ear when the stethescope is applied; while in expiration, it is blown into the ear, as expiration is feeble in comparison to inspiration, and the air is not driven through, and out of the cavity, as there is not a sufficient force, but is blown up into the ear, the exit of the cavity is narrow, and the force driving the air is weak, and a cavernous ronchus is the consequence, in inspi-

ration the cavernous ronchus is not heard, first, by the force by which the air is impelled through it, and second, by there being no communicating medium to convey the sound to the ear, (it seems drawn from the ear), such is our opinion, and such we consider to be an explanation of this, and the respiratory sounds so far as we can give.

—The decidua, has been considered to be a new structure, Dr Sharpey says, it is no new structure, it is merely a portion of the mucous membrane become more thick, and vascular, than the rest. A matter is secreted, by the enlarged glands of the uterus, which is brought in proximity with the vessels of the fœtus, and that it is for the nourishment of the fœtus, Dr Sharpey also says, that the mucous membrane is converted into the decidua, and discharged from the uterus during parturition, this opinion is adopted by various continental physiologists.

It is our opinion, that the decidua is a new formation, and is formed by a secretion from the glands of the uterus, after conception, and it is at first of a soft nature, and is a medium, by which the vessels of the fœtus, and mother communicate with one another, and it is a glue, cement, or dough, if we may so term it, by which the placenta is glued, or fixed to the uterus, and over the uterine vessels.

Some have said, that the vessels of the uterus, grow into the placenta, this must have arisen from

numerous shrivelled vessels being seen, after the placenta has come away, but these vessels have only been drawn out, and stretched, and elongated, by the action which propels the blood to the fœtus, and after delivery, are drawn into the uterus, and gradually regain their elasticity.

—Dr Douglas, of Dublin, in 1811, is believed to have given a true history of the process called spontaneous evolution of the fœtus, in opposition to the opinion of Dr Denman, which was at one time considered the true opinion. Dr Douglas is said to have proved, that the foetus does actually pass the pelvis in a doubled state, there can be little doubt, that it is quite possible, in certain cases, for it to do so, as where the pelvis is large, or where the fœtus is small, it is also quite possible, to take place in the way which Dr Denman has mentioned. We consider spontaneous evolution to be, the revolving, or turning of the child by nature, in the liquor amnii, while in the uterus, this is something curious, and yet nothing new, but the others are not, and there is no particular evolution about them, and we suspect that most consider evolution to be what we term it.

— Animal Heat, has been said to be formed in the Capillaries, &c. We consider whatever causes an increased action, or excitement of the nervous system, causes heat, and an increased action of the circulatory system is caused, by an increased action of the nervous system, and an in-

creased action of the circulation, causes heat. Animal heat is diminished in a limb when the nerves are cut, or divided, as it is the nerves which carry on, and stimulate the functions of a limb, the functions are stopt, by a division of the nerve and the part is the same, as if dead, (see Brodie's experiments, Chaussat's, Dr Marshall Hall's, and Legallois'.) We see heat increased, in an impure atmosphere, as well as in a pure atmosphere we, see it increased by exercise, and we see it increased, and the flow of blood increased, by the application of warmth; whatever excites the circulating system, as fever, digestion, stimulants, &c., cause it; digestion increases the activity of the different functions, and this causes heat. Pure air is a stimulant, and causes it, whatever excites the nervous system, whether it is a healthy or diseased excitement, stimulates, and excites the circulation, and causes increased heat, whether it is at the most distant parts, or near the Heart. The disengagement of gases, and the formation of some new bodies, excite, and stimulate, and are a cause of acceleration of the circulation, or even irritants, and in escaping (and to escape out of the system as it were) and being driven out of and through the body, the circulation is increased. Heat and light are evolved, when two different gases meet, and during the formation and disengagement of gases, the more rapidly and oftener this takes place, the more heat have we. (See Dr

Davy, as to the connection of animal heat, with the formation of carbonic acid. It is generally believed, that the union of carbon and oxygen, to form the carbonic acid of the expired air, is a great source of the heat of animals, but this is supposed again, to be only one of the causes of it. See Brodie's experiments, the nervous influence has been said not to be proved by these experiments.

—Dr Cullen and other physiologists say, there is excitement of circulation in the evening and morning, Dr Knox says, that in the healthy circulation there is only one diurnal revolution, that the pulse is more frequent, and excitable in the morning. We consider that there is nothing peculiar, in either of the opinions, and that both are right, in the morning, after the long evening's rest it gets, and from the pulse getting slow during sleep, it therefore after waking rises, and the circulation is increased in vigour, and speed, as waking requires an increase in the circulation, it rises; we see an increase in the circulation by exercise, and the waking state is exercise, and the sleeping state is rest; towards evening it gets weak, but this is different from sleep, it is from exhaustion, and the nervous system cannot stimulate, as it is exhausted; sleep is a renewal, recruiting, or the formation of the nervous, or vital stimulus, and at the same time, that it is generating, the different organs, and actions, and the whole of the body is at rest, to a certain extent. Therefore it is only to be expected,

that the pulse is increased in strength, in the morning, from being rested, and slow in the evening from being fatigued, and over-exerted during the day.

In some cases, we may have the pulse excited in the evening, this may be from a late dinner, and digestion thus going on, or it may be from want of sleep, and the nervous system, makes a strong effort to keep the circulation going, and we have excitement.

—*Angina Pectoris.*—There have been, a great many opinions, as to the cause of this disease, and they have each, in their turns, been considered, to be wrong, but on closely examining them, we find, that there is some truth, in the whole of the reasons given, and although each opinion does not account, for all the causes of the disease, yet it is a cause of the disease.

Parry refers it, to ossification of the coronary arteries; Fothergil, to deposition of fat on the heart; Latham, Brera, and Zechinelli, to enlarged liver; and consequent pressure on the heart; or sympathetic derangement of its functions; more enlarged observation it is said, has however shown, that none of these appearances, are essential, to its production, or that it may exist without any of these; Laennec says, although it may arise from diseased heart, yet it is essentially a nervous disorder, affecting the cardiac, or pneumo-gastric nerves; or both, according as the heart, lungs, or stomach are affected; M. Desportes had pre-

viously held the same opinion; but he limited it to the pneumogastric; M. Andral conceived it to be, a mere modification of the innervation; Dr Butter with Darwin said it arose, from a gouty source, Dr Hossack considers it to consist, in a plethoric condition; and similar views are advanced, by Dr Forbes, Dr Hope, thinks, that any thing irritating the heart, may cause it; Dr Corrigan says it may originate in Aortitis, M. Sormani, that it is occasionally of an inflammatory nature.

When arteries are ossified, the blood does not pass freely through them, and they press on the nerves; and cause pain; when arteries are engorged, pain is caused, by their pressing on the nerves, wherever there is inflammation, and an increased flow of blood to a part, there is pain, from increased pressure on nerves; wherever muscular substance is swelled, and inflamed, there is pain, from pressure of the nerves; wherever we have pain, we have an attempt of nature to stop the flow of blood to the part, and the heart's action; and it is the attempt of the nerves of the heart, to stop its action, without being able to do it, that causes pain; if we assist nature to do this suddenly, we have death, from the heart's action being stopped, or if we depress the heart even slowly. Flatulence and indigestion cause it, from cardiac branches of the pneumogastric affecting it, and as it were trying to stop, the circulation and

impede the flow of blood, but the blood not being checked, but pressing on the nerves, and the vessels being pressed on, by the wind; and being distended, by the flow of blood to the stomach, and through the stomach, being impeded, the nerves are pressed on, and great pain is caused, and the nerves trying to be relieved of the pain, try to stop the circulation, (it is by generally causing pain, or irritation, that the nerves sympathise with, and get assistance of other nerves, or stop the action of the part causing pain;) and this causes pain, and the action of certain nerves being checked, causes pain, as they try to act, but cannot, and the pain is felt in, a part distant from the disease; and a little way back, from the part diseased, we have pain, as the nerves try to stop by a strong effort the action of the blood-vessels, before they reach the diseased part, and from this effort, the nerves are pained, or the nerves may be pained, at a distance from the disease, from the nerve making the effort, at that part, to check the action of the nerves at the diseased part.

And sometimes the system causes the wrong nerve to sympathise, and this unnatural action, causes pain; at other times, a nerve connected with the part, as with the heart, say it is the nerves going to the arm, or shoulder; in this case, the shoulder, and arm may be pained, from the nervous fluid, or energy, being too strong, and

causing pain, or from the effort of nature, to stop the action of the heart, and instead of being confined to the nerve going to the heart, it also goes down the shoulder and arm, as the nerve going there, has a connection with the nerve going to the heart; in angina, the pain runs up and back to the shoulder, and down the arm, from the nerve at the heart, having a connection with the nerve at the arm, it is almost impossible to explain the action, and sympathy of the nerves, when the heart is affected, there are so many parts of the frame, and the action of so many nerves to be altered, to check, the circulating, nervous, and muscular system of the whole frame; in the chest we have all the different nerves connected with respiration, sympathising with and assisting the heart's action, be it an increase or diminution, we see the immense net-work of nerves clustering round the heart, each for a different purpose, and connected with the nerves going to the brain, lungs, stomach, and intestines, and even to the feet, all ready to hasten or diminish the action of these different parts, or if these parts, or any part is diseased, they communicate with the heart, and then the heart communicates with the brain, principally, but also with every other part of the body, to sympathise with, and assist the part that may be diseased, as it may require stimulus, or nourishment, depression, or absorption, often the system loses all

control over its actions, and over the nerves, and we have irregular action.

In gout, the vessels are, as it were, hardened, and are not under the power of the nervous system, as in health, and the blood forcing itself, into the vessels, press against, the nerves, and cause pain, and if we use any strong, or powerful sedative, to keep away the blood, from the feet, in gout, as cold, the action of the nerves, of the feet, are stopped, and this acts back, on the nerves of the heart, whose action is also stopped, and we have death, by gout flying to the heart. Therefore in gout, we have angina, as the nerves of the heart, strive, to diminish the flow of blood to the feet, and cannot do it, and are thus pained, therefore we should give low diet, in gout to prevent plethora and stimulation. We have angina, or pain, in hypertrophy, of the heart, from the muscular substance pressing on the nerves, and the attempt of the nerves, to depress, the circulation. In rheumatism, we have severe pain, from the vessels being impeded, and swelling, and causing pain, and the heart is affected.

—Quick pulse in endocarditis. Large jets of blood cause pain, by requiring the heart to be distended, less pain is felt, by small jets, and less force, and exertion are required by two small jets, than by one large jet, and this causes an inerease of the pulse, and also the pressure of the blood, when the heart is too full, causes pain.

—Pulsation of jugular vein is caused, by the suction of the right auricle, being carried on irregularly, and imperfectly, and by jerks, or by a double sucking action, and not smoothly, as usual, or it may be by a prolonged suck, into the auricle when the Ventro-auricular valve is impeded, and then there is a sudden dilatation or jerk, which causes the pulsation.

—Purring tremor is caused, by the stopping for an almost imperceptible space of time, the contraction of the ventricle, while it is contracting, or it contracts with a shaking motion, or tremulously, and it does this in nervousness, and when the valvular orifice is contracted; in this last case, it cannot force the contents out freely, and smoothly, as the quantity of blood is not diminished, for the small aperture, nor the force of propulsion, and the action of the heart checked, and stopped constantly, and quickly, during the whole contraction of the ventricles, causes it.

—The friction sound in pericarditis, we consider to be caused by the dryness of the membrane; when inflammation comes on, it is generally noticed, in the first two or three days before lymph can be said to be thrown out, when inflammation is ceasing, the secretions also get dried up for a time, as nature continues to dry up any morbid secretion for a little time longer, than is just requisite, (as she cannot stop any of her processes or functions, healthy or unhealthy at once,) and

then, the healthy secretion natural to the part bursts out.

The friction sound is generally attributed to lymph. (It is said, that the experiments of Drs Williams, Clendinning, and Todd, have rendered it improbable, that it is ever heard from dryness, and that it is from effused lymph.)

We sometimes hear a sound, which is considered friction, but it is the effect of the stethescope pressing hard against the ear, and this deceives many, as it is heard with the movement of the heart, when the friction sound is heard.

—Are the liver, and spleen receptacles for blood, to prevent regurgitation or congestion, or places for blood when organs are congested; or fountains to supply the organs, and intestines in their neighbourhood with blood; when any of the organs in the neighbourhood of the liver are congested, does not the blood rush to the liver, or is it not retained in the liver, and prevented from going to the organs diseased, and is the liver not also a receptacle to prevent the blood rushing downwards, in too great quantities, and when the blood is going to the heart, does it not assist and prevent it from receding, is the liver not for all these purposes? Is it not also for the manufacture of bile, when it may be said to be doing nothing, and is idle, and is not the bile a useful and powerful bitter, tonic, and antiseptic to preserve the contents of the stomach, &c.?

ORIGINAL OPINIONS

ON

ABSCESSES,

THEIR PHYSIOLOGY AND TREATMENT, &c.

AND

OPERATIONS OF NATURE.

We need scarcely remark, as to the very great importance, and the very great evils, that arise from Chronic Abscesses and Pus, and also the great injury arising from their mistreatment, and it is also well known to all, that it has been impossible to treat them successfully, and no treatment has yet been laid down by medical writers abroad, or here, to prevent their evils, it is a disease, which is of hourly occurrence, and happens in every rank of life, and occurs as a disease of itself, and is a most frequent effect of almost every other disease. It is also a frequent cause of death and the loss and destruction of the parts where it may be situated.

An Abscess is formed by strains, causing rupture, and effusion from vessels, or it may be caused by inflammation alone, and consequent effusion. An Abscess may be said to be formed, by an increased action of vessels at a part, and the flow past this part being impeded, or from congestion of the vessels, rupture of the vessels takes place, and there is effusion, and pus is poured out, or it may take place from the wasting of vessels, it may happen from strains causing rupture, and effusion from the vessels (there may also be effusion from inflammation, or congestion, or from checked perspiration, or from the vessels of the skin, as in Scarlatina, being stopped or destroyed, or from the urine not passing freely by the kidneys, or from increase of action in a part), the solid parts of the blood being kept back from the vessels, and the albuminous and thin compressible part, being poured out, in such a case the fibrin of the blood is in larger quantity, as it is not used when formed, and continues to be formed as in nutrition, in reaction the usual nutritive functions are not performed, or are partly stopt, and the albumen is the fibrin in an early state of preparation, it is fibrin not formed, or ripened, if we may so term it, and when it is carried to a part, it does not irritate it, and is not so solid as fibrin, and is smaller and finer, and more fluid, and passes more easily through the minuter vessels, or it may be termed a delicate nutriment of the blood, only

used for delicate nutrition, and thus for parts in a diseased or disorganized state.

We consider Pus to be albumen unoxygenated, or unarterialised, (or a mixture of the different parts of the blood, intended for the different, and many various structures of the body, in an unprepared state), and there may be mixed with it fibrin, but fibrin is albumen oxygenated, when there is inflammation, and great reaction, the fluid of the blood, or venous portion of it, passes so rapidly through the lungs, that it cannot be oxygenated, and we consider fibrin, to be the albumen in a more refined state, and we have, in such a case, (that is in the case of inflammation), the buffy coat.

—The buffy coat is caused, by the circulation being greatly increased, or accelerated, and from there being a fulness, or plethoric state of the system, and where the system is injured, or diseased, and where the acceleration is the effect of this injury, or diseased state, as in inflammation from a wound, or in typhus of an acute or inflammatory type, which takes place in a person robust, the blood is not arterialized, from passing quickly, and in too large quantities through the lungs, and from the different parts of the body, not taking up nourishment, and giving off excrement as usual, and from the blood being in an unprepared or unmanufactured state, fit for the different tissues of the body, and the colouring part is not taken on, and it is not so adherent, and

there is less red matter than usual.—*See Dr Elliotson's Lectures, Med. Gaz.* 1831.

Hewson and other writers say, that inflamed blood coagulates more slowly than healthy blood, and that this is the cause of the buffy coat; this opinion is however controverted by Dr Davy, and Gendrin, they say, that the coagulation of inflamed blood, commences sooner, and is completed more quickly, than that of healthy blood. The slow coagulation of the blood, is not sufficient to account for the formation of the buffy coat, has been said to be clearly proved, by some experiments by Dr Stokes.—(See his *Pathological Observations.*) Some have advanced, that the mere acceleration of the circulation, was sufficient to impart to the blood its inflammatory character, but Sir Charles Scudamore says, that he has never observed any buff, in cases of simple fever, or after violent exercise. The reason why it is not seen after exercise, is, that the body is in health, and that exercise during health, is a healthy action, and nutrition, and excretion go on as usual, and therefore the blood is also properly arterialized, if the exercise were continued so long, as to cause depression, and weakness of the circulation, and exhaustion, and if we afterwards had nature striving to overcome this depression from exhaustion, by stimulating the nervous system, and thus increasing, and accelerating the circulation, we might then have the buffy coat; it is an increase of the

circulation, and where the system is full, and plethoric, and in a diseased state, that the buffy coat is seen, and not in a healthy acceleration, or in that acceleration, where the system is feeble and weak, it is seen during pregnancy, as the circulation is more active, and more rapid, and is increased in quantity, to nourish the mother, and child, and the nutritive portion of the blood is more delicate. It is not seen in fever, where there is weakness of the system, although the pulse is increased in rapidity, as it requires the blood to pass through the lungs, in over abundant quantities, as well as with rapidity. In weak or phlegmatic subjects also, whose blood is impoverished, the buffy coat is not seen, and also in typhoid fever.

There are however various circumstances which assist the formation of the buffy coat, and also prevent it.

The slow coagulation assists it, or by the blood flowing in a full stream, or its being put into a narrow vessel, cold prevents its formation, also pouring it into a broad vessel, or pouring it from a height, or by agitating the blood.

The taking away of blood from the system, prevents its formation, as it prevents plethora, and overabundance, and allows of the better arterialization of the blood. The first cup is buffy, the second is much less so, and the last not at all, showing, that a plethoric, or congested state, is

favourable to the formation of the buffy coat. A weak state of the lungs assists its formation, from preventing its arterialization.

Dr Alison considers the separation of the fibrin in inflammation, to be due to a vital repulsion, between the fibrin and the colouring matter.

Albumen is kept in the fine state that it is, in order to be used for delicate organs, and for delicate purposes, it is thrown out to repair parts torn, or cut, and passes more easily through the minuter vessels, than fibrin, which is in a firmer state, and less fluid, and it also coagulates, and adheres closer than fibrin.

—Abscesses may be formed from there being an increase of the absorbent action, causing a consequent overbalancing increase in the nutrient vessels, and the flow of Pus to the part, or it may arise from irritation of the part, causing an increased action to the part, or it may arise from an increase in the whole general circulation, and there being also general weakness, there is rupture of the minuter vessels at various parts, and Abscesses are formed, either large, or small, from a pimple, to the size of an orange, or larger.

Or there may be no general excitement, but there may be weakness of the system, without a diminution of the blood of the circulating system, and the nervous system is weak, or it may be strong, and this causes congestion, and rupture, and the formation of pus.

—Where a piece of wood, or a ball is in the flesh, it opposes the vessels going past it, the action of these is at first increased. As opposition to the flow of blood causes the system to increase its force or action, and at length is diminished from exhaustion, and from the current being opposed, the fluid takes another direction, (in many cases serum is poured out round the ball, and a cyst is formed, and the mouths of the vessels are closed,) and at the same time, where the vessels going to the ball are increased in action, the vessels going from it, are also increased in action, as an increase to a part generally causes an increased action from it, but the action of the absorbents, is not diminished in every case. As where we have substance, we have absorption, although there may be no nutrition, as the substance without full nutrition acts as an irritant, and where we have an irritant, we have absorption, we may have increased nutrition, or congestion, and we may have ulceration or increased absorption,) while the action of the nutrient vessels is diminished, and this causes absorption of the surrounding parts, and disorganization, and non-communication of the nutrient with the absorbent vessels, and we have a cavity thus gradually formed, by absorption going on, and nutrition gradually receding from the cavity, and we have pus, and blood, and serum poured into the cavity, all around it, and this cavity may remain for seven or eight years, as we

the other day saw such a case, or longer, not unnoticed, nor without pain, the person may work with it all this time, although situated on, or in a limb, or part in constant use, and when opened, it may cause death, or at least the loss of the limb where it is situated. Where the abscess is not formed into an impenetrable cavity, and where there is a thin side of the cavity, or a looseness, it finds its way to the surface, or to a part communicating with the surface, it is generally in the nature of the vessels of the body, excepting the large and central vessels, or the main trunks, to propel to the surface, and where an abscess is formed, it is pressed on to the surface, (or if there is much resistance there, it is pressed to the weakest side,) and pressing on the soft parts, and being forced in that direction, either by the tendency of vessels, to flow to the surface, or it may be by the action of strong muscles excited to contract, (and thus thickened, filling up the cavity,) by the irritation of the fluid of the abscess, or its pressure on it, the nutrient vessels of the part where the abscess presses against, are stopt, and the absorbing vessels still act, and the opposing parts are gradually destroyed, and the fluid, or enlarged, and enlarging cavity finds its way to the surface, or the fluid may find its way to a surface, with less destruction of parts, by insinuating itself between the different muscles, or if there is much opposition to an abscess, it forms a kind of loose

sac, or cavity, and there is a diminished action all around, the fluid pressing on the sides, and on the mouths of the vessels going into it, and this is the first of a chronic abscess.

—One of the evils of opening chronic Abscesses of long standing, is the necessity of amputating the limb, (if it is in a limb, and we will suppose it is in a limb, and the remarks to this will also apply to abscesses elsewhere,) in which the abscess may be.

It has generally been said, by almost every writer, that the danger arising, from opening abscesses, arises in a great degree, from air getting into the emptied abscess, but we do not attribute much injury from this cause, (it is injurious to a certain extent.)

—When a chronic abscess is opened, and part of the contents discharged, there is an increased action to the part, in a short time, and soon this is excessive, this is owing first to the resistance of fluid in the cavity, being removed from the open vessels of the limb, or the part opening into it, and also from the circulation being increased, and the excessive increase arises, from the fluids of the body, being attracted from other parts, and which were intended for more distant parts, to this part; where there is little, or the least resistance to the fluids, they will flow in that direction, (in the case of chronic abscess, the vessels are relaxed, and have less tonicity, and less power of resisting un-

usual quantities of fluid,) and they are also propelled to the abscess, because nature has set up an increased action to the part, in order to repair the loss of substance, where the abscess is situated. There thus being no resistance to the open mouths of the vessels entering the cavity of the abscess, and as their tonicity, and the action of the nerves supplying and contracting them, have been destroyed, in the destruction of the parts, from which the cavity has been formed, the vessels continue pouring into the cavity, a mixture, of all the various fluids, going to supply the soft parts, and also those which are injurious to them, and also pus, which is increased in quantity, (as we stated before, that where a part is destroyed, the other parts of the body are not nourished, and their functions carried on as usual, but nature uses her whole strength to heal, and cure the part destroyed, and sometimes this is excessive, and beyond her control to stop, that is the increased action to the part which she has set up she cannot stop,) as the soft textures are destroying.

The parts in the neighbourhood of the abscess, are softened, from the want of nourishment, and are thus the more easily absorbed, and the cavity of the abscess is enlarged, as the vessels opening into it, carry the nourishment of the neighbourhood, into the cavity, and the absorbents, at the same time acting, on the unnourished soft parts, there is nothing, but wide-spreading destruction

of all the soft parts, and their functions are entirely destroyed, and in the case of a limb, the distant parts are cut off from nourishment.

To prevent such evils, and the necessity for amputating, (or even amputating a second limb, or excising the same limb by the joint, as in the thigh,) and the loss perhaps of life, in those delaying to amputate, from not knowing the evils, arising from the opening of chronic abscesses, or not treating them properly; we will endeavour to explain some simple means, to prevent such evils.

Professor Syme recommends great caution, in the opening of chronic abscesses of long standing, and even recommends, as a matter of safety, that we should not open them, at all; this shows that there must be great danger, in opening such abscesses, and we are aware of this danger, but there are many, who are not aware of it, because they have opened such abscesses, and no danger has arisen, and in the same way, other diseases are considered not dangerous.

We have seen Professor Syme refuse to open an abscess near the hip-joint, as it would cause destruction of the joint, and death, we are acquainted with a medical man, who afterwards refused to open this same abscess, and we know a druggist who plunged a lancet into it, and opened it, and not the least danger, or inconvenience took place, and the patient, a stout large female, got quite well; a reason for no injury occurring in this case

might be from the patient's being a strong robust and healthy well-fed female, better fed than usual, as she was a miner and in her district they are clean, and have plenty of animal food, and her flesh or muscles were firm, and elastic, and this resisted the force of pus to the part, in large and destructive quantities, and it also closed the mouths of the vessels opening into the abscess, as well as compressing the vessels farther back and generally throughout the system. People in the country are easier cured, than those in town, and those who are best fed, the rich pampered patient, worse than the rich unpampered; the well-fed poor in the town, is easier cured, than the ill-fed; and the easy-wrought, is easier cured, than the ill-fed, and hard-wrought; and those in an ill-ventilated part, are worse to cure, than those in an airy situation; and the drunkard is worse to cure, than the temperate; and those who are much confined to the house, bear confinement better, than those who are not; and patients in an airy, and well-ventilated hospital, are easier cured, than those in one in a bad situation, and ill-ventilated; and those who have been long in ill health, are worse to cure, than those who are not. In treating patients, all those circumstances should be attended to, sometimes we hear one medical man say, a certain disease was mild, while another says, it was not; one says a disease is easily cured, another says it is not; one says certain medicines have a good effect,

another says they are useless; and even hurtful; now such differences of effect, will depend on the above circumstances. The English are better fed, than the Scotch, the benefit of medicines given in England, will be favourable, in comparison to those in Scotland, amongst the poor.

Animal Magnetism is a powerful agent in destroying or curing and soothing disease, and assists the curative powers of medicines, and nature more powerfully, than they can; therefore when we attempt to cure without it, we are grievously disappointed, to find medicines which were highly successful in the treatment of a disease, almost inert when used without animal magnetism; and in the same way operations are more successful, when properly treated by magnetism; we should therefore not expect to treat a disease so well, or at all, without it as with it, or expect a certain medicine to cure so well, or at all, when used alone, as when it had the aid of magnetism. Magnetism is apt to fail at times from certain counteracting influences, and is liable to cause great danger, and even death, therefore we should always depend on books, our own practical experience, the experience of others, to medicines, and what the different branches of medical science, teaches is best in the treatment of disease. There are those evil disposed who counteract your magnetiser and his treatment by another magnetism. There can be no doubt as to the truth of magnetism, we hear voices as if in the

air, and not near us, and at a distance, not possible to be heard, in the usual way, and we hear what they say and are doing, and we think it is the person in the next room who is speaking, when it is not, and we think people are speaking about us beside us, and in the street, when they are not, the magnetiser follows you as it were, and sees all you are doing, and he can imitate, or speak in the, or with the same voice, as any individual, dog or cat, you are passing, or are beside, without their speaking to you, and you think it is them, but it is not. You might thus abuse a person for saying things about you when it was only a blackguard magnetiser, we should therefore never believe any thing important or unimportant that such voices say or wish you to believe.

Age and climate, and the differences of sex, modify disease, and the action of medicines; and we are therefore not to trust implicitly, or distrust the accounts we hear, with regard to disease, and medicine, unless we know, the various modifying circumstances, under which they occurred.

—We see something similar to the opening of abscesses, in delivery, and after the birth of the child, and the treatment, in such a case; but after delivery, generally speaking, there is no reaction to the uterus, or cavity, and if there is, it is in the nature of the parts to close, and contract, and the blood to be attracted to other parts, as to the breast, but artificial means are used, in a civilised

state, to prevent the risk, of the mouths of the vessels, pouring their blood into the cavity of the uterus, which from long dilatation, does not contract at once firmly, in the case of the uterus, it is in its nature to contract, and no cavity is left, but in the abscess, we have no natural contraction of the cavity, the substance of it has been destroyed, and the vessels opening into its cavity, have been partly destroyed, and have been long inactive; in the case of the uterus, the vessels which were covered by the placenta, and inserted into cavities, or mouths of vessels, (by the placenta growing over them,) have been in a state of vigour, and action, and no doubt, their tonicity may be a little destroyed, by their being stretched, and drawn out of the uterus, after being inserted into the placenta, (this stretching out, is caused, by their action, pushing, and elongating them, while pouring blood, into the placenta, but after delivery they retract, and are drawn into the substance of the uterus;) but their elasticity, is not destroyed, like the mouths, of the vessels of the abscess, and if they are a little non-elastic, it is only for a short time.

But after delivery, to assist nature, and to keep the uterus in a contracted state, and to cause the obtruded vessels, to contract, a towel folded, or other stuffing, is put over the uterus, (which is fully contracted,) in order, to keep it contracted, and to allow the pressure, of a bandage to be ap-

plied, to the contracted uterus, and prevent blood, flowing into it, in excess. In tapping for ascites, pressure is used, it has been said, as it prevents sickness, which takes place, after tapping, as pressure suddenly taken off a part, long pressed on, not used to it, causes irregular, nervous action, and excitement, (from pressing on the vessels a towel also prevents exhalation.) As the nerves act irregularly, (and lose their power for a time in this case, but altogether in the case of the brain, when pressure is taken off, as in the brain a certain pressure on the nerves stimulates and regulates the nerves, and prevents too great excitability or irregular action, the brain is the fountain and origin of all nervous energy; when there is a deficiency of pressure or blood, the nerves lose the stimulus of pressure, and the heart not having the equable stimulus, or from the deficiency of stimulus, as a certain pressure acts as a stimulus, as where there is a slight opposition it causes an increased force, or action to overcome it, and where the brain has been accustomed to this pressure or stimulus, if it is taken off, there is irregular action or a temporary stoppage of the action of the brain, and from want of nervous stimulus there is also stoppage of the heart's action,) after being long pressed on and cause sickness and pain an increased flow of blood to the part (from the pressure being taken off the vessels) taking it from the brain. From the treatment of the above,

we can get little assistance, to help us in chronic abscess.

—Before opening a chronic abscess, we give the patient some preliminary treatment, and this should be, to strengthen the constitution, in order, to bear suppuration, and also, to give tonicity to the soft parts, as well as to the vessels of the part, and the frame generally, which treatment, also prevents excessive reaction, which is so apt to arise, in the feeble, and at the same time, causes exhaustion, and deficient action after it.

The general health of the patient should be attended to, the bowels regulated and open, the shower-bath, and the parts, in the neighbourhood of the abscess, should get a douche frequently, or be bathed in cold water, and well dried, which will strengthen, and give tonicity to the parts, and vessels, going to the abscess.

The secretion of the skin should be attended to, and diaphoretics should be given, and a warm bath, now and then, but not so long, or frequently used, as to cause relaxation.

Iron, after a little laxative medicine has been given, may be used, if the patient, is not plethoric, (and if he is, the system should be reduced some time, before opening the abscess, but only gradually,) and it will give tone, to the vessels. Pure air, and an unstimulating diet, should also be employed, and if the patient is weak, a nourishing diet, and if the abscess is on a limb, or elsewhere,

a bandage may be employed, if on a limb, as on the thigh, from the toes past the abscess, not too tight, but to give support to the parts, and this will assist, in contracting the vessels, and prevent the great flow of blood, to the abscess.

For a short time, previous to opening the abscess, small doses of tartrate of antimony, should be given, in order to diminish, and prevent, the increased action, likely to arise, by opening the abscess, and they must also be given, after opening it, some may suppose, that this would cause relaxation of the parts, and relax, the tonicity of the vessels, but it is better te be prepared, to check, the severe suppuration, which is likely, to arise, and thus prevent, the vessels going to the abscess, from being ruptured, by the increased action; we prevent this, by having, the nervous system, generally depressed by antimony, and thus the circulating system. Antimony is therefore useful, in the weak, as well as in the robust, and plęthoric, it prevents exhaustion, from the loss of blood, when the system cannot bear it, and is also useful in compound fractures on this account, as they are attended with suppuration.

—On opening the abscess at first, a very small quantity of the matter, should be let out, almost none, it is a great error, and source of mischief, to let out much fluid, (as it allows the blood, by taking off the pressure, and contracting power caused by the fluid, to flow, and causes reaction,)

as the blood flowing in great, and excessive quantity, to the abscess, prevents the partly diseased vessels, from contracting, as they have no pressure at their mouths, to resist the fluid, flowing through them, (which they have, when they have the fluid in the abscess, pressing against them,) and they have lost a part, if not wholly, their tonicity, at the abscess; but where there are only a few of the vessels exposed, the pressure of the surrounding parts, closes them, at their mouths, when there is no great flow of fluid, as there is not, when only a part is emptied.

—To effect also contraction of the mouths of the vessels, some astringent should be thrown into the cavity, which will also prevent decomposition of its contents, and assist, though mixed with the fluid in the cavity, to contract the vessels, in the fluid, as well as that, not in the fluid. Chlorine will cause the vessels out of the fluid to contract, and will cause granulations; or a weak solution of chloride of lime, so as not to excite too much inflammation, will assist in preventing decomposition of the contents of the abscess, and will also act as an astringent, and cause granulations. Iodine vapour might also be tried. We see port wine used in hydrocele with good effect, but we see tincture of iodine stopping hydrocele without failure, and it might also be used in abscesses. What would be the effect of employing tincture of Iodine in dysentery, &c., or even injections of port

wine, the last would do no harm, but would also strengthen the patient.

—We see many deaths from evacuating fluid from the chest, if this were done gradually, and if sedatives, and chloroform were given to diminish the action, and expansion of the lungs, and if the fluid were withdrawn gradually, so as to allow a small part to get contracted, while the fluid still in the cavity kept the vessels which it covered contracted; and if chlorine, &c. were injected into the cavity, to cause contraction of the open mouths, death would be less likely to ensue, and the flow would be checked.

When the fluid is withdrawn at once, the lung expands loosely, from the long pressure of the fluid, and not regaining its elasticity, and tonicity, it does not expand firmly, and fully, and therefore the mouths pouring out fluid are not stopped, or pressed on; and the pressure of the fluid withdrawn, being taken from off the open mouths, there is an increased uncontrollable discharge, and death ensues, sedatives prevent the lung from expanding too rapidly, and pumping out, and exciting the flow of fluid.

The iron given will also act as an astringent, on the vessels near the abscess, and what is also of importance, on those at a distance from it.

—By putting lint into the hollow, externally formed, by the evacuated liquid, and the bandage on the limb, and thus slowly, and gradually, evacuat-

ing the contents, so as to allow the vessels, slowly, and gradually to contract, (and where the vessels, as they look into the abscess, are diseased, or dead, to press on the soft parts, and vessels at a distance from the abscess, and thus prevent fluid, from passing through them, into the cavity, and thus also direct the flow of blood elsewhere,) will the chances of danger be removed, and if amputation is necessary, the more readily, will the limb heal, and the better a stump will there be, and also the chance of death, especially in weak patients, will be less.

—Astringents are used, to cause contraction, of the mouths of the vessels directly, and also by exciting inflammation, and causing granulations, which press on the mouths of the vessels, and also press, on the vessels laterally, and thus contract them, and prevent them pouring their contents uselessly, and hurtfully, into the cavity, and by stopping the mouths, direct the fluid into other vessels. Where the flow of the vessels is excessive, granulation cannot be effected, as the granulating portion of the blood, is washed away, some resistance is thus required, to allow of granulation, and for this purpose, Antimony as diminishing the quick flow of blood, and also iron is given, to give tone to the vessels, and thus check it, and bandaging to compress the vessels, and fluid in the cavity, to press on a portion of the mouths of the vessels; and at the same time, to allow of only a

few of the vessels, at a time, to heal, and become contracted, and the likelier are they to contract.

Granulations are sometimes formed, in excess, in various morbid states, and parts of the frame, where there is no pressure against them, the pressure causing a diminished flow of nutriment, and it acts like the skin, in this respect, but it has not the advantage of the skin, which has under it, all the different nerves, and communicating, and absorbent vessels entire, where there is pressure against the granulations, the absorbing vessels act stronger.

—Pressure is also of use, where the nutrient force is weak, or the absorbing force is strong, as where there is no skin, the nutriment being thin, the matter thrown out is exuded, and does not congeal, or firm, and adhere, and in this case also, it is easily absorbed, pressure also causes, an increased action to the part, as where there is opposition, to the flow of blood, there is generally, an increased force of the circulation, to overcome it, but if this force is long continued, and ineffectual, and not gradually diminished, instead of increased action, by opposition, or attempts to force past the opposing force, there is great prostration, and diminution of the force, and flow, and no nutriment at all, is carried to the part, (where too great opposition, has been used, causing an increased action, this is worse, than where no pressure is used, for this purpose, and ends in diminished, and deficient

action, and therefore care must be taken, in using the different means, recommended, for chronic abscess, that the circulation, in the weak, and delicate, is not too much diminished, as it may cause sloughing, and the same in ulceration, from diminished nutrition,) and absorption is carried on as usual, if not with its usual vigour, at the spot, where there is diminished action of the nutrient vessels, yet at a small distance from that part, where the parts are healthy, and there being no nutriment to the parts, there is entire disorganization, by sloughing, if absorption is weak, or by wasting, eating, or cancerous ulceration, if absorption is strong.

—In cases where there is irritation, the absorbents act in excess, and it may be, that the nutrient vessels, are defective, in their action, and a cancer, or eating ulcer, is formed, and this is removed, by cutting out the part, and joining together the lips, which united together, causes, and gives a double nutritive action to the part, and the cutting the part, causes nature, to increase the healing action to the part, the part before it was cut, perhaps could not heal, as it had no force to oppose the absorbing vessels, whose action was increased, by the increased absorbing action, which was excited in the part, by some irritation; in such a case, the nutrient vessels, not having, as it were, any use, or nourishing point, but pouring out nutriment uselessly, would close, or contract, a good way

back, from the ulcer, and as the ulcer gradually wore back, so would the inactivity, of the nutrient vessels, and they would thus never regain, their vigour, although absorption were diminished, and ulceration would go on; or it might happen, that the absorbent vessels, were over distended, with fluid, might press on the vessels carrying nutriment, and thus prevent, their conveying it, and they might never regain this power, and this would even increase absorption, and destruction, and in such a case, excision, of a part of the lips, in time, and joining the parts, and *also* giving them the benefit of the *skin*, is of high importance. In ulcers bandages and plasters stretch the skin, and draw it over the ulcer, and they also cause absorption of the muscles, and they generally allow of the approximation of the edges of the ulcer, and also prevent the too exuberant flow of fluid to the part, in certain cases, and also prevent, and suppress too luxuriant a crop of granulations, (as a means, of cure; in all wounds, the skin is of first rate importance.) Cancer of the lip, generally commences, by a very slight irritation, as a pimple, or abrasion of the skin, and this increases by irritation, the action of the absorbents, and nature although the cause is removed, cannot herself check the absorbing action, which becomes as it were natural to the system, but we have given the reasons for it previously.

In scrofulous habits, and where mercury has

been taken in excess, in both, there is a diminished action of the nutritive, and absorbent vessels, in mercurial cases, the vessels are destroyed, or nearly so, (mercury is a powerful stimulant, irritant, and ulcerative, also from its irritation it excites the circulation immoderately, and prevents the different parts of the blood, from being carried to the parts appropriated for them; and to remove the irritation, increased absorption, and consequent ulceration takes place, we see it causing albumen to pass through the kidney as nutrition does not go on as usual) in scrofulous habits, the nutrient vessels are forced to carry along nutrition, and there is deficient absorption, we see in mercurial cases, ulcers of an eating nature, in scrofula enlargement, and ulceration from this cause.

In mercurial patients the inflammatory action is borne badly, on account of the destruction of vessels, and decay, or weakness of others, and this increases the destruction still farther, from this destruction of vessels; ulcerations from the excessive use of mercury are difficult, and almost impossible to be healed, and the disease will therefore run on, until it arrive at a part, where there is an increase of healthy vessels; if patients under such circumstances were to regulate their diet, take tonics, use iodine, and iron, the warm bath, and sea-bathing, and live in a healthy situation, and if the ulcerated part were cut early, and put

together, (it might stop the ulceration) and if some of the preparations for cancer were used, and if this were done early, a cure might be effected, But it might, and would come on again. if the patient, in any way, went to excess, and perhaps a dry climate might have a very beneficial effect, where mercury has not been used enormously, as it is sometimes here yet, and abroad, and in warm climates, and the climate does no good. Often there is a diminution of the nutrient power, but there is not a greater increase, than usual, in the absorbing vessels, and there remains an unabsorbed dead portion, which is a slough. Instead of absorption, we have an increase in nutrition, and the nutrient matter is congested, or deposited, and there is no absorption of it, and yet the part does not slough, but becomes organized, and proper absorbents, and nutrients go from, and to it, suited to its condition, but yet it is a morbid production, and goes on slowly increasing, it may be imperceptibly, and pressing on nerves, or important organs, or the surrounding parts, causes at length great irritation, and this causes absorption, and ulceration of the surrounding parts; when this morbidly organized process of deposition is once set up, the general system, and circulation, acquires naturally, and as an original part of the formation of the body, this tendency to secrete, and deposit this morbid formation, and this tendency is increased, by there

being generally more secreted, of any ingredient, than is absolutely required, in case it should be required; and in a healthy state, it may be, and is thrown off, by various means, viz. by the skin, kidneys, and intestines, if not required, and there being more of the morbid secretion, than is required, it is deposited in other parts of the body, than that part, where it was originally and first deposited. Where it has been deposited in large quantities, it seems to be deposited, in other parts, to diminish the circulation, to a certain extent, if it has interfered much, or stopped it, where first deposited; but generally speaking, it is caused, by there being a superfluity of the deposited material, in the blood, and when deposition cannot go on, any longer in the part, or so strongly, where first set up, the system does not stop forming the morbid material, and it is thus deposited by force, as it were, elsewhere, in a part something similar, to that where it was first deposited. In the case of Tubercle we see nature throwing off this morbid deposition by perspiration and purging.

—We see in cancer of the breast, and in tubercles, the above kinds of deposition, it may also first arise, from something impeding the circulation, and depositions are formed against this, it may be the mucus, or expectoration in the lungs, is the cause of tubercles, (or expectorations or inorganized formation of the different parts of the blood)

and the mucus not being absorbed, or expectorated.

Tubercles are of two kinds, first an induration of a grey or greyish brown colour, second the production generally in this induration, sometimes elsewhere of a yellowish white opaque friable matter; see Dr Clark, on Tubercles; and Andral and Dr Carswell, &c. We consider these depositions to be from diminished absorption at first, and secondly from diminished nutrition, (Dr Carswell considers tubercle to be an excretion from the mucous surface of the pulmonary vesicles) the perspiration, or some of the secretions being checked, there is an excess in the blood, and the different functions as nutrition &c., are not performed as usual, and the unyielding nature of the upper part of the chest, causes the tubercular matter to be deposited there (the blood in the lower part of the lungs is in larger quantities and washes away depositions, and the chest is more moveable, and there is a greater force, cold affecting the nerves there, and the contractility of the lungs, and also from the depending position of the lungs there, are causes of congestion and inflammation there) and it is not used in nutrition, nor yet thrown out of the system, and not being used as usual, there is not increased absorption to remove it, and it continues to be secreted as usual, and not being absorbed in proportion to its secretion, it is gradually deposited throughout the body.

We will explain it a little more at length. We consider tubercles to be a deposition caused by a diseased, or defective nutrition, it may be, that the organs of the whole body are deficient in their attractive nutrition, or the nutritive process is weak, or it may only be in a part of the body, and there is thus a too great abundance, in the circulation, of the different nourishing materials of the body, and the superabundance of nourishing materials are not thrown out of, and off the body, the cause of the excess may be from a very common cause, viz. checked perspiration in a weak and delicate frame, and the excrements by this means are not thrown off, and this acts on the rest of the circulation, and vessels, and the system is clogged, and poisoned by this excess of material thrown off by the skin. The blood also contains an excess of unprepared, as well as prepared nourishment, but the body does not take up the nourishment, that is usually attracted to each of the different structures, nor is any superabundance of nourishment thrown off as usual in health, but the system deposits this mixture of the different materials of the blood, which is in excess, and not manufactured, and not used, or not required by the different structures of the body, in structures, where there is a large supply of blood-vessels, as in the lungs, liver, and mesentery, it at first causes congestion, and by irritating, it causes inflammation, and at length so irritates the system, that it with great

violence attempts to get rid of it by perspiration, and by diarrhœa. We are of opinion that depositions are from diminished absorption, we call diminution of perspiration, diminished absorption, it is an excretion, and the same, and it causes defective and unhealthy nutrition, (where there is an excess of nutrition, it may not be absorbed, as absorption is not greater than usual, we therefore say, that primarily, there is an excess of nutrition, and secondarily, absorption is deficient and does not carry off this excess. We may have tubercle from the stopping of a secretion, as the menses, this stoppage causes derangement of the whole system, and its various functions,) and from their being from deficient perspiration, or absorption, and from deficient nutrition, too large, or a larger portion of solid materials, (not used) in the blood than usual; and continuing to be formed in the system, it is not absorbed, and the superabundance of solid material in the system, causes congestion, irritation and inflammation.

Dr Williams, considers, that tubercular depositions are not from diminished absorption, he regards its prevalence in the less mobile parts of the lung, as a consequence of the greater proclivity of these parts to vascular obstruction, and to the lower degrees of irritation arising from the incomplete expansion, and contraction of the vesicular structure, and from the consequent imperfection in the process of aeration of the blood.

—There are many sores, and wounds which do not heal, which would heal, if they had the covering of the skin, and the benefit of the vessels under the skin, and others which would heal sooner, are slow of healing, for want of the skin.

ORIGINAL OPINIONS

ON GANGRENE,

OR

AMPUTATION BY NATURE;

ITS TREATMENT AND THAT OF AMPUTATION.

We lately saw a case of a man of a naturally strong and robust constitution, and frame of body, who had had fever, and the soft parts of one of the legs absorbed up to near the knee, where artificial amputation and healing of the soft parts took place, but of course the bones were not absorbed, the thigh was amputated, and the patient died, from the strength not being able to heal the extensive soft parts of the thigh, after the weakness of the fever, and the exhaustion consequent on absorption of the soft parts of the leg, and the healing up of these near the knee.

Absorption—cure or attempt of nature, to cure and heal, and amputation by absorption—or waste of the soft parts, but not of the Bony Texture.—As this takes place, from the blood not being pro-

pelled into the extreme vessels at all, or not in sufficient quantities, absorption is the result, it may arise from deficient nervous energy as well as from contraction, deposition, and blocking, or choking up of the extreme vessels. In that from fever, it is from weakness of the general system, from long illness, and relaxation of the frame, and diminution of the nervous energy, there still remains a strong absorbing power, but no nutrient power to the distant extremity of the limb, or if there is nutritive force, the vessels, and nerves of nutrition at the extremity, have lost their power.

When once absorption is set up, the system cannot stop its progress, and the parts die, and are partly absorbed, and this absorption does not stop, while there are extensive soft parts, but it is checked, when the absorption has reached a part, where there is not much soft material (but where there is, the absorbing process goes on, not that these parts are diseased, but only nature cannot heal them, the decay of the nutritive vessels, being in advance of the absorbent vessels, and also because, they have no point of communication at their extremities, and no diminution, or opposition at their points, to oppose the flow of nutriment), to heal up, and to nourish (take for instance the leg) this cure of nature takes place near the knee.

We will make some remarks as to the treatment, if amputation were performed, before the strength has been exhausted, by this long conti-

nued wasting of the strength, by absorption. We will not say amputation might be performed without risk, below the knee, (but it might be done there, with a degree of safety,) but above the knee, before the patient has been secondarily exhausted, after fever, by the attempt of nature, to effect a cure, by absorption, (it is not a diseased action, after some time, but a healthy action of nature, to form a stump, and allow of the absorbent, and nutrient vessels, communicating, and also to prevent the loss of the nutrient vessels' nourishment, by having their ends sealed, up and confined.) If the absorption is allowed to go on, while nature is attempting to effect a cure, the frame becomes so exhausted, as not to heal, and join, and heal the parts cut, whenthe limb is amputated; and cases of this kind are numerous, now when the absorbing force seems to be of a healthy nature, and seemingly an attempt of nature to effect a cure, and to heal up the ends of the soft parts, and where the patient's strength has been reduced, by a fever, and this gangrene, is the effect of it, we may delay for a time amputation, and strengthen the patient's constitution, and nature will be able to heal, and join the amputated parts, or the amputated part may die, and death ensue, from the exhaustion secondarily caused by amputation, when we would have imagined, the amputation would have been successful.

Let us suppose nature has absorbed the soft

parts, up to near the knee, and healed this, the patient being weak, we might saw off the bones, and allow this bad stump to do, and not have artificial amputation, until the patient was strengthened, and then perform it above the knee.

Nature absorbing the part gradually, and slowly, is not so dangerous, as the violent shock, and suppuration, and feeble reaction, and the attempts of nature to heal the parts cut, by artificial amputation of the same limb.

Perhaps in Gangrene of the extremities, of old people, it might be considered, that the thigh might be amputated with success; in such a case, it might, as the thigh may be said, to be free from disease of the foot, but then the strength of the patient would not heal it, from old age, and from the circulation, and system being generally weak, as is shown from the defective circulation of the extremities, but there may be cases of it, where the patient is robust, and where it has occurred in an old person, not from old age, but from the extreme circulation having been always a little defective. Where there is a malignancy of the system, we need not remark, as to the danger of amputation.

In all cases where there is deficient strength, or action, either from fever, or from poverty, or constitutionally, or from a certain malignancy of the system, if the disease is not showing a tendency, to over diseased action. (In some old peo-

ple, gangrene takes place, from too great stimulation of the system naturally, and not from stimulants, but it may be assisted by these, and the system being weak, and not able to bear this excitement, gangrene is a consequence, in such a case, stimulants are hurtful.) We should strengthen the patient, before amputation, and amputate, where the soft parts are not too exuberant, where the soft parts are superabundant, the patient's strength is exhausted, by the strong and unnatural effort of the system, to heal, a largely wounded surface; in many cases, if this were followed, the system would heal the parts, and the life of the patient would be saved.

—Amputations of the thigh, are generally believed to be operations which are always successful, but this is an erroneous opinion, as they are often unsuccessful. The principal cause of this want of success, is, that they are performed too high up; where you have a very large mass of flesh, or muscle cut through, to join together, and heal, the system even in a healthy state, and not broken down by previous disease, has some difficulty in healing so large a destroyed, and cut surface, and it finds it impossible to cure it, in those who are sickly, and have been long confined by the disease, which required amputation to be performed. In certain cases the whole thigh, as well as the body, partakes of the diseased state, which was the cause of the amputation, and this alone

would make the limb be cured with difficulty. In the robust and plethoric, a limb heals with difficulty, as where there is too much blood in the system, a wounded part does not heal readily, as the impetus of blood to the part prevents the healing process, so where a limb is cut off, as at the thigh, the system continues to secrete for a length of time, the quantity of blood required, before the thigh was amputated: and the excessive flow of blood, prevents the union of the cut surface, and there is also a natural tendency in the circulation, to flow where there is a wound, and this also assists in causing the evil, therefore where a patient is robust, and plethoric, we must expect derangement of the whole functions of the body from congestion of blood, and an extraordinary flow of blood to the part, which will without doubt oppose the healing of the limb, we ought therefore in such cases, to allow the free flow of blood, before tying the arteries of the thigh, and give small doses of tartar emetic after the operation, to act as a sedative of the circulation. In amputation, the bone acts as an irritant, and prevents union of the soft parts. Would not the Cautery applied to the end of the bone, smooth it, and cause it to heal sooner, and prevent the too great flow of the healing exudations of the bone, and also prevent its irritation, and when the patient is weak, the constitution would better, and more ably heal the soft parts, (or is it better to allow of exudation

for a time, as it must be in large quantities, and it might be locked up to a certain extent by the cautery, and do harm to the bones.) Or it might be used in cases, where, as in gangrene, we see a stump formed naturally, and we only cut off the bone at the stump, and do not touch the soft parts, in case the strength at that time, would not heal them again. The placing of the stump in a proper position, so as not to allow the bone to force itself into the flesh, and irritate it, may also assist to heal a stump. The amputating the limb, where it is not too fleshy, and preventing the system from being too congested, by blood, and scraping the sharp edges off the bone, will be the most effectual means to cause the successful issue of an amputation. There are many operations, which do not, which would succeed well, if the circulation were diminished, Aneurisms near the Heart, when tied, might oftener be successful, if the system were previously reduced by low diet, and if blood were freely drawn some time before performing the operation, and if excitement after it were prevented, by sedatives and antimonials after the operation.

Condensed Remarks.—Convulsions during the early stage of pregnancy, are caused by nervous excitement and by the blood forcing itself to the Uterus from the brain and there being a deficiency of it generally.

Some writers on Midwifery, consider convulsions, at, or near delivery, to be caused by granular

kidney, as it is called; but we consider the albuminous kidney, to be rather an effect of dropsy. Convulsions are caused by the blood, returning to the system in the latter period of pregnancy, and causing dropsy, as in the plethoric; (we consider the convulsions to be caused, by the excess of blood taken into or formed in the system to nourish the fœtus, and not required, for the nourishment of the fœtus,) but this dropsy may arise, from pressure on the Ureters or blood-vessels, and the ineffectual attempts of the kidneys, to pass the urine, causes disease of them by over-action.

Dr Osborne says, that diuretics are hurtful, in cases of granular kidney, and even a cause of it, and we believe, that the great and frequent use of diuretics, is often the primary cause of granular kidney, it may be imperceptibly, but still in course of time, it causes the degeneration; and all dropsies have the same effect, the kidneys being over-exerted, or overwrought, in secreting large quantities of fluid; and any after disease, may bring the disease of the kidney to light. Albumen goes through the kidneys, as it is in the nature of it, to be sent to parts excited, or diseased.

Anasarca is a secondary effect, in some cases; (or it may be also a primary cause of it,) as it is in the nature of the system, for parts injured, or diseased, not to secrete as usual, and as a consequence of this non-secretion, and non-irritating

principle of nature, we have diarrhœa, which is an attempt of nature to pour out fluid by the intestines, and this fluid, causes irritation, and diarrhœa, and when excessive, this pouring action into the intestines, ulcerates the intestines, by over-action, purgatives increase this tendency to diarrhœa, by causing relaxation, and exciting it.

In Phthisis, we have diarrhœa, as it is an attempt of nature, to diminish the circulation, and the morbid matter, and vomiting prevents irritation of this fluid and diarrhœa. Nature has various ways in which she cures disease, and assists, and attempts to prevent the farther progress of disease, and frequently she is not able, to remove, the remedies which she has set up, to remove disease; and to alleviate it, when it is required, and death is a consequence, such measures of nature, are called complications, we have in bronchitis after pneumonia, an example, of nature attempting to cure, by pouring out mucus, and preventing air getting into the part of the lung diseased, to prevent the weak part exerting itself, to press out the air; and also the irritation of the air, and nature cannot remove it, or stop its secretion at times. We have after disease, Pneumonia, but this arises from weakness of the lungs and system, caused by the previous disease, and thus causing inflammation by congestion from weakness.

Tubercles are caused by a weakness of the sys-

tem, and mucus, or expectoration being formed at the upper lobe of the lungs, cannot be thrown off, the nerves not having the assistance of the compressible chest, at the under lobe, as well as the diaphragm to press on the lungs.

Before concluding, we would impress on all, the important part that the nerves play, in all diseases, much more important a part, than is generally believed, and that there are nerves, however minute, or imperceptible to every part of the body, and that he who knows when to stimulate, and when to depress the action of these, during disease, and by this means regulate the different functions, will cure disease best.

When fluid touches the extreme points, of the venous capillary vessels, the delicate nerve for this purpose, is irritated, and causes the imperceptible mouth, to contract, and then, it retracts, and the fluid is thus drawn into it, by suction; and it goes on for ever in this way, and up the whole of the vein, and in the same way the valves, which may be said to be suction mouths, (as well as to prevent the flowing back of the fluid,) and to support the column of fluid, and as we go on, the Auricle of the Heart is the great suction mouth, which attracts and draws up the venous blood, (and heat assists) the nerves along the side of the vein, pushes against, and slightly as it were, propels the blood onwards.

The power of the nerves is very great, and this may be seen, when one leg is crossed over the other, the nerve at the popliteal space being pressed on, by the Artery, causes the limb to rise, at each pulsation ; (the nerves when touched start as it were.)

We also see the delicacy of the nerves, in the lungs, where mucus is formed, how the nerves during sleep push it off, the part where it may be, and gradually raise, and push it into the windpipe, any thing not usual to a delicate part, and on it, is thus thrown off, we see it in vomiting, to a greater extent, and the exudation caused by irritation of the nerves; it is seen in sneezing; in the flow of tears, from emotion, as joy, or grief or laughter; and also when dust, or matter touches the eye; and also when the saliva flows, when we see something juicy, or nice; the urine flows from fright; the bowels operate, when irritant matter is within them; the perspiration flows, from fright; the blood is sent from the face, by fear; it is sent to the face, by shame; or emotion; we have sympathy between the kidney, and bladder; the uterus and stomach; the stomach and tongue, &c.; this shows the great, and varied power, and importance of the nerves, in every movement of the frame, from the most tangible, to the most etherial, movement or expression.

There are different nerves, for all the thousand varied actions, and functions, and different forma-

tions of the human body; and the brain is the source of nervous energy and fluid, and it is there it is formed and replenished, and it is the brain which originates and directs the different varied movements and sensations of the human frame, and which are all affected by means of the nerves.

Note.—Pain is caused at the mamma in pleurisy by the phrenic nerve.

ORIGINAL OPINIONS

AS TO

CONTAGION & PUERPERAL FEVER

AND

CONTAGIOUS DISEASES.

The subject of contagion, has excited the attention of the Public, and Medical Men, from time immemorial, and especially the cause of it, in the case of medical men, and the opinions with regard to its primary cause, has not yet so far as we can see, from their writings, been explained. We have attempted to give an explanation of our own, but like many medical opinions, it may not be the correct one. The prevention of contagion, has excited great attention with the public, more than the causes of it, and we suspect, that all that can be done for its prevention, has already been laid before the public, and we therefore do not intend to enter upon its prevention. For opinions on this subject see Drs Stokes, Graves, Tweedie,

Christison, Alison, Adams, Elliotson, Armstrong, Lind, Blane, &c.

Some suppose that we cannot account for contagious diseases, we believe that for many of the contagious diseases we can give an explanation of their origin, but there are others, which we believe it is impossible for us, to explain their origin, we must only suppose, as they are sometimes called, that they are heavenly (the Vital principle will not explain it) blessings, not to be accounted for, we cannot call them curses, (although they are seemingly so) as we are led to believe, that what seems evil, is for our benefit.

Those diseases, whose origin we cannot account for, are Measles, Scarlet Fever, and Small-Pox.

But it is possible to account for the origin of other diseases, which are contagious, as Typhus, Puerperal Fever, Dysentery, Cholera, Yellow Fever, Venereal Disease, Hydrophobia, (see Dr Elliotson for Glanders.) Typhus may be said to originate of itself, without any contact with those previously affected with the disease, the principal predisposing cause, is deleterious air, the minor causes are, cold, wet, hunger, bad food, and filth.

The body being long accustomed to inhale, a deleterious, and impure atmosphere, the whole system gets tainted, and the blood is in an impure state, we may say a typhoid state, and which breaks out into Typhus fever, when the body is exposed to wet, or long fatigued, and exertion of

the mind, and mental depression, and also to the long want of nourishing, and wholesome food, or to a diminished quantity of food, it is also most likely to arise in the intemperate, whose nervous system, as well as their other functions, are in a highly deranged state, and also those who have been long in a sickly state.

—When the system is weak, and in a state of putrescency, if we may so call it, or a Typhoid state, from deficient nervous energy, from the long inhalation of a deleterious atmosphere, causing stagnation of the blood, to a certain extent, and from the blood being poisonous, instead of nourishing; poisonous or typhoid, or contagious vapour, or exhalation, (or perspiration,) evaporating or exhaling from other bodies, and coming in contact with those of a weak, or an healthy frame of body, or when the nervous system is depressed, or the body relaxed, it is taken into the system, and it irritates, and depresses the nerves, and delays the flow of blood, the head is affected, and the nerves from pressure of fluid, cannot perform their functions, they are also affected by the typhoid poison, the blood is not employed, in its different uses, and for its many various purposes, and it is not secreted, and excreted, and its beneficial parts formed, and used, and its deleterious parts thrown off, (red globules of blood are gradually formed, and gradually increase in size, as they go along, and are required, and according as they are re-

quired for delicate structures or purposes,) and this causes increased nervous depression, and thence stoppage of the circulation, at first the depression is caused, by the brain sympathising, and perhaps too rapidly depressing the circulation, in order to prevent the poison, from being carried into, and through the system, and the nerves, and different parts, not being nourished, and their excrementitious parts, not being thrown off, there is putrescency, and gangrene; the nervous depression may be so great and sudden, that death soon ensues, and there are no particular signs of putrescency. The body when not in a healthy state, cannot throw off the poison of contagion which it can, when healthy, and also prevent its being taken into the system or retained in it.

—In all diseases, which have a strong tendency to depress the nerves, and brain, any malaria, or putrescent, or morbid exhalation, inhaled, or which comes in contact with the patient at that time, however small, is liable to cause, and increase nervous depression, and a typhoid state. When the body is robust, and there is plenty of pure air, it requires a greater quantity of the morbid effluvia, or poison, to cause this typhoid state, and depression, and poisonous and unnourishing state of the circulation.

—We see a species of contagion, in Fever caused by malaria of marshes, but not from the human body. We see another species of conta-

gion, in the case of sores, as in Hospital Gangrene, and such is most likely to take place, where the system is in a depressed, putrescent, or typhoid state.

—It is curious, how malaria should lurk in the system for years, as in Ague, and break out by some exciting cause. We are of opinion that the fit of Ague comes on, from the poison from which it originates, causing a diminution of the different functions of the body, to such a degree, that nature makes a strong effort to stimulate the system, and to excite it, to set agoing the animal machinery, and to throw off the poison, (or from the poison gradually contracting, and receding after being diffused through the system generally, by perspiration, it slowly poisons and stops the different functions, and then acts as an irritant, from being condensed, and contracted, and the system tries to throw it off, which may be done to a certain extent for a time, by perspiration, when it is condensed, it stops the functions, causes the cold stage, and nature to cure this, stimulates the system to become hot, and this in time causes relaxation, and perspiration, and perspiration gives relief, by diffusing the poison throughout the body.)

We see in scrofula something similar, to the lurking and lying dormant in the system for years of malaria, and also in mercurial poison, and in venereal disease, and also in consumption, (it is curious how these should break out in descen-

dants) some people are also more liable to some diseases than others. We see people with sore throats, liable to it, when a certain wind blows; it shows that the disease lurks in the system during health, and the system or part is weak, and when an exciting cause, which has a tendency to excite, or increase the disease in question arises, the system cannot resist it, and disease breaks out; therefore where there is in the system a liability to disease, or the typhoid state, an increase in the cause of the disease, or that which is hurtful to the system, excites the disease, and also increases it. We are of opinion that contagion, is liable to arise, where disease is of the Typhoid type, or where there is a tendency to it, and this same contagion, most likely, and most easily takes effect, where the system is weak, as in sores, &c.

—Contagion may be taken some time before it breaks out, this is caused, by its not being able to affect the system at once, (it does it sooner in the sickly, and those who are filthy, and inhale impure air,) but it slowly, and gradually poisons, and insinuates itself into the whole system, and the disease breaks out.

—We have in Erysipelas, an example of Contagion; contagion in such a case in an Hospital, may not show itself, it takes effect according as the other patients are healthy, or not; strong or weak; as they are well, or bad dieted; as the Ventilation is good, or bad, as the Weather is

damp, or dry; as it is warm, or cold; as the room is airy, or dull, or the situation; or as the mind is to a certain extent amused, or depressed; contagion breaking out will depend on all these circumstances.

—Yellow fever depends on hot, and sultry weather to a certain extent, so does also Asiatic Cholera, so does also Hydrophobia, and these diseases are of the depressing kind.

—In Hydrophobia, the blood, and fluids become poisonous, and putrescent, from the Brain and nerves not acting, and performing their functions, at first, from the depressing effect of heat and an impure and sultry air, and the blood thus becomes poisonous, (and of itself destroys the action of the nerves, as also from pressing on them, and stagnating the blood) and the blood from not being formed and separated into its different parts, and being distributed to the body in a poisonous state, is not, and cannot be arterialized, in such a crude state, (although it were not poisonous,) and it destroys nervous action, from the blood not being perfected, it is not sent to minute, and delicate structures; and also from its poisonous state, it is repelled as it were.

—We have in Gonorrhœa, a contagious poison, originating without contagion. It is caused by irritation, and excitement, filth, causing the nerves of the part to lose their power. The secreting nerves lose to a certain extent, and for a time,

unless remedied, their power of secreting, a pure fluid, peculiar, and fit for the part, and such being the case, there is an excrementitious mixture, instead of the original fluid of the part, the nerves having lost their power, from over irritation, and excitement, cannot regulate, separate, and assimilate the quantity sufficient for the wants of the part, and being acrid, and poisonous, when it comes in contact with a like surface, it poisons, and partly destroys the action of that part, and there is a discharge similar to the original (We have Itch caused by filth and it is contagious.) Contagion produces a like disease in another, in the same way, as the same poisons, in different individuals, but modified according to many various circumstances.

—Scurvy is supposed not to be contagious, it may appear to some to be contagious, from a number being seized with it at nearly the same time, but we are of opinion, that it is contagious, secondarily, although it occurs primarily, and usually from the want of vegetables, but it will affect those by contagion who are liable to be affected by scurvy. We consider all diseases to be contagious where we have a state of putrescency or non-arterialization of the blood. Of late years it has been said to be satisfactorily proved, by a first-rate authority, Dr Budd, that salt meat is not the cause of scurvy but we are of opinion that there

can be little doubt, that it is the fibres of the salted meat, which are dried up, and are highly irritant, and contain no nourishment, and one might as well eat dry woody fibres, without any thing else, it being both irritant, and unnourishing, and if long continued and taken in large quantities, it will cause disease. Salt is a poison, and if long continued, and taken in large quantities, it causes disease, if you put salt into the food of a bird, it will kill it. Vegetables have the effect of neutralizing the evil effects of salt, by its being neutralized by the gases formed by vegetables. We may do with fresh meat, and bread without vegetables for a long time. Spirits act as a stimulant, and prevent for a time the evil effects of salt and salt meat and hard fibre.

—The opinions with regard to the cause of Puerperal fever are innumerable and the most eminent practitioners differ as to its cause.

We will attempt to give an explanation as to its cause and which differs from others so far as we can find out. 1st. We have inflammatory puerperal. 2d, We have typhoid puerperal. It is this last and most dangerous kind that we will speak of and also its contagious properties.

We have in Puerperal fever contagion, and the Typhoid state, but we may have Puerperal inflammation without a Typhoid state. The first is liable to occur, where there is fulness of blood from delivery,—and before it, this we consider to

be the true cause of it, also from weakness, consequent on a painful, and tedious labour. Where labour has been painful, and tedious, inflammation without Typhoid symptoms may occur, from difficult labour, (and the unnatural twisting action of the Lateral position) without weakness of the system, or fulness of the system, but both require bleeding in the early stage, but the non-typhoid, will bear it better.

1.—In Puerperal fever from congestion, and plethora, the brain is congested, and pressed on, and does not perform its functions, and from this cause, the rest of the body, and there is a typhoid state, the brain cannot, and will not act, as the system is too full of blood, and unless this is relieved, and this clogging and pressure of the brain, and circulation is taken away, it cannot work, and blood must therefore be withdrawn to take off this too fulness, a small quantity will do, you will know by watching its effect, too much would cause too great weakness, and excitement, and would do harm while the system is weak, from a tedious labour, cupping or allowing blood to flow from the cord is useful. Let it always be understood, that we have an increase in the circulation during pregnancy, even in the case of the robust, and plethoric, and let it also be understood, that the system after delivery, does not, and cannot at once stop, and prevent from still going on, and being secreted, this increase of

blood and nourishment, which is not necessary for the mother, but which is generated for the sustenance of the fœtus in the mother's womb, (nature cannot generally stop such an increase, or any increase at once, so as to stop and suit the extra secretion, to the present want, or necessity of the system,) and therefore after delivery, especially in the small, and delicate, and in the plethoric, we have more blood than the system requires, and this causes congestion, pressure on the brain, nervous excitement, and convulsions. This extra secretion of blood, during pregnancy, is to a certain extent required, after it, but it is not generally required for several days after delivery, (or in many cases it is not required at all, where the mother does not suckle her child) when it is required to secrete milk, for the nourishment of the child, but before the child is delivered, and during delivery, and for a short time after, the blood necessary, and appropriated for the child, is taken entirely into the maternal circulation, and continues to be secreted, although not necessary for the nourishment of the mother, and thus we have congestion, &c. We have fever from tedious labour, without the system being plethoric, and bleeding is not borne well immediately after delivery, as it causes excitement, and still farther weakens the body, so that it cannot even by rest, recover strength, but when the system has got a rest, as it were, and a little strength, it bears

bleeding well, and it does good, and a little wine in such a case, if the pulse shows, it requires it, and if the labour has been exhausting, it is highly useful, if the bleeding causes excitement, an opiate will be useful, not to cause so much depression, as to stop the action of the system. Suckling the child, and doing it as soon as possible after delivery, will prevent too great congestion, and allowing the blood to flow from the cord after it is cut, and the child separated from the mother, will do great good, where the mother is stout, robust, and plethoric, (and where the mother is plethoric, unstimulating, and low diet, and mild purgatives during pregnancy, will prevent convulsions, and the effects of Plethora) and will prevent the formation of milk abscesses, and the too great flow of blood to the breasts, and also to the brain, it will be highly useful in the case of those who do not suckle, and at the same time keeping them on low diet before, and after delivery. The subject of Puerperal fever is an important one, and there are great differences of opinion as to its cause, and treatment, but we have given our own opinion with regard to it and which is entirely new, but for the opinion of others (see Gardien, Clarke, Boivin, Gooch, Lee, Ferguson, Locock, Rigby, Burns, Hey, Campbell, Moore, Armstrong, Ramsbotham, Butter, Hulme, Gordon, Collins, Michaelis of Keel, Ingleby, &c.)

—A child may die from being too plethoric, and the lungs do not act, as the lungs get dis-

tended by too much blood, or from the mother being plethoric, or from the blood being sent into the child's lungs with too great a force; when a child is born plethoric, let the blood flow from the cord, which will allow the lungs to perform their functions, if over-distended, and congested with blood. Infants when born, sometimes do not breathe, the lungs have lost their power, from the mother being plethoric, and from too much blood being driven into them, and are thus irritated, and distended, and weakened; (hydrocephalus is also produced by this cause;) or it may occur from some temporary excitement of the mother, causing an increased flow to, and distension of the child's lungs, or inflammation, or engorgement; or the lungs may lose their power, from the mother using stimulants, or be weakened from poverty, and the child is thus never nourished, and its lungs weak in all these cases; so long as the mother as it were, is constantly carrying on the circulation of the child, it lives, but so soon as it depends on its own organs, and strength to carry on the circulation, it dies, after delivery, or in a few days after; and if it lives, it is a sickly child, in such a case a strong healthy nurse, and country air, and warm clothing, and the prevention of cold, and attention to its diet, and scarifying frequently its gums (while painful and swelled although no tooth is felt) when about to teethe, to assist nature in this painful, dangerous, and excit-

ing process, of piercing a sharp substance for a long period through the flesh; and at the same time giving mild purgatives, and plenty of fresh air, will greatly assist in strengthening, and keeping alive a sickly child.

Too plethoric a state of the system, and the Lateral Position during Labour, are causes of Convulsions, Puerperal fever, Pneumonia, Milk Abscesses, (Phlegmasia dolens takes place at times, from pressure of the child on the Arteries during Pregnancy, and especially in those who are Plethoric, it also arises during delivery, from the patient lying on the left side, and the child pressing on the vessels of this side, it also takes place when the delivery is in the horizontal position, unless where the child is large, or pelvis small, we are not so likely if at all to have it, it generally occurs on the left side, as pressure destroys or stops the flow of blood, and the vessels lose their action or power and do not regain it, such we believe to be the cause of it, although we are not aware of any other holding this opinion (see Mr White, M. Bouillaud, Dr Davis, Dr Hull, and Dr Lee, &c. on this subject) it also occurs during Pregnancy from pressure on the vessels,) and death and a cause of most of the female complaints, and weaknesses during, and after Pregnancy, and labour, and a cause of disease of the womb, and system in after life! (see our Treatise on the Horizontal Position during Labour.)

—Puerperal fever is contagious, it is generally allowed; we know that there is in it the Typhoid state. Putrescent matter, or exhalations, or poison, will produce, when the body is in a diseased, and debilitated state, typhoid disease, and we have good proof of it, from what occurred at Vienna, (and which could not be accounted for and is very curious) where students, who were dissecting, and had Midwifery patients, were the cause of Puerperal fever, it arose from their *especially* inhaling, as well as carrying about with them, on their clothes, the exhalations of the putrescent dead bodies, and the patients coming in contact, or being touched by them, or inhaling their breath, while in a diseased, or weak state, the poison took effect, while students not dissecting, did not affect their patients with puerperal fever. (It is the inhalations we consider to do it oftenest.)

—This shows, that when the body is in a weak state, but especially when under disease, that typhoid symptoms will be produced by noxious vapours, air, exhalations, and the healthy body carrying about in the system typhoid inhalations; and from putrescent exhalations acting as a poison on the system, and easily affecting it; when in a weak-nervous, and diseased state, and it is highly important to keep this in mind.

We may here remark, that patients die, when bled to too great an extent immediately after delivery, which has been exhausting, but if the pa-

tient gets a little rest (it also allows the system to get accustomed to the new action, and to the want of the action long necessary, for pregnancy) and the bleeding does great good. See Dr Kelly on Puerperal Epidemic at Leith.

There have been of late females complaining; and we suppose they have been so for centuries, and no one knew what was the matter with them, as it was the uterus, that was affected, and it is only in modern times, that this part has been closely examined with the eyes, and it is not general yet, but the cause of complaint was not known, on looking at the os uteri, a very small abrasion, or ulcer, is seen, but to those who have never known it before, this does not account for the great uneasiness, and complaint of the patient, but the complaint arises from nothing else, at least it is the only mark of a diseased state, (or it may be only the beginning, of a very serious diseased state, which may cause various diseases of the delicate organ, where it is situated, and which may render the after life of the patient miserable, and disagreeable, if not fatal.) We saw some years ago, when in Dublin, many cases of this disease, viz. a small imperceptible granular ulcer on the os uteri, rest, and attention to the general health, and the daily application of nitrate of silver, relieved the patient, and perhaps arrested the beginning, of future, extensive disease, of the Uterus.

In conclusion, we would remark as to the ne-

cessity of fresh, and pure air in disease, and the taking out of the rooms, as often as possible, all excrementitious matter, as expectorations, and alvine evacuations, and keeping them covered, when in the apartment, and throwing on them chloride of lime, and the same in dissecting rooms, and with a view to the Public health, and the safety of the subject, the same in Public Necessaries, as excrementitious matters may prove contagious.

Note.—Diseases of the young, are apt to be considered contagious, when they arise from weakness, from cold, and peculiarities of the weather, as in Hooping cough, which arises from cold, affecting, and weakening the nerves, especially; and from general weakness of the system. Hooping cough, although it may be taken by contagion, is not primarily a contagious disease, as it arises from a visible external cause affecting the system, as cold, it is the nerves which get paralyzed, or are very weak, from cold caught, and their action is stopped, and the blood is stopt, (from not having the nervous energy to impel it, and the blood being stopt, the nerves are pressed on, and this excites them to action, and forces them convulsively to act, and causes the cough) it is only in the young, that the nerves are so easily affected, we do not see it in the grown up, and as their strength recovers, or as they get old, or from bracing air, strengthening them, they get well;

there may be something weakening, or poisonous in their breath, from imperfect arterialization of the blood, which affects, and poisons the nervous system of the weak, in whom it comes in contact but the disease originally arises from cold, and many children may be affected by it, without having caught contagion, and we have *supposed* contagion in the old, from bad diet, and cold, a certain kind of food which is bad, and deleterious, affects a large body of people, who use it and this is called contagious, and it may attack those taking the same kind of food, or the weak, by contagion, but the disease is not originally contagious.

We have been at much pains to simplify the preceding subjects, and if we have not made them easily understandable, it is because it is in the nature of the subjects to be difficult to explain and to be understood, unless to those well acquainted with such subjects. We have not tried to discuss and disprove the opinions of others, as it would fill up several volumes and takes up time, but we have merely given our own opinions, simplified and condensed; nor have we given cases, as they take up much room, and are not required in this case.

NOTE.—There are many sedative medicines, which are considered stimulant, and not effective medicines, as they stimulate when first given, although they are powerful sedatives, their stimulant action arises, or is caused by the system reacting, or striving to oppose the sedative action of the medicine, and we have therefore a strong effort of nature to carry on the circula-

tion and to prevent the depressing effect of the sedative medicine, and so it is with all sedative medicines, and some have noticed digitalis causing excitement, and it is owing to what we have stated above while others have not seen any stimulant effect. Opium in small doses is a stimulant. Tartar emetic is also stimulant which is shown by diaphoresis, it affects and goes through the system quickly and out of the system unless given in very overpowering quantities. Opium acts on the brain and has a soothing effect and does not irritate and stimulate the nerves like Tartar emetic, nor does it paralyse the nerves from coming in contact with a powerful general irritant like Tartar emetic. Opium only slowly diminishes the action of the nerves, but it does it entirely and quickly, if long continued and given in large quantities. Tartar emetic is thrown out of the body by perspiration by vomiting by the urine and by purging when the quantity gets too large for the system to bear it but at the same time the system is affected, and retains as much as it can bear and the rest is thrown off and out of the system. Opium on the other hand from being soothing, and not irritant and diffusible like Tartar emetic is retained in the system and is not thrown out of it, and is thus more poisonous or a poison.

ERRATA.

Page 8, line 25, *for* left *put* right, line 26, *for* right *put* left.
„ 19, line 20, *for* left *put* right.
„ 20, line 9, *for* left *put* right.