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LECTURE VII.

SUPPURATION AND ABSCESS CONTINUED: HECTIC FEVER.

Treatment of Chronic Abscesses; Means calculated to effect their disappearance without bursting; Artificial opening, valvular, by Trocar; Inflammation of lining membrane; Abscesses of long standing best removed by the Knife; Simultaneous occurrence of Abscesses in various parts of the body, arising.—first, from depressed condition of a part, or of the system, which may have been caused by severe Accident or Operation, or from Cachectic state; Treatment of these Cases;—secondly, from admixture with the Blood of Pus, or other Morbid Matters, occasioned by Traumatic Inflammation of a Vein; Spontaneous Phlebitis not inducing these results.—Hectic Fever; Conditions under which it occurs; Symptoms; Chill, Fever, Perspirations, their relation to one another, and to the general cause; Treatment.

The treatment of chronic abscesses involves many considerations, of which we can now enter only upon a few. I have already mentioned that they occasionally disappear without bursting. This fortunate event is most likely to take place in those very cases in which the abscesses prove most troublesome to heal, if they burst or are opened,—viz., in abscesses occurring in scrofulous or delicate persons, and in abscesses connected with disease of bone, especially if that disease be of syphilitic origin. You know how fatal are psoas and lumbar abscesses connected with caries of the vertebral column, when they burst; it is therefore well to bear in mind, that these abscesses sometimes disappear, or remain stationary, for a great length of time. I have seen a few well-marked cases in which the swelling gradually subsided, the spine seemed to become sound again, and the patient recovered his health, although there had been no doubt of the existence of an abscess, and the abscess had been attended, or rather preceded, by the usual signs of vertebral disease. Moreover, in the examination of the bodies of patients who have suffered from disease

of spine, it is no uncommon thing to find the remains of abscesses, which may or may not have proceeded to such an extent as to have presented externally, having the appearance of being in a dormant or retiring state. Their walls are, in such cases, thick and tough, and their contents are creamy, putty-like, or even calcareous; we have, therefore, a double reason to beware of interfering with psoas and lumbar abscesses; their fatality when they are opened, and the fact of their occasional spontaneous disappearance. The same remark applies to chronic abscesses in general, and particularly to those which occur in delicate subjects, or which are connected with disease of bone in any situation; they are all very slow to heal when opened, and their contents occasionally are removed by absorption. We cannot indeed look forward to this result with any degree of certainty in particular cases, but we should not forget to regard it as a possible event.

The treatment which has appeared to me most favourable to the disappearance of chronic abscesses, has been such as is most conducive to the general health,—exercise in the open air, nutritious diet, cold ablutions, and tonic medicines, together with some mild irritant to the skin covering or near to the abscess,—the application of tincture of iodine, or what is still better, a succession of small blisters. The disappearance of the vertebral abscesses to which I have referred took place in each instance while the patient was allowed to walk about and attend at the hospital occasionally. One of the men followed his avocation as a day labourer during nearly the whole time that he was under treatment. I think the more delicate and scrofulous class of patients who suffer from vertebral abscess have a better chance of obtaining a cure, by the absorption of the pus and the retiring of the abscess, than stronger and healthier persons, in whom the disease is of more accidental nature. The effect of iodide of potassium, and occasionally small doses of mercury, in promoting the disappearance of abscesses depending upon syphilitic disease of bones, is very decided. There are frequently to be seen in attendance, at the out-patient's room, delicate persons with chronic subcutaneous abscesses, unconnected with disease of bone, which are in process of absorption, under measures directed to the improvement of the general health, together with local stimulating applications.

The same general rules apply to the opening of chronic abscesses, which I laid down in the last

lecture, when speaking of the treatment of acute abscesses. The natural opening affords the most favourable vent for the matter, but it is not advisable to allow the skin to become much undermined, especially in the chronic subcutaneous abscess, for these are very liable to be followed by troublesome sinuses and ugly cicatrices, which may often be prevented by a timely incision. As a general rule, subcutaneous chronic abscesses should be opened as soon as the integuments over them begin to be discoloured, for the chance of their disappearance, without bursting, after that has occurred, is very slight. The opening should be free, and care taken not to injure the walls of the abscess by rough manipulation. It may be remarked that chronic abscesses, being accompanied by little inflammation, are in their progress more subject to the influence of gravity, and the mechanical effects of the pressure of their contents, than acute abscesses; they therefore approach the surface of the body less directly, and often travel to a considerable distance without bursting. This disposition to extend in the direction of gravity does not generally furnish a sufficient reason for opening them, because their progress is not attended with much injury to the surrounding parts. We not uncommonly see patients with large abscesses extending from the loins to near the knee, who are able to walk about, and do not appear to suffer much inconvenience.

In the case of a large chronic abscess, which is steadily increasing, and bids fair to approach the surface and burst, we sometimes endeavour to effect a compromise by evacuating a certain quantity of the contents, allow the wound to heal, and trust that the remainder may become absorbed, or that the matter may re-accumulate more slowly. With this view an oblique or valvular incision is made into the abscess, as recommended by Mr. Abernethy; or, (and this plan generally answers better,) the integuments having been divided with the knife, a trocar is introduced obliquely into the abscess. I have adopted this treatment in several instances, and have not seen any ill consequences result from it, but I have generally found that after the operation has been repeated two or three times, the wound does not heal, or the cicatrix gives way, and the abscess takes much the same course as if it had been allowed to burst: occasionally, no doubt, the treatment is more successful. Some of you may remember the man in Maynard's ward, with a large psoas abscess, preceded by the usual signs of vertebral disease, which I tapped with a trocar three times, at intervals of about two months. On the first occasion two pints of pus were evacuated; on the second, a pint only; and on the third, which is three years ago, half a pint of thin fluid was discharged, more nearly resembling serum than pus. After this the fluid re-accumulated a little, but I did not think it advisable again to remove it; the man, therefore, went home, and I learn from his friends that the swelling by degrees disappeared entirely, some weakness in the loins being the only remaining symptom of the disease.

When an abscess has begun to point, or rather, when the integuments at the pointing spot are discoloured,

you cannot prevent the formation of a permanent opening at the part by an incision, or by the use of the trocar; for if an incision be made where the skin is discoloured, the wound will not heal; and if it be made at a distance from the pointing spot, the evacuation of the contents of the abscess in this manner, by a side-door, as it were, will not prevent—will scarcely even retard, its bursting, where it had begun to point. Nevertheless, the artificial opening does no harm, and I think it in some measure diminishes the shock to the system, which is occasioned by the bursting of a large abscess, and the sudden discharge of its contents.

The treatment which I generally adopt in cases of large chronic abscess, connected with disease of bone, such as psoas abscesses, is as follows,—first, I endeavour to promote the absorption of the pus by counter-irritants; I direct issues to be made near the diseased bones, or small blisters to be applied in the neighbourhood of the abscess. The patient is at the same time allowed to go out of doors, if he can do so, and a moderately nutritious diet is given. If, in spite of these precautions, the abscess continues to advance, and to approach the surface, so as to render it probable that it will soon burst, I draw off some of the pus by a trocar, keep the patient quiet for a few days, and then allow him to move about again. The operation is repeated according to circumstances. When the abscess bursts, which generally takes place sooner or later, the patient is induced to get up and move about with crutches, as long as he is able to do so, the limb on the affected side being rested in a sling. By these means the progress of the disease is certainly, for the most part, delayed in its several stages, the hectic period is averted for a time, and an increased opportunity afforded to the constitutional powers of the patient to withstand the enervating effects of the disease, and to carry on the reparative processes necessary for a cure.

It may seem strange to talk of the inflammation of an abscess, but the membrane lining the cavity not unfrequently becomes inflamed after an opening has been established whether by natural or artificial means: more particularly when the abscess is of large size, and when the matter has been roughly squeezed out of it. The part becomes very tender and painful, the discharge scanty, thin, foetid and mixed with blood. The accompanying constitutional disturbance is sometimes severe, the fever being rather of an asthenic character, the pulse very quick, perhaps intermitting, the tongue dry, the skin hot and dry, and the patient restless. Under these circumstances it is important that the opening be sufficiently large to permit the free escape of the new irritating products formed in the interior of the abscess, and much relief is often afforded by enlarging the opening. At the same time warm fomentations or poultices should be applied to the part, and general antiphlogistic treatment adopted, not bloodletting, but antimonials, saline aperients, &c. This train of symptoms sometimes follows the admission of air into the abscess, which causes decomposition of the pus and irritates the lining membrane; but it is more often induced by the escape of blood, which, mixing with the pus, undergoes decomposition and

gives rise to the dirty foetid fluid discharged on these occasions. The effusion of blood may be caused by abrasion of the lining membrane of the abscess, and it is most likely to take place when the patient is much out of health at the time the abscess bursts or is opened. It may be expected, and its ill consequences may be watched for, when the matter which first escapes is stained with blood. In the case now in the hospital, where so much swelling of the limb, with severe constitutional disturbance followed the removal of the contents of a large deep abscess in the thigh, the man was in a wretched state of health at the time, and the fluid which flowed through the opening was thin and of a reddish colour. You remember what immediate relief was after two or three days afforded by a free incision into the abscess, giving vent to a large quantity of dark grumous stuff, which stunk like the contents of a filthy drain.

With regard to the treatment of those abscesses of long standing which are often mistaken for tumours, I believe it is the best plan to dissect them away altogether, provided they be free from connection with great vessels and other important parts, because their walls are often of considerable thickness, and they are lined by a structure resembling mucous membrane, so that they do not granulate freely and heal kindly when they are opened, but sometimes remain as sinuses for years. Besides, incisions into these abscesses are occasionally followed by troublesome inflammation of the erysipelatous kind, in the same manner as is the opening of serous cysts, burse, &c.

I must not omit to say a few words respecting an interesting and important class of cases which have been for some time known to surgeons, and have attracted especial attention of late years in this country. I refer to those abscesses which occur in various parts of the body, often in considerable numbers and usually associated with some primary abscess, ulcer, or local lesion attended with suppuration. They have been called metastatic or sympathetic abscesses, purulent deposits, or by other names according to the views which different writers have entertained of their nature and origin. They form a grave addition to the local disorder; and the constitutional symptoms with which they are attended are always very severe, and for the most part fatal. I need not stop to refute the idea formerly entertained, that they are occasioned by the absorption into the circulatory current, of pus from the primary abscess or ulcer, and its deposit in the new situation, for you are aware that the corpuscles of pus cannot thus readily pass to and fro through the walls of the vessels. As I have just intimated, you will find some difference of opinion respecting the nature of these abscesses. By most modern surgeons they are thought to depend upon the presence of pus in the circulatory system consequent on the inflammation of a vein, but they have appeared to me to take place under two very different circumstances; first, (and this division includes I believe, the greater number of cases,) suppuration takes place in various parts of the body in consequence of an enfeebled and depressed state of the system; secondly, it is sometimes occasioned by pus globules or

other morbid fluids mixed and circulating with the blood.

Let us consider the first class of cases a little in detail. Observe what frequently takes place in a limb which has been severely injured. Suppose a bad compound fracture or dislocation with much bruising, where attempts are made to save the limb, but the case goes on badly. In a day or two the limb becomes swollen and discoloured, thin grumous fluid issues from the wound, the extremity below the injury acquires a livid or dark colour, is cold and loses its vitality. Higher up, the limb assumes a dusky red hue, with more or less heat, indicating a state of low inflammation. If this inflamed part of the limb be examined after a short time, it is found to be loaded with serum, and suppuration is discovered to have taken place in various parts. The pus in some places is collected into distinct cavities lined with lymph, in others it is infiltrated into the cellular tissue, or into the texture of the muscles, dissecting and separating their fibres. There can be no doubt in such a case, that the abscesses and the interstitial suppuration depend upon the direct effects of the injury, extending far beyond the apparent mechanical lesion caused by it. The whole limb received a shock, sufficient to destroy the vitality of its lower part, and to induce a low kind of inflammation which was quickly followed by suppuration higher up. We have had of late years several opportunities of witnessing these symptoms following the severe lesions occasioned by railway carriages passing over and shattering limbs. In several cases where amputation was performed above the apparent seat of the injury, the less directly appreciable effects of the shock upon distant parts of the limb were shown in the sloughing of the stumps and the formation of abscesses at various points in the limb above the amputation. In cases where amputation was performed below the knee on account of injury to the ankle or lower part of the leg by a railway carriage, though the parts cut through appeared to be sound, we found that the stump generally sloughed. Sometimes, in addition, purulent infiltration took place into the limb. At others abscesses formed, although the stump did not slough. In one lad who recovered after amputation performed below the knee on account of severe injury to the foot and ankle, I opened three abscesses which formed consecutively in the thigh, and one in the buttock. Neither of these had connection with each other nor with the stump.

Such abscesses are not of uncommon occurrence in a limb above the point at which amputation has been performed under other circumstances, or indeed in a limb which has been the subject of any severe operation or injury. They do not result merely from the burrowing of matter from the wound, because they are often quite unconnected with it, but they must be regarded as a consequence of the impression or shock occasioned to the limb by the severe lesion of the operation, which, felt in the greatest degree in the line of incision, vibrates through the limb, and more or less through the whole system. Abscesses in a limb after operation are most common when the powers of the patient are low, or when, in addition to that of the

operation, the limb has received some previous severe shock, as in the cases of railway injury just mentioned.

But the shock of an accident or an operation is not generally confined to the injured limb, it extends to the whole system, and the effects of the depressed condition occasioned by it are witnessed in various ways, and, among others, in the liability of different organs to inflammation, which soon runs on to suppuration, or it may be to gangrene. How many persons die of suppurative pneumonia, pleurisy, arachnitis, or hepatitis, after severe accidents, operations, or burns. These secondary inflammations and abscesses are most frequent when the strength of the patient has been much reduced by illness before or after the operation, more particularly when there has been erysipelas or much suppuration in the limb. A man received some injury to the right wrist, from a heavy bar of metal falling upon it, traumatic gangrene set in, and the arm was amputated just below the shoulder on the fourth day. Four days after the operation erysipelas attacked the stump, and spread over the shoulder, chest, back, and loins. On the twenty-third day after the operation, when the erysipelas was subsiding, and the stump doing well, he was attacked with pain in the left shoulder, and in the fingers of the same hand, which was thought to be rheumatic. Then he was seized with pain in the right hip and right side of the chest, attended with occasional severe rigors, followed by profuse sweats. An abscess formed on the shoulder, which was opened, and three or four ounces of fetid bloody pus evacuated, affording some relief to the patient. Attempts were made to support his strength with wine, ammonia, bark, &c., but he became weaker. Two months after the operation the right lower extremity became swollen, tender, and painful. An aphthous state of the mouth with diarrhoea followed, and he died six weeks after the amputation. On *post-mortem* examination the stump was found to have nearly united, and the vein was quite healthy. There was a large abscess beneath the right deltoid muscle, another in the course of the right psoas muscle, communicating with the hip-joint the articular cartilages of which had been almost entirely removed. The right femoral and external iliac veins were distended with coagula mixed in places with pus. The right pleural cavity contained a good deal of lymph and pus, and there were small abscesses in the lower lobe of this lung.

These inflammations of distant parts, more especially of the lungs, quickly proceeding to suppuration, softening, and gangrene, are a very common sequence of operations performed upon patients who have been much reduced by previous disease, indeed they constitute the most frequent cause of death in these cases. The following instance of this kind will be remembered by some of you:—A delicate young man, in a very feeble state of health, to which he had been reduced by severe suppurative disease of the knee-joint, was admitted into the hospital for the purpose of having the limb removed. He determined on submitting to the operation, which we did not feel justified in declining to perform, although we could not recommend it to him. The limb was accordingly amputated, with very little

loss of blood. For a few days the case seemed to be doing well, and we had hopes of his recovery, but on the twelfth day he was chilly and feverish, with dyspnoea, and pain about the chest, shoulders, and back; the dyspnoea increased, his strength quickly failed, and he died on the eighteenth day after the operation. The stump was nearly healed, there was a small abscess beneath the upper flap, but the artery and vein were quite sound. Scattered throughout various parts of both lungs were numerous inflammatory patches, with hepatization, and grey, soft, suppurating spots in the centre of most of them. We cannot suppose that in these and other similar cases the secondary inflammations and abscesses are the consequence of an inflamed state of the veins, because those tubes are often quite healthy, and when they are diseased, they are so, probably as the result of the same general cause which gives rise to the inflammation of other parts than as a primary affection.

A similar train of events to those we have been considering may occur, not only after an operation or injury, but in the course of any long continued disease when the powers of the patient are much enfeebled. The life of a person suffering under cancerous ulcer, profuse discharge from an abscess or compound fracture, is often unexpectedly terminated by inflammation and suppuration or gangrene of some distant part. Inflammatory affections of the same kind are not uncommon in typhus and other low fevers; the pus formed in such cases is generally ill-conditioned, fetid, mixed with gas, and much relief is afforded by its discharge. It now and then happens that the illness takes this turn from the beginning. A servant girl, aged about 17, in rather a weak state of health, was seized with rigors, followed by severe pain in the arms and knees, which were thought to be rheumatic; the general symptoms assumed a typhoid character, with great prostration of strength and restlessness; the pulse was small and quick; the tongue dry, brown, and cracked; sordes collected on the lips and teeth; dyspnoea ensued, with delirium; the abdomen became tympanitic, the bladder distended, and she died within ten days of the first attack. On examination after death we found yellowish lymph and pus in both knee-joints, in the left shoulder, and in the bursæ beneath the deltoid and at the acromion. There were also numerous deposits of lymph and pus in various parts of the liver and in the lungs, those in the lungs being surrounded by vascular ecchymosed or hepatized condition of the pulmonary tissue. The right pleura was coated with lymph. There was no evidence of a wound or ulcer in this case, and no disease of vein or of the intestines was discovered.

It appears, then, that suppuration, diffused and circumscribed, may take place in various parts of a limb, in consequence of the shock sustained by the limb from severe accident or operation. It may occur in various parts of the body in consequence of a shock sustained by the system, or in consequence of the general powers having been reduced by loss of blood, by erysipelas, or long-continued disease of any kind. Lastly, it may occur in persons out of health, in consequence of some low typhoid peculiarity of the fever which attacks them.

Now, this first class of cases in which suppuration

occurs simultaneously in several parts of the body, in consequence of an enfeebled condition of the patient, has been confounded with that next to be described, because the morbid appearances are, in many respects, similar, and because the inflammation is frequently found to have attacked a vein. But I have already said that the veins may, under such circumstances, be regarded as suffering in common with other organs, not as the source of their distress.

The treatment should consist in endeavours to restore the general tone of the system. The abscesses should, if possible, be opened early, for their contents soon undergo decomposition, and the fœtid gases resulting therefrom, pent up in the body, add much to the general distress. During the febrile state which accompanies the early stage of the inflammation of the lungs and other parts under these circumstances, it may be necessary to employ antimonials and saline medicines, or to remove small quantities of blood by cupping or leeching. The local depletion may be advantageously combined with nutritious diet and tonics, when the inflammation is unaccompanied by fever. We cannot often boast of success in the treatment of these formidable cases, but, as a few have recovered, we should not give them up in despair. Much may undoubtedly be done to prevent the occurrence of such disastrous events by attention to the general health of the patient, by not delaying operations till the powers of the system have been too much undermined by the local disease, by care in preventing unnecessary loss of blood during an operation, and by avoiding too lowering a diet afterwards. By closely watching your patients, and attending to the earliest symptoms in suspicious cases, you may sometimes arrest the inflammation in its first stage, and prevent its destructive effects; remember that those destructive effects very quickly ensue, and that the time during which treatment is most likely to avail is very short.

In the second class of cases the purulent formations in various parts of the body appear to depend upon the admission into the circulating current of pus or other morbid fluids which, passing with the blood into the different organs excite inflammation of them. It is probable that the effects of the inflammation thus induced may vary according to the qualities of the noxious fluid circulating with the blood. Dr. Budd, in his treatise on diseases of the liver, adduces cases to prove that the septic agency may be introduced into the blood from a part in a state of gangrene, the noxious matter thus disseminated destroying the vitality of the tissues on which it acts most strongly. The supposition is worth bearing in mind, though the circumstances of the particular cases recorded are perhaps explained equally well by the depressed condition of the patient which accompanies mortification in one organ, rendering him liable to inflammation and mortification in others.

Mr. Arnott and other writers have clearly shewn that the scattered abscesses and inflammations which occur after injuries are occasionally connected with an inflamed state of the vein near the injured part, and depend upon it as their cause. Cases have frequently

occurred in which, during inflammation of a vein caused by the wound in venesection, tying a vein for the cure of varix, or a ligature placed upon the vein after amputation, symptoms have arisen similar to those I have described to attend the occurrence of inflammation and abscesses in various parts from other causes. The patient is seized with a succession of rigors and sweatings; a kind of low typhoid fever ensues, with quick pulse, dry brown tongue, sallow sunken countenance, &c. Dyspnoea, with pains in the joints and limbs occur; and after death, inflammation and suppuration, diffused and circumscribed, are found to have taken place in the lungs, liver, joints, bursæ, or other parts. These alarming sequelæ of the inflammation of veins are now so well known, that the apprehension of them has led to a discontinuance of many of the operations on veins which were formerly practised. They are supposed to be occasioned by the escape of pus from the inflamed vein into the circulating current. The pus and blood being intermixed flow on together, but the pus globules which are generally larger than the blood-globules, become arrested in the narrow capillary channels, give rise to inflammation, and so occasion the formation of abscesses.

The mode of formation of these abscesses has been illustrated by the experiment of injecting quicksilver into the crural vein of a dog. For the first day or two the animal suffered no inconvenience, but afterwards it became feverish, had cough, difficulty of breathing, and died. On examination, the lungs were found studded with small abscesses, in the centre of each of which was a globule of mercury. The mercury, in the same manner as the pus corpuscles, being arrested in the capillary tubes at various points, became the exciting cause of the inflammation, which was circumscribed around the spots where the irritating substance was detained.

These inflammations and abscesses in distant parts are occasioned almost exclusively, if not quite so, by the phlebitis which follows the wound or injury of a vein. They are very rarely, if ever, the result of the inflammation of a vein arising spontaneously. I cannot tell wherein consists the difference between spontaneous and traumatic phlebitis, which occasions so important a disparity in their effects upon the system. I do not think that the subject of spontaneous inflammation of the veins has attracted so much attention as it deserves, for I am sure it is of more common occurrence than it is generally supposed to be. I have observed it in a considerable number of instances, and under a great variety of circumstances;—in the latter stages of fever, of pleurisy, and of phthisis;—in cancer and in long continued illnesses of various kinds; most frequently in the veins of the lower, but occasionally also in those of the upper, extremities. You have lately seen both femoral veins inflamed in a case of disease of the hip-joint, and in a patient who died with malignant disease of the scrotum. Though a serious addition to an illness, the disease is by no means necessarily a fatal one, for I have known several persons recover completely from it. It occurs most particularly in patients whose strength has been

greatly reduced by any long continued depressing cause; that is to say, it occurs under nearly the same circumstances with the purulent deposits, which I described as constituting the first class of cases of that kind. Hence it is sometimes associated with those abscesses scattered in different parts of the body, which owe their formation to an enfeebled state of the system. They more commonly precede than follow it when they occur in the same person, and as I have already said, do not depend upon it. In the first cases of spontaneous phlebitis which particularly attracted my attention, I was somewhat apprehensive of the terrible consequences of the admission of pus into the circulating fluids, and watched carefully for the symptoms of inflammation of the lungs and other parts; but I have not known these symptoms to follow in a single instance, so that the disease has for some time ceased to be a cause of alarm to me on that account.

I have no remarks to offer to you in reference to the treatment of these secondary abscesses following inflammation of a vein. You must meet the various symptoms as they arise according to circumstances, but the prognosis is always very unfavourable.

I do not know that I can take a better opportunity than the present for speaking to you of hectic fever. Not that it has any necessary relation to the subject we have been considering, but because it is more frequently associated with suppuration, and the continuance of purulent discharge, than with any other kind of disease.

Hectic fever consists of a peculiar train of symptoms occurring in cases of great debility, when the powers of the system have been exhausted by protracted illness, by phthisis, a discharging abscess, or a suppurating joint. It is most marked in the early periods of life, and when the disease under which the patient suffers is attended with suppuration, and much discharge of matter. It is not so constant an attendant on malignant affections, which is probably owing to the fact, that in cases of malignant disease, even in the latter stages of the complaint, there is greater vigor of constitution, less weakness and relaxation of body, than in those diseases where hectic is a more frequent accompaniment.

The symptoms of hectic are observed to take place in the following manner:—The weakened wasted patient, with pale face, and small quick pulse, is easily excited; the face is flushed after meals, during conversation, or on the sudden arrival of a friend; this is noticed more particularly towards the latter part of the day, indeed, it may take place every evening, and may be sufficient to keep the patient awake till past midnight. During this period of excitement the skin is hot and dry, the pulse is quickened, and there is thirst, perhaps delirium at night. Sometimes the febrile excitement thus spontaneously occurring is preceded by a slight chill, but the chill is not usually observed. When the fever begins to subside, the patient falls asleep, and wakes up in an hour or two bathed with perspiration, which appears first, and in greatest quantity, upon the head, neck, and chest. He now feels cold and languid. He falls asleep again to wake in a short time in the same very uncomfortable condition, and this goes on till morning. Perhaps he is fortunate enough to sleep

on till the morning, or the perspirations may not commence till then. The urine passed in the morning, as well as on the previous night, is high-coloured and turbid, from the deposit of lithates.

When the three phenomena of hectic, (the chill, the fever, and the perspiration,) are present, they follow one another in regular order, and stand in the relation of cause and effect, in the same manner as in ague. The hectic fit is then not unlike an attack of ague. In both there are more or less complete intermissions of the symptoms, and both depend upon an enfeebled state of the body. But in hectic the symptoms are less regular in the time of their appearance, and are more easily induced by slight exciting causes. In ague, the chill, the fever, and the sweating, are proportionate to one another; the two latter do not occur unless they are preceded by the former, and the patient is greatly relieved by the sweating during which he feels comfortably warm. In hectic, on the other hand, the chill is generally wanting, the sweating is mostly the predominant symptom, and often takes place profusely without being preceded by either the chill or the fever, so that it clearly has no necessary relation to either of them. When the chill and the fever occur, by further weakening the patient, they predispose him to the sweating, but they do not generally induce it, unless he falls asleep, whereas he often wakes in a perspiration without having felt any preceding fever or chill. Hence we may assume that the relaxed condition of the body induced by sleep stands more nearly in the relation of direct cause to the sweating than does the fever.

Perspirations, then, constitute the leading feature of the hectic state—perspirations occurring at various times, without the ordinary exciting causes, and unaccompanied by a proportionate sense of heat. Now, undue perspiration is generally to be regarded as a symptom of a weakened condition of the frame. The strongest persons perspire least during exertion. The appearance of moisture on the forehead and lips is one of the symptoms of commencing faintness; a cold clammy sweat generally accompanies a prostrate condition of the body, and tells us that the system is labouring under the depressing effects of some shock,—a fright, or a fractured limb; and the continuance of this symptom informs us that some more severe injury has been sustained, from which the vital powers are unable to rally,—a bowel has been ruptured, a lung perforated, or a liver contused. The hectic perspirations result, in like manner, from the enfeebled state of the patient, and take place most especially during the relaxation of sleep. They are to be regarded, therefore, merely as an evidence of weakness, and not as a symptom of any particular kind of disease. They are by no means uncommon during convalescence from illness, and need not, under such circumstances, excite your alarm, or induce you to apprehend that some seeds of mischief are lingering behind. They frequently happen from sheer debility without any apparent local disease, and a tonic regimen, particularly exercise in the open air, in a carriage or on horseback, or residence at the sea side, will, in such cases, generally effect a cure.

The other features of hectic, namely, the chills and fever which sometimes precede the sweating, are, like it, merely indications of a weak state of body; they show that the system is easily depressed, or easily excited. The change of temperature encountered by passing from one room to another is enough to cause a chill, and the reaction from that chill, the slight stimulus of a meal, or the increasing warmth of the body towards evening, may be sufficient in these delicate frames to light up a fever, which, subsiding in a short time, leaves the patient in a state of depression corresponding to the excitement, a state most favourable to the occurrence of sweating. I think that fever precedes the sweating chiefly in cases where, besides the general debility, the system is chafed and fretted by some advancing local disease, such as a phthisical lung, or a suppurating joint. But there is not on that account any need to resort to the somewhat unintelligible Hunterian hypothesis, that "hectic is a sympathy with the operation of an incurable disease, where the constitution is conscious of the inability of a part to effect a cure." We have seen that the most constant symptom of hectic—the sweating, is a common attendant upon extreme debility, in whatever manner induced, a local disease being by no means essential to it; or if a local disease be present, it is not necessarily incurable because hectic supervenes; and the less constant symptoms of hectic—the slight fever, and the preceding chill, may in like manner be attributed to the general weakness; for excitability, no less than the liability to depression, is usually proportionate to debility.

The weak and relaxed state of the frame in which hectic sweats occur is very favourable to suppuration, so that abscesses are often observed to discharge profusely, and tubercles to soften quickly, during this condition. A variety of other affections are also incidental to this state, and sometimes alternate with the perspirations, such as diarrhœa, erysipelas, inflammation of the veins, &c.

The treatment of hectic consists in the employment of various means adapted to promote the general health, and invigorate the system. I need not say that they are frequently unavailing. Our resources have commonly been expended in the endeavour to prop the tottering frame before it gives this indication of its approaching fall. The disposition to fever makes us fearful of the employment of stimulants, because we know that a greater depression, with perspiration, will follow the excitement produced by them, and the administration of tonics is likely to occasion diarrhœa and sickness. Exposure to the air gives cold, and we have little hope of arresting a local disease which has wrought such havoc on the system. These remarks are intended to apply particularly to hectic supervening upon an advancing local disease, for I have already said that hectic, unattended by local disease, or occurring during convalescence will generally yield to tonic régime and exercise in the open air.

In the early treatment of a local disease which promises to be protracted, and to be attended with hectic, be careful to husband your resources. Do not

begin the administration of tonic medicines, and a more liberal diet, because the patient is likely to become weak, for if measures be taken while the strength remains unbroken they are rather likely to do harm; at any rate, they soon lose their effect, and you have not then this resource to fall back upon when the disease really begins to tell upon the constitution; rather endeavour to maintain the general vigour by the natural tonics, fresh air, and exercise; and when the health shows signs of failing, the judicious employment of quinine and iron will often, for a time at least, avert the threatening evil.

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ON THE MEDICAL AND GENERAL TREATMENT OF LOCAL DISEASE

IN PREFERENCE TO OPERATION.*

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III.—TUMOURS.

The propriety of extirpating morbid growths is a question, the determination of which is often as difficult as it is important. I propose to enquire generally into the circumstances which justify excision, and to point out also the indications which decidedly interdict the interference of manual surgery.

The question embraces a wide field of practice, and includes diseases of various character and seat. Almost every writer has accordingly classified, or at least segregated, these diseases before determining their treatment. I propose rather to speak of them in the mass, regarding them simply as diseases occupying any locality which can be reached by the knife, or by escharotics, deducing the indications of treatment from certain circumstances connected with their history and pathology, which may belong to all or any of them, whatever be their nature or situation. This is the way we treat internal disease. One drug is not good for the brain, another for the lungs, and another for the liver. The condition of an organ in relation to the other organs and to the general circulation, is the question which determines one treatment far more generally than the anatomical position of the organ, or even than its nature, which may consist of inflammation at one period, and effusion, suppuration, or morbid growth at another. It is desirable that this medical principle should be brought faithfully to bear on the management of local diseases. The knife and the caustic of the surgeon are but as the drugs of the physician; the propriety of their use is not determined by the nature of the disease, be it scirrhus, fungous, or fibrous, nor by the part or parts affected, but by the state of the general system. There is one grand principle which should never be lost sight of in the prosecution of this momentous enquiry: *the origin or cause of a morbid growth, where it can be satis-*

* Continued from page 544 of last Volume.