It is laid down in books, as a fundamental precept, that the perforator, not the forceps, should be resorted to for the delivery of dead children. The reason assigned is, that the perforator is a safer instrument than the forceps. I beg to doubt the correctness of the supposition and the propriety of the practice. In a case of twins (before named), I perforated the first child, because I could not; and I did not use the perforator to the second, because I could get at it with the forceps.

When the necessity for the use of the perforator is in my mind clearly established, I have not hesitated, holding paramount the safety of the mother, to employ it, irrespectively of the child being dead or alive.

A very laudable desire has been expressed by Dr. Tyler Smith, on the desirability of abolishing the operation of craniotomy. It would be well indeed could this be accomplished; but, bearing in mind that the difficulties usually arise in first children, where previously we have had no means of ascertaining the exact condition of things, it is more desirable than possible. After the first labour, when the difficulty has been discovered, then it would not only be culpable, but criminal, to neglect, as the chief means of averting so dire a necessity, the induction of premature labour. This was done twice in the same patient, when at the first labour a tumour was discovered. It is well for the interests of humanity that the dangerous facility with which this operation can be effected, is unknown—if it is unknown; and, if not unnamed, not fully described in ordinary channels. The manifold uses of warm water are not yet enumerated. Of its appliance and value in natural labour, I hope fully to speak at no distant period.

[*To be continued.*]

THE PATHOLOGY, DIAGNOSIS, AND TREATMENT OF CARDIAC DISEASES.

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VI.—Treatment of Pericarditis. General Remarks; Bleeding; Mercury; Opium; General and Local Treatment; Paracentesis of the Pericardium; Pericardial Adhesions.

In considering the treatment of pericarditis, it is necessary to bear in mind a fact already referred to, namely, that pericarditis (excepting in the case where it is the consequence of traumatic injury) is not an idiopathic inflammation; that is, not idiopathic in the sense in which we use the term, as applied, for instance, to ordinary inflammation of the lungs.* Pericarditis, when not of traumatic origin, or excited by the local action of tumours, etc. in the neighbourhood of the pericardium, is manifested either secondarily, as the result of some other disease present elsewhere in the body,—of purulent absorption, for instance; or as one of the local expressions of some general disorder of the system,—of its fluids or its solids,—as in the case of rheumatic fever. Unless these distinctions, in the origin of the disease, be properly recognised by the practitioner, he will never arrive at a correct and rational method of treating pericarditis.

Excluding, then, from consideration those cases of pericarditis, which are the results of traumatic injuries, or other local affections, we find, that we have to deal with a disease which is connected with some particular diathesis, or constitutional disorder, not merely with a local inflammation. One treatment, therefore, must be directed to the constitutional disorder as well as to the pericardial affection. And since, as we have seen, pericarditis is associated with many different constitutional disorders, it is manifest that no general directions of treatment can be prescribed, which shall be adapted to every case; for each case demands a particular consideration—a consideration founded, in the first place, upon the nature of the exciting cause, or upon the relation of the pericarditis to the constitutional affection; and secondly, upon the age, constitution, and condition in life of the patient. These are the data upon which a rational treatment must be founded.

It follows necessarily from this, that the treatment which may be proper in one case, is most unfitted for another case; and, therefore, that in different cases, different plans and methods of treatment become the true and proper methods.

We have already seen, when describing the causes of pericarditis, that it was necessary to divide the disease into two general classes, *rheumatic* and *non-rheumatic;* and in accordance with what has been there advanced, I shall consider the treatment of the disease under these two separate heads.

The first sort, the *rheumatic pericarditis*, includes generally all the most acute forms of the disease. In such, the local inflammation itself becomes the chief centre towards which the treatment is especially directed; for it is this local inflammation which immediately tends to the destruction of life, and in the manner I have already described. The local character of the inflammation, therefore, and the consequences resulting from it, are the characteristics of rheumatic pericarditis,—its prominent features. The same cause which brings out the pericarditis is, perchance, the cause of the arthritic affections, and may be the cause of other local inflammations; but all such other co-existing and localised affections, are of diminished importance in comparison with the pericardial affection. Once the pericarditis has declared itself, it becomes the primary object of our treatment; the others are but secondary and subordinate objects.

On the other hand, in the *non-rheumatic* form of pericarditis, the local inflammation is rarely of other than secondary importance; its symptoms are ofttimes so little marked, so obscure, and produce, by their reaction, so little disturbance of the constitution, that the existence of the inflammation may altogether escape observation, if not carefully watched for and anticipated. Where non-rheumatic pericarditis occurs, death very generally ensues, but it is not the pericarditic inflammation, which is the chief destroyer of life in such cases. Although the local inflammation is ten times more severe in the rheumatic form of pericarditis, death is an exceptional result, whilst here in the non-rheumatic form it is the rule; and when we seek a clue to elucidate this apparent discrepancy, we find it at once in the different nature of the maladies with which the inflammations are associated. Acute rheumatism is not, *per se*, a fatal malady: but uræmia is, and so are very generally those forms of erysipelas, of tuberculosis, of scarlatina, of typhus, of pyæmia, of pneumonia, of pleurisy, in the course of which non-rheumatic pericarditis appears, and which are erroneously said to be its causes.

Speaking generally, then, and in accordance with the foregoing remarks, I may say: That the treatment of the *non-rheumatic* form of pericarditis is the treatment of that particular general affection, with which it happens to be associated; and that the treatment, therefore, has quite a secondary reference to the particular local inflammation. Such is the rule; but of course it has its exceptions: for we now and then, though very rarely, meet with cases of non-rheumatic pericarditis, in which the local inflammation takes on such a form as to become a very prominent part of the disorder.

On the other hand, in the case of *rheumatic pericarditis*, we have to treat both the general disorder and the local inflammation. The diathetic nature of the disease indicates, that the general treatment should be mainly the treatment of acute rheumatism. And the local inflammation demands the use of local remedies; its peculiar seat,—its immediate relation to the heart—indicating, besides, some special objects for our consideration in this respect. It is to the acute inflammation, therefore, as we find it especially typified in rheumatic pericarditis, that the following remarks on its treatment apply.

Bleeding, in the treatment of pericarditis, has been very highly extolled; at the present moment, however, its practice is generally abandoned in this country. That its value, as a remedial agent, has been overstated by Bouillaud and many other admirers of the practice, is now universally admitted.

"Contrast," says Dr. Bennett, "the treatment of Hope with that of Stokes, and what a difference is observable! The former energetic in lowering remedies, the latter cautious, and constantly warning us not to proceed too far. Though he

* I say advisedly, "as usually applied to inflammation of the lungs"; for I do not wish to be here understood, as considering that so-called idiopathic pneumonia is really and truly invariably such. I have already referred to the fact, that pathology is daily diminishing the number of those idiopathic local diseases, and referring them to some more general and exciting cause, present in the body. There are many reasons which justify the belief that "idiopathic pneumonia" may possibly be merely the local signs of a general disorder. We must remember, therefore, that "idiopathic" means merely, and no more than, this; viz., that, so far as we at present see, the inflammation is a local disorder, provoked by local causes, and having no relation to any particular general disorder of the system; and admitting, as we must, our very imperfect knowledge concerning the exciting causes of diseases in general, and marking, as before said, the more enlarged views which modern pathology has opened to us concerning their nature, we should at least be cautious in localising *the disease* in the existing and perhaps accidental derangements of parts.

recommends blood-letting, it can only be practised with his consent, at a time, to an extent, and under circumstances when obviously it is least likely to do harm." (*Principles of Medicine*, p. 528.)

A better pathology and a truer method of observation have forced upon the physician, during the last few years, a conviction of the injurious effects of large venesections upon the progress of internal inflammations. Inflammation is a disease of weakness. It is a condition, which, in reference to health, is an asthenic condition. Heat, redness, and increased vascularity are no more signs of a sthenic circulation, than is the hyperæsthesia of a paralysed limb a sign of increased vigour of the nerve force. There are, indeed, few physicians at the present time who resort to venesection in the cure of pericarditis with the hope of arresting the inflammation; and even they who still follow this practice of former days, in the treatment of acute internal inflammations, admit that it is only during the very early periods of the pericardial inflammation, and in patients of strong and robust constitutions, that venesection is of service. That a moderate bleeding may be practised with impunity, *under such conditions*, there is little doubt; and that it often gives *temporary* relief to the sufferings of the patient, and relieves the congestion of the heart and lungs, is certainly true; but that such a bleeding has any other beneficial effect or any direct influence over the progress of the inflammation has yet to be proved.

But if the good effects of such venesection are so doubtful, its evil consequences, when it is practised without reference to the conditions specified, are to the eye of modern medicine certain and manifest. We must recollect, that we have to do with a disease which attacks for the most part those of a somewhat feeble constitution; and that rheumatic pericarditis occurs exceptionally only in persons of robust constitution; and that there are, moreover, peculiar circumstances connected with pericarditis, which oblige us to be especially cautious in the abstraction of blood. We must keep in mind the fact, that an organ is involved in this inflammation, the constant performance of whose functions is indispensable to life; and that one of the most immediate effects of the inflammation and its products is to induce a paralysed condition of the muscular structure of the heart, and thus to endanger the integrity of its action; that in pericarditis, the reaction of depression, consequent upon the excitement, is great, and sets in early; and that it is in those cases in which the inflammation appears most violent at the onset, that we are most cautiously to watch for and to expect the greatest amount of subsequent depression. Moreover, it is certain that bleeding will not arrest the exudation; but on the contrary it appears, in certain states of the body, to hasten and increase the amount both of the solid and fluid parts of the exudation. There is another danger, also, which is possibly incurred by the bleeding. Endocarditis, as we have said, is very commonly associated with the pericarditis, and under such circumstances bleeding, by promoting the tendency in the blood to the deposition of its fibrinous particles, increases the danger of permanent injury, to which the valves are exposed, through the deposition of fibrine upon them. Dr. Todd, again, has a remark well worthy of note under this head. He says, in his lectures on *Renal Diseases*, p. 412:

"I would impress upon you this dogma; an active antiphlogistic treatment creates asthenia—asthenia gives to both rheumatic fever and gout what I may call *the shifting character*, which in both diseases is most perilous; when you find this shifting tendency, depend upon it that the asthenic condition of the patient is that which demands your earliest attention." "In this case of acute rheumatism," he says again at p. 12, "the loss of large quantities of blood from hæmaturia at an early period of the disease, has not sufficed to keep off a severe attack of pericarditis .... nor has it saved the patient from swollen and exquisitely painful joints. On the contrary, the articular, as well as the cardiac symptoms, have been much less tractable than usual."

It is to be understood, however, that in thus speaking of blood-letting, I am referring to large venesections, and of their effects upon the inflammation only. That small bleedings are often of very great service in relieving the congestions of the heart and lungs, which so often arise as consequences of and coincidently with the pericarditis, is, I think, an undoubted fact. I have elsewhere spoken of this particular mode of action of venesection; and if the conclusions* there arrived at are correct, it follows that, in the treatment of chronic and acute cardiac, as well as in certain other acute diseases, moderate venesection is of the greatest service, and, at the present moment, less frequently resorted to than is desirable.

In all cases of pericarditis, when the heart's action is much disturbed and its congestion great, I would strongly recommend the abstraction of a moderate amount of blood by venesection; the amount being regulated by the condition of the patient, and the degree of relief which it gives. Not only in pericarditis, but in all states of diseases of the heart in which congestion of the organ occurs, is such venesection—duly adapted to the individual case—of great service. I am satisfied that I have even seen life preserved by this timely abstraction of blood in cases of chronic valvular diseases of the heart, where the organ was so overwhelmed and labouring as to render death imminent.

As regards the *local abstraction of blood*, there can, in my opinion, be no doubt as to the propriety of applying a few leeches to the præcordial region, or of abstracting blood by cupping, in pericarditis, from that part, whenever there is much pain in the neighbourhood of the heart. The relief which a few leeches, thus applied, often give, is very striking; and is, I believe, explained by the fact that they draw the blood directly, or divert it, from the seat of the inflammation which causes the pain. Severe pericarditis, it must be remembered, is invariably accompanied by inflammation of the parts of the pleura which lie contiguous to the heart; and this local pleurisy is, I believe, very frequently the chief cause of the pain which is felt in the course of the pericarditis. And it certainly is not unfair to assume, when (as frequently happens in the less severe forms of pericarditis) there is an absence of pain at the præcordial region, that there is also an absence of the pleurisy.*

Caution, however, is requisite even in the local abstraction of blood at advanced periods of the disease, when the patient has previously undergone venesection, or is in an anæmic or enfeebled condition of body. Even a few leeches, under such circumstances, appear sometimes to produce alarming results. I have seen purpura hæmorrhagica and death quickly succeed the application of eight or ten leeches, in a case of acute pericarditis, where bleeding was considered inadmissible; and I have also witnessed fatal choreal symptoms closely follow the application of a few leeches in a child who was suffering from the same affection; and in both cases I was compelled, in reason, to associate the effects of the leeches with the immediate results which followed their application.+

It has been supposed that leeches, applied to the inflamed joints, may reduce the pericardial inflammation; but of this the proofs are altogether wanting. Whether there really is any connexion between the severity of the arthritic and the severity of the pericardial inflammation, is still matter of doubt. The influence which the one exercises over the other has yet to be determined. There can, however, be no objection to the application of one or two leeches to the inflamed joint when the arthritic pain is severe. I have so often seen this practice give great relief, that I cannot doubt its propriety, if judiciously made use of.

Whether leeches or cupping be most adapted for the local abstraction of blood, has been made matter of dispute; cupping is, occasionally, in pericarditis a very painful operation, but it has the advantage, when skilfully performed, of more quickly

* 1. Venesection has no *directly* beneficial influence over the course of inflammations, either external or internal.

2. But venesection is at times of great service, *indirectly*, in the course of certain internal inflammations, and in the course of certain internal chronic diseases, and of all disorders which occasion congestion and oppression of the heart.

3. The use of the venesection is in all cases alike. It acts by relieving the cardiac oppression; it neither arrests nor modifies beneficially inflammation. (*Remarks on the Uses of Bleeding in Diseases.*—BRITISH MEDICAL JOURNAL.)

* The distribution of the blood-vessels here enables us to explain the reason of the beneficial influence of the local bleeding. The internal mammary artery, which, in part, supplies the skin, etc., over the left side of the sternum, sends a branch directly to the pericardium. The intercostal arteries, also, which supply the costal pleura, are in part distributed to the skin over the præcordial region. Consequently, both from the inflamed pericardium and the inflamed pleura local bleeding acts directly by drawing blood, or diverting the current of blood, from the part. There is, consequently, a marked condition to be drawn between the effects of bleeding in inflammation and the local abstraction of blood from the inflamed part: Local abstraction of blood materially influences the inflammation, reducing the most characteristic of its phenomena. But local abstraction of blood can only modify, in this way, the inflammation of internal parts, when there is a direct vascular connection between the part inflamed and the part from whence the blood is taken.

+ In the case of the child, violent choreal symptoms so immediately followed the application of two leeches to the temples, as to leave no reasonable doubt as to the fact of their being the immediate exciting cause of the chorea. And in the other case, I well remember the remark of the gentleman who insisted on their application: "That they could do no harm, if they did no good."

obtaining the object sought than leeches, and of less worrying and fatiguing the patient; and less exposes him to the chances of being chilled by exposure to the air. Cupping, however, is manifestly objectionable in females, and few persons have the knack of performing the operation quickly and effectually; leeches, therefore, will as a rule be the means used to draw blood from the præcordial region. The distribution of the internal mammary artery would seem to indicate that the leeches should be applied rather along the left side of the sternum than about the point where the apex of the heart beats, and the left side of the left nipple.* The patient should always be carefully covered with flannel during the application of the leeches.

Mercury. The induction of the specific effects of mercury was formerly considered by the leading practitioners of our art as of primary importance in the treatment of acute pericarditis; but later and more extended experience has not corroborated the opinion.† The practice, indeed, may be said to be generally abandoned at the present moment. The careful observations made by Dr. John Taylor first demonstrated the worse than inutility of the induction of salivation in pericarditis. "The best evidence", as Dr. Bennett says, "on this subject is to be derived from an analysis of the forty cases of acute rheumatic pericarditis by that gentleman, in which mercurial ptyalism was produced, and with the following results:—1. Ptyalism was not followed by any abatement of the pericarditis in twelve cases. 2. In one case, ptyalism was followed by speedy relief. 3. In two cases, ptyalism was followed by a diminution, and then gradual cessation, of pericardial murmur. 4. In one case, pericardial murmur had been diminishing for some days before, and it ceased soon after ptyalism was produced. 5. In one case, pericarditis and pneumonia both increased in extent and intensity after ptyalism. 6. In four cases, pneumonia supervened after the establishment of, and therefore was not prevented by, ptyalism. Was it *caused* by it? 7. In three cases, endocarditis supervened after ptyalism. 8. In six cases, ptyalism was followed by pericarditis. 9. In one case, ptyalism could not be produced, and yet the pericarditis went on favourably. 10. In two cases, ptyalism was followed by extensive pleuritis. 11. In one case, ptyalism was followed by erysipelas and inflammation of the larynx. 12. In two cases, rheumatism continued long after ptyalism was produced.‡ Thus, out of the forty cases, only four can be said to have improved after the mercurial action was established, and in these there can be little doubt that the improvement was purely a matter of coincidence. Indeed, I have often observed in hospital cases, that when mercury has been said to be most successful, its physiological action has been established just about the time when, during the natural progress of the disease, the friction or blowing murmur may be expected to cease." (Bennett's *Principles of Medicine*, p. 529.)

The conclusions to which Dr. Taylor was led by these observations have been so fully confirmed by subsequent investigations, that the inefficacy of the practice of inducing salivation in the cure of acute pericarditis may now be considered as an admitted fact in therapeutics.§

[*To be continued.*]

* It might, perhaps, not be out of place here to insert a word of caution to the student in respect to the management of the physical examination of the patient. I believe there is no case, in which physical diagnosis is required, where more gentleness and tenderness should be employed in its practice than in the case of acute pericarditis. The severe sufferings of the patient and the nature of the disease forbid all needless exposure of his person, and all manipulations which are not absolutely necessary for the satisfaction of the diagnosis. I cannot doubt, that the excitement, and the pain, and the exposure, which frequent examinations necessarily entail, are often very prejudicial to the patient; and particularly in the instance of young and nervous females, who seem, among the lower classes, to be especially liable to the inflammation, and in its most acute forms.

† The following may be quoted as an example of the ordinary method of treatment adopted some years ago in acute pericarditis:—"Of one thing, I am certain, that inflammation of the pericardium in a person of tolerably good constitution, may be generally arrested in its progress by bleeding, frequent leeching, and scruple doses of calomel..... Instantly use every effort to produce the full action of mercury on the system. Apply the ointment to the axillæ, smear it over the inside of the thighs; make your patient respire the vapour of hydrargyrum cum cretâ as often in the day as he can bear the process." (Graves' *Lectures*, II, 153.)

‡ To these conclusions may be added the fact: that pericarditis has been frequently observed to supervene during salivation. Dr. Fuller, in his work on Rheumatism, notes five such cases. In each case he observed that the salivation appeared to act injuriously upon the pericarditis. The most rapidly fatal case of pericarditis which has come under my own notice, was one in which the pericarditis commenced, when the patient was suffering from severe salivation.

§ It is a fact worthy of note, as corroborative of this position, that mercurialisation in acute pericarditis has never been much resorted to on the Continent. The practice would seem to be almost untried and unknown in Germany. Neither do there appear to have been any authorities in France who have patronised it extensively, however vigorously they may have resorted to that other prime (so-called) antiphlogistic remedy, bleeding. The opinion of Gendrin (*Leçons sur les Maladies du Cœur*), that mercury is completely useless, appears to be the general opinion of his countrymen.

TWO CASES OF CONTINUED FEVER OCCURRING IN THE PUERPERAL PERIOD, SEVERALLY SIMULATING PUERPERAL CONVULSIONS AND FEVER.

By E. Garraway, Esq., Faversham.

[*Read before the East Kent and Canterbury Medical Society.*]

The suspension and arrest of internal disease on the occurrence and during the continuance of pregnancy is well known to you. Instances must have occurred to all where a woman has been snatched for a time apparently from the very jaws of death, by the occurrence of conception. A lady, a near relative, who four years ago was expectorating large quantities of pus from a cavity in the right lung, sweating, emaciating, in short said to be dying, became pregnant, all these formidable symptoms abated, and in due course a strong and healthy child was born. Again the mother relapsed, again she became pregnant, and this recurred four times, and the lady is at this moment in the enjoyment of moderately good health, still, however, with a partially obliterated lung.

I mention this singular power which pregnancy appears to exert of arresting existing internal disorder, only the more strikingly to contrast the peculiar susceptibility to disease, which arises on its completion, the puerperal state appearing to induce a proneness to the absorption of noxious or morbid *materies* from without. No sooner is the process of gestation perfected, and the child born, than the maternal system seems ready to imbibe any subtle poison which may be floating in the atmosphere, more particularly the *materies* of erysipelas, the exanthemata, and eruptive, and febrile disorders generally. Why this should be so is not easy to explain, it is probably dependent upon diminished nervous tone consequent upon the shock of labour. Did the uterine sinuses remain open, and the os and vagina uncontracted, we might imagine absorption of a poisoned atmosphere to ensue, but experience warrants no such supposition.

I have been led to these observations by one or two cases of recent occurrence, and which I think sufficiently interesting to bring before the society.

Case I. Mrs. M., aged 35, was safely delivered of her fifth child in December last. Everything went well with her till the 10th day, when I was hastily summoned, and found my patient just recovered from what appeared to have been a hysterical seizure. She expressed herself as being perfectly well, and unconscious of what had happened. In an hour or two this was repeated, but the attack which I had the opportunity of partially witnessing was evidently not hysterical, but epileptiform and convulsive. The seizures occurred again and again at intervals of a few hours, each time becoming more violent and protracted. During the intervening periods, however, the patient had nothing to complain of, save a feeling of exhaustion, no pain in the head, no great acceleration of pulse, in short, no indication of disease whatever. Still the attacks were sufficiently alarming. Depletion, counterirritation, in various forms, and mercurialisation, were had recourse to; notwithstanding matters grew worse, and scarcely three or four hours passed without convulsion, which every time became stronger and lasted longer than before, so that at length they assumed a more frightful character than anything of the kind I had ever witnessed. Every muscle, from the occipito-frontalis to the plantar muscles of the foot, was in violent action, every thing in the room was in a state of vibration, the windows rattled, and the nurses were fain to fly in terror from the house. The poor creature was about four days arriving at this state; the pulse was by this time running, the dejections passing involuntarily, the whole surface bathed in sweat, the tongue and teeth now brown and covered with sordes, and so my poor patient sank.

It was at first difficult to pronounce upon the pathology of this unwonted case, but the brown tongue and sordes, coupled with the fact that one of Mrs. M's. little girls was suffering from low fever at the time of her accouchement, furnished the key to the mystery. There is little doubt in my mind that the fever-poison was here absorbed, probably soon after delivery, and the convulsions under which the patient sank were occasioned by its maturation and nature's efforts at elimination.

The next case, though altogether dissimilar, so far as