

efficient and very useful at this period, when the sloughs have separated.

M. Dupuytren says, that there are elongations of the subcutaneous cellular membrane which extend into the skin, and that when one of these becomes inflamed, it forms a boil, but if several be inflamed, they form a carbuncle. It may be so: the disease may begin in these elongations of the cellular membrane of which he speaks, as far as I know; I cannot contradict this opinion. But there is something more than this: I do not believe a carbuncle to be a mere local affection; it is a constitutional disease, and is always preceded by something wrong in the general health. It seems to me as if there were something like a poison in the circulation, which is thrown out of it into the cellular membrane in cases of carbuncle; so that we might be justified in classing this disease with small-pox and other exanthemata. In a case of small-pox, there is first an attack of fever, which is relieved as soon as the pustules appear; and as these contain the variolous poison, there is little reason to doubt that it is the expulsion of the poison from the circulation that relieves the fever. The case which I am about to relate seems to indicate that something like this happens in cases of carbuncle. A gentleman, and old acquaintance of mine, formerly a surgeon of eminence in a provincial town, but who has retired from his profession, about sixty-three or sixty-four years of age, called upon me some years ago, at my own house, in the morning, and said there was some complaint in his back, and that he suffered a great deal of pain. On examination I found that there was a carbuncle. I sent him home, and told him to poultice it. Two or three days afterwards, it being, as I supposed, in a proper state for the operation, I made a crucial incision through it. He was very much relieved, and was going on very well, indeed, when there appeared another carbuncle, but on a smaller scale than the first. It was not a pimple in the skin, but the subcutaneous form of the disease which I have already mentioned. I told him what I believed to be the case. He said that it did not give him a great deal of pain, and I therefore thought it would be better to let it advance a little further before I opened it. It went on increasing, the skin over it became purple, and the whole assuming the ordinary form of carbuncle. In the mean time he continued well, and appeared to have hardly any thing the matter with him except the local complaint. But two or three days afterwards on calling upon him, I found him in bed. On inquiring the cause, he said in a faint voice, "O! my dear friend, I am dying." I expressed a hope that that was not the case. "O! yes," said he, "I am dying." I found that indeed his words were true. His skin was cold and clammy, and the pulse scarcely perceptible. I asked him how long he had been in that state? His answer was, "During the night all the pain subsided, and at the same time I became ill. I believe that the carbuncle itself has disappeared." And so it was: when I examined the back, I could find scarcely a vestige of it. He died in less than twenty-four hours after this change had taken place.

Another circumstance is worthy of notice, as confirming the view

which I have taken of the pathology of this disease. It frequently happens, when a patient has recovered from a large carbuncle, that other smaller ones, like boils, appear on different parts of his body; and a succession of these, gradually becoming smaller and smaller, may continue for many months, or even for one or two years.

---

## LECTURE X.

### INFLAMMATION OF THE VEINS.

INFLAMMATION of the veins is a very common disease, and was not much noticed till within the last forty or fifty years; but of late it has been the subject of very general investigation. One description will not apply to all cases, as it occurs under various circumstances, arises from various causes, is attended by different symptoms, leads to different results, requires, of course, different treatment, and has the additional characteristic of sometimes being not at all dangerous, and at other times extremely so. Let us, then, take the disease in its simplest form, for all diseases should be thus studied. I address this observation more particularly to those gentlemen who are just commencing their studies; I recommend them to study the simpler forms of disease first, namely: those cases which more advanced students look upon as of trifling importance, for, by thoroughly understanding these, you will be enabled more readily to comprehend those more difficult cases which you will meet with afterwards. Suppose, then, a man has varicose veins of the leg; he takes too much exercise; you therefore rest him; you also purge him, and bathe the parts with cold lotions. The pain probably soon ceases, and very slight constitutional disturbance results. Now, if from any cause this man should die, and an opportunity occurs for examining the body, you will find the veins which, during life, felt hard and like cords beneath the finger, filled with lymph, so as entirely to have obliterated their cavities. This form of the disease is not dangerous; it seldom leads to any bad result. Then there are cases where inflammation of a larger vein takes place, independently of wounds or mechanical injury, and these also are not generally dangerous. Let us suppose an ordinary case. A man takes too much exercise, or is exposed to cold; he gets a sense of weight and pain in the groin, extending down throughout the whole of the limb; there is tenderness along the course of the veins during the day; no constitutional disturbance; pulse a little quickened, but the symptoms not urgent; then, after a time, the calf of the leg swells, soon the whole of the leg swells—it is an elastic swelling, and is sometimes sufficient to make the leg double its natural size. These symptoms continue for a length of time, and then, either with or without treatment, begin to subside; and first, perhaps, the pain ceases, the swelling remaining; then, perhaps, the size diminishes,



but not to the natural proportions, and sometimes the leg and ankle remain subject to swelling the remainder of the patient's life. Sometimes the swelling subsides every morning, but returns in the afternoon; here, again, there will be pain in the limb and tenderness in the course of the veins. In this case you will feel the vena saphena and the femoral vein like a cord in the groin, and you will be sure that this is the result of inflammation; but it will not be acute, and generally not attended with danger; but if it becomes more acute, and goes on to suppuration, then it is dangerous; and a particular feature of these last cases is the swelling of the thigh, leg, and foot. You may perhaps ask, why does venous inflammation produce this swelling? The reason is plain. The cavity of the vein becomes filled with lymph the blood cannot pass back to the heart, and then, having to find its way by some circuitous route, it becomes collected in the veins below, and the serous portion escapes, I suppose, by lateral apertures in the capillary vessels, and in this way produces the œdematous swelling. It is in this way effusion takes place in dropsy; it may be the consequence of disease of the heart, that the blood cannot make its way through the vena cava, and so you get the effusion in the same way. Another man, we will suppose, has disease of the liver; the blood gets confined in the vena portæ, and the serum escapes into the abdomen, thus laying the foundation of dropsy of the belly; if effused into the chest, it constitutes the disease called hydrothorax. Now to return; if you examine a case after death, resulting from acute inflammation of the veins, you will find the veins filled with coagulated blood mixed with lymph, and I am disposed to believe that, when the coats of the veins become inflamed, they give the blood contained in them a tendency to coagulate. It is not the disposition of blood when effused to coagulate; for we know that it may be effused into the tunica vaginalis, and remain there a long time without its being coagulated. You have another familiar example of this in the leech, in which the blood does not coagulate; but when it is out of the body, stir it as you will, it will coagulate. When inflammation of the veins runs very high, it becomes a dangerous complaint. It was the practice of Sir Everard Home to put a ligature on the vena saphena in these cases, but its effect was the production of increased inflammation. Mr. Abernethy recommended cutting the vein in two, and I being at that time much less experienced than I may claim to be now, tried his plan, but to my dismay, in a few days the man was dead, with violent inflammation of the veins. The example, therefore, is not one to be followed.

I shall now describe to you some of the MORBID APPEARANCES. These are different according to the period at which the patient dies; sometimes you find a red blush on the inner surface of the vein, and nothing more, this perhaps extending upwards towards the heart, and also downwards towards the capillaries, sometimes even to a greater extent in the latter direction than towards the heart; I do not by this mean that it runs a greater distance, but that it runs along a greater number of branches, because when it ascends, it confines itself to the trunk, and does not enter the branches. In these cases it looks like a

red stain, with a very little lymph effused on its surface; and with nothing more than this I have known the patient to die in a few days. But if he does not die, other changes take place. You find the blood coagulating in the veins (I say coagulating, for there is fibrin mixed with colouring matter), but this coagulum is evidently mixed with blood which has been effused, and sometimes you find a portion broken down, dissolved, and looking like pus, although I have not satisfied myself that this is pure pus. I have seen coagulum in the two ventricles mixed with this liquid-like pus, but it will not stand the test of a close examination, although it resembles the pus found in an aneurismal sac. If, however, the disease is allowed to go on, pure pus is formed, but then the vein becomes totally obliterated below, and the "vis a tergo" is wanting. In the greater number of cases where lymph is effused into the cavity of a vein, you will find pus secreted on the side nearest the heart; and although the pus at first puts on a doubtful appearance, if it goes on, there will be actual, pure, genuine pus, unmixed with any thing else; and then another portion of coagulable lymph will be effused between the pus and the heart, thus forming a complete barrier to its further progress. This second layer of lymph, however, is not unfrequently wanting; but even then, it does not follow that the pus shall mount up to the heart; for you will remember there is an obstruction also formed by the effusion of lymph previous to the formation of pus; so that the "vis a tergo" to force it forwards is wanting, and in this case it will form a regular abscess in the vein. The vein may be filled with pus for two or three inches of its length, or pus and lymph, pus and coagulum, or all three mixed together. If this remain, you have suppuration taking place, and then you get, secondly, abscess round the vein, which is entirely destroyed; so that, if the patient dies, you find merely very indistinct remains of it on examination. This abscess will soon make its way under the skin, and present itself externally. These, then, are the principal morbid appearances which present themselves after the inflammation of a vein. There are some others of minor importance, but these I shall dismiss for the present.

I come now to speak of the SYMPTOMS OF VENOUS INFLAMMATION. Now, let us suppose there has been a wound in the vena saphena, or in the groin; the patient has violent headache; shivering, the pulse very quick; tongue dry; next day the pulse so rapid that you cannot count it; another attack of shivering and intense headache; great agitation of manner, and an expression of anxiety in the countenance; the tongue will get black, as if he were in the last stage of typhus, and probably the next day the patient will die. This is not an overdrawn picture, for I have known several cases run this rapid course. But you will also find tenderness above and below the wound, the skin being so tender that the patient cannot bear it to be touched, and yet the pain will be relieved by putting on a flannel bandage, because it prevents the inflamed veins becoming distended. If the symptoms are less urgent, there will be shivering; an anxious countenance; brown tongue; sallow appearance of the skin; disturbance of the mind, but to a less degree than in the former; and in



these cases, where the symptoms are not so urgent, although the disease may go on for a long time, nevertheless the patient will ultimately recover. In these cases, where the disease persists for a long period, the local changes which I mentioned become manifest, viz., redness in the course of the vein; discharge of pus from the part where the ligature was applied; hardness of the vein, and swelling over the part which has been injured; and the abscess forms and breaks, and you will be able to press out the fluid from it even for several inches. If the disease has occurred after bleeding from the arm, several abscesses may form a few inches distant from each other, reaching up as high as the shoulder. But even cases which have gone on to the formation of these secondary abscesses may recover. The abscesses may be laid open; they will then go on secreting purulent matter for a long time, but ultimately granulations will form on the surface, and the patient will be restored. If this were all, there would be no reason why the majority of cases should not recover; but I have not yet described the principal thing which prevents this fortunate consummation. The patient goes on suffering the train of symptoms I mentioned before, viz., shivering, headache, &c., which appears to be connected with venous inflammation in the first instance; but as the abscesses come forward, or as the inflammation subsides, the constitution does not recover, but appears to suffer more. As the local symptoms subside, you might expect the constitution to recover itself; but instead, you find the febrile excitement continuing, with an anxious countenance, sallow tinge of the skin, fresh attacks of shivering, and pains in other parts of the body. One will complain of pain in the opposite shoulder, another in the knee, whilst a third will have a short cough or pain in the liver. In fact, there will be a variety of symptoms present in various parts of the body; and if the patient dies, you will find that actual disease has taken place in them. In one patient you will find both knee-joints filled with a reddish fluid; another will have a deposition of cheesy matter in the liver, which goes on to abscess; a third will have it occurring in the lungs, whether beginning in the air-cells or not, I know not; and these go on to abscess. You will also find effusion of fluid into the ventricles of the brain; effusion of lymph sometimes into the pericardium; inflammation of the pleura, and effusion here also. It is said the inflammation has been traced to the vena cava, but I do not think this observation correct. Mr. Hunter threw out the hint as if it were a possibility, and later writers have mentioned it as a matter of fact. Then you have fluids deposited in various parts of the body, and you may have fluid, and even lymph without pus. Venous inflammation may be the consequence not merely of a ligature or wound affecting a venous trunk, but it may arise in this way. A man has erysipelas, which is a disease of the integuments. This may extend into the cellular membrane, producing sloughs there, and abscesses under the skin, and so you have abscesses and sloughs mixed together. Now, in this case, when the patient dies, you will find the veins have participated in the erysipelatous disease. A man comes into the hospital (a gin drinker) with a wound in the leg, and

he has inflammation of the cellular membranes. The man dies, and when you examine him, you find pus deposited in the cellular membrane. Here again you have the disease of the veins. Inflammation of the veins also not unfrequently takes place after child-birth. Inflammation of the veins of the uterus, extending into the hypogastric, internal iliac, and cava veins, sometimes occurs in these cases. Here, also, if the patient dies, you find the veins filled with pus, and there is swelling of the lower limbs. In this way we account for "phlegmasia dolens," the white swollen leg. It is supposed that this swelling, which takes place after child-birth, is the result of venous inflammation; but if it is, it must be said that venous inflammation does not usually assume the violent character we have just described, but generally that milder form which I mentioned first; but very few of these cases occur where death follows. Indeed, Sir Charles Clark told me he never saw a case which terminated fatally.

## LECTURE XI.

### INFLAMMATION OF THE VEINS. (*Continued.*)

At our last meeting I began the subject of venous inflammation, and if I recollect rightly I explained some of the more remarkable circumstances which occur towards the termination of the disease—I allude to the inflammation showing itself in different parts of the body. Now by this I mean not merely those parts which are in the line of the inflamed vein, but in parts quite distinct from, and having no connection with the original seat of the disease. Thus, a man may have inflammation of the arm, and presently he will be attacked with inflammation of both knees, and the cartilages will be entirely absorbed; or again, abscesses may form in any other part of the body. An interesting pathological question is, "where there is venous inflammation, why should there be these deposits of pus in different parts of the body?" It is the opinion of some persons that pus deposited in an inflamed vein is carried into the general circulation. M. Cruveilhier has made some experiments on this subject which seem to prove that pus may be formed in an inflamed vein without being absorbed. Mr. Arnott says that although pus may not be produced in the vein, still there is a diseased action going on, by which a secretion analogous to pus is formed which becomes mixed up with the blood. But neither of these declarations can be considered as established, and I do not think it is at all necessary that there should be a morbid secretion of pus to produce these symptoms. A man has an attack of fever without your supposing that there is an affection of any particular organ or region of the body, yet what is the result? In one man you will find ulceration taking place in the jejunum or ileum; in another there will be a determination of blood to the head,



or he will have an attack of inflammation of the brain or lungs, and these results would lead us to suppose that where the system has been subjected to febrile action for a length of time, it acquires a disposition to produce local inflammation. A gentleman had a stricture many years, and several ineffectual attempts had been made to pass a catheter into his bladder; I however at last succeeded, but having drawn off his water he was immediately seized with a violent shivering, and after this had an attack of inflammation of the neck, and since that time the head has been permanently fixed and immobile. Now this you see arose merely from passing a catheter, and of course no part of it could have been absorbed. Again, a lady of nervous temperament had spasmodic contraction of the sphincter muscle, attended with great pain whenever she went to the closet; well, I divided the muscle on both sides, and she immediately fell into a state of complete syncope, from which, after a time, she recovered, but only to relapse into the same state a second time, and this entirely from the influence produced upon the nervous system. These attacks continued for some time till ultimately she was seized with inflammation of the chest, from which she died. On then examining the body I first looked to the part where the operation had been performed; in the hemorrhoidal veins nothing was to be seen; but I found inflammation of the peritoneum, and also effusion of lymph in the cavity of the chest; now in this case there was inflammation set up in a distant part of the body which could not be from the absorption of any diseased matter; in short it was produced entirely from the effect upon the nervous system. After injuries of the head we find these deposits in various parts of the body, and they occur more especially when there is suppuration going on between the dura mater and bone. One person will die of abscesses in the lungs, or of inflammation of the pleura, accompanied with effusion into the cavity of the chest. Then I have known cases where there has been fracture of the humerus or clavicle, and when the patient has died, the end of the bone has been found bathed in pus, and in these cases matter has been found between the dura mater and the bones. Some persons would have said, perhaps, there was in this case inflammation of the veins, which you have overlooked, and purulent matter has got into the circulation, but this is not at all probable; because it is not pus always which is effused, sometimes it is merely serum, and sometimes again you will have this secondary deposition of matter set up where there is no suppurative inflammation at all. A man had an injury of the head, and the surgeon applied a caustic issue which produced a large slough, so that the bone was exposed; in a short time the man died: previous to his death, however, he had a set of curious symptoms, for which we could not account: such as swelling of the abdomen, and a puffiness about the body; and when examined after death, we found there had been considerable peritoneal inflammation. The head was also examined, and it was found that where the caustic had been applied, the bone was dead, and of course, the dura mater separated from it, and a little pus was found between them. 2dly. A girl suffering from pain in the head, had a

caustic issue applied; she died of inflammation of the lungs, and it was found that where the caustic had been applied, the bone was dead; there was slight sloughing of the part and effusion into the brain. 3dly. A man was admitted into this hospital, who had been beaten about the head with sticks; he remained here till he died, and on examination, it was found that small particles of pus were deposited between the bone and dura mater; there was also a gelatinous matter mixed with these particles. Now, to say there was inflammation of the veins in all these cases, would be absurd. The view I am inclined to take of these cases is, that there is a certain disturbed state of the constitution induced, which has a tendency to end in the formation of pus; for you see that in persons who die from symptoms analogous to those we have just enumerated, there are always to be found in the extremities, what are called critical abscesses, depositions of pus in the cellular membrane. A gentleman had a violent cold, and was attacked with inflammation of the vena saphena, and died. The result here was rapid, and shows the importance of careful attention to the local disease, though still, as I said before, as a general rule, and in the majority of cases, this disease is not dangerous. The treatment must depend upon circumstances. But suppose you were called to a patient with symptoms, such as we mentioned in our last lecture, (shivering, sallowness of complexion, brown tongue, and slight derangement of the mental functions,) you would apply leeches in the course of the vein; retain the limb in the recumbent posture; keep the bowels open, and give moderate diet. But the principal remedy is mercury, in moderate doses, continued at stated intervals till the gums are slightly affected. Calomel gr. ij, or hydrargyri bichloridi gr.  $\frac{1}{4}$ , bis in die, is, I think, the best mode of administering the remedy. Where there is much inflammation of the leg, and considerable swelling, you may relieve the patient considerably by puncturing the part with a common needle; the fluid will escape rapidly from the cellular membrane. Mind, I do not say this will cure the disease, but it will relieve it considerably. I am seeing a gentleman now who had, some years ago, an attack of venous inflammation, and the leg was so much swollen as to threaten the bursting of the skin. In this case I punctured it in the manner just described, and afterwards he did it himself, and always found considerable relief from it. This mode, of course, gives greatest relief when the serum is very thin; sometimes it will be a comfort to the patient to wear a bandage as a support to the parts, but it should be *flannel*, and never applied *tightly* with the view of preventing the swelling. Once I saw a lady who had that form of swelled leg called phlegmasia dolens, the swelling being very large, and the skin tense; a bandage was applied, but she was soon attacked with pain in the hypogastrium, and a variety of symptoms which I cannot describe; the bandage was taken off; immediately the swelling returned, but the pain in the abdomen, and all the other symptoms just alluded to, disappeared; and this occurred twice successively. In acute venous inflammation, it is generally a good practice to take blood, but this cannot be done in all cases. Sir E. Home tied the



vena saphena in three cases, but they all died except one, who being a very strong man, was bled very freely, and here the practice succeeded beautifully, and the venous inflammation almost entirely subsided. But sometimes this disease is attended with low symptoms, the pulse being weak and feeble, and there is great prostration of strength. In such a case as this, it is evident you could not take blood largely; you must, therefore, be content to apply leeches to the part. Warm fomentations seem to answer better than cold applications; but this may be regulated by the feelings of the patient. Occasional purging and low diet will, of course, be most proper. Very frequently this is a consecutive disease, as it may follow an attack of erysipelas. Of course, in this case, and when it comes after cellular inflammation, the patient will not bear depletion. It is a question with some whether or not mercury is beneficial in these cases. In those which I mentioned of Sir E. Home's, which occurred when I was house surgeon to this hospital, it would doubtless have been extremely beneficial, but the administration of the remedy at that time was not thought of. In those cases where there is great prostration of strength, I doubt the propriety of its use; but where this symptom is absent, it may be employed with advantage. It, however, requires a good deal of discrimination on the part of the surgeon to determine when it is, and when it is not right to put the patient under the influence of mercury.

You will find, gentlemen, after venous inflammation, the limb is generally left swollen, and the veins are what is termed "varicose." Can any thing be done here? will a bandage do good in these cases? To a certain extent it will; but let your patient walk about, and you will find that the collateral vessels will thus become dilated so as to make up for those which have been obliterated. In some cases the swelling will entirely disappear, whilst in others, it will remain, to a certain extent, the remainder of the patient's life. I spoke of the disease in connection with varicose veins as though it only occurred in the lower extremities, but I saw it in the forearm of a patient a very short time ago, produced, as I think, by bleeding. In cases where a secondary deposition of pus takes place, very few, I think, recover, as the deposition is scarcely ever confined to one part of the body; and if you let it out in one part, there is no method of preventing its recurrence in another.

When venous inflammation has gone on some time, it is quite beyond the reach of art. But you should always bear in mind the original cause of the disease, and also the patient's previous mode of life. Many of you will recollect the case of the man last year, in whom I tied the external iliac artery; after the operation, there was a quick, irritable pulse, with pain in the opposite shoulder; and these I attributed to the man being debarred his usual quantity of stimulus. After bleeding him once, and finding he was no better, I allowed him a quantity of gin daily, and if I had not done so, I think there would have been the secondary formation of matter, as in some other cases I have described. Those persons who drink large quantities of spirits, are most liable to this deposition of matter, and, I think, it is owing,

in a great measure, to their being deprived of their usual stimulus; and in these cases you will sometimes succeed in arresting the disease by allowing the patient a certain portion of that kind of stimulus to which he has been accustomed. The general rule for treating inflammations, is by depleting remedies;—but there is another plan. Suppose a man gets a piece of glass in his arm, you would of course, in the first instance, remove it if you could, just as in chancre you give mercury to remove the cause which produced it. On the very same principle, in those cases where you have low symptoms coming on in cases of venous inflammation, produced by the withdrawal of the usual quantity of stimulus, your first plan should be to restore to the patient at least a portion of that stimulus. Let me take this opportunity of observing, that mischief is not unfrequently produced by violent changes in the patient's diet. If a man who has been accustomed to drink gin, or other stimulus in large quantities, meets with an accident, and you take him off that stimulus, you will have the injury going to a much greater extent than it would if you had not done so. And I am certain that I have been more successful in the treatment of persons who have been accustomed to drinking or high-living, by merely diminishing their quantity, than when I have had recourse to antiphlogistic treatment.

## LECTURE XII.

### VARICOSE VEINS AND ULCERS OF THE LEGS.

By a varicose vein, I mean a vein which is unnaturally dilated. When there is increased growth of any part, the arteries increase in size to take the blood to it, and the veins increase in size to take the blood from it. This is a healthy increase of the veins, and we do not call these veins varicose. But by a varicose vein, I mean a vein unnaturally enlarged, without the dilatation being instituted to answer any good purpose in the animal economy.

Varicose veins occur principally in three situations: in the legs; in the spermatic cord, where the disease is called *varicocele*, or *circocoele*; in the rectum, and about the anus, where the disease takes the name of *piles*, or *hæmorrhoids*. I will explain to you, by-and-by, why they occur in some situations more than in others. But varicose veins occasionally occur in other parts of the body. I have seen varicose veins of the forearm to a considerable extent. In the case to which I allude, there had been inflammation of the medium cephalic and cephalic vein. These veins had become obliterated, and, in consequence of their obliteration, the blood did not easily return from the forearm; so that the veins became varicose.

A man was admitted into the hospital who had varicose veins all down the right arm, and to a considerable extent down the right side