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A COURSE OF LECTURES ON SURGERY, DELIVERED IN THE MEDICAL SCHOOL OF CAMBRIDGE.

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LECTURE IV.

Antiphlogistic Treatment; Local Applications; Treatment of preliminary Depression; Stimulants in early Stage of Inflammation; Chronic Inflammation, Treatment of, by Depletion; Ill effects of too much local Depletion; Mercury: Attention to General Health; Ill Effects of long-continued Poulices; Strong Irritants; Exercise of the inflamed Part, to be enforced in Hysterical Cases, and sometimes excited by Electricity; Counter-Irritants, Mode of Action, when to be employed, and in what Form; Issues; Pressure.

The general antiphlogistic treatment comprises a variety of measures, intended as auxiliaries to bleeding, in subduing inflammatory fever, such as aperients, diuretics, sudorifics, more particularly antimony, (which, besides its lowering effect upon the system, is supposed to possess some direct anti-inflammatory property,) and saline medicines. To these are added sparing diet, rest in the recumbent position, and elevation of the inflamed member.

The local applications best adapted to the relief of acute inflammation situated below the surface, as in the knee-joint, are those which combine the soothing influences of warmth and moisture, at the same time that they promote perspiration, and prevent chafing and irritation of the tender part. The continued application of warm fomentations or poulices upon the skin over an inflamed joint, no doubt exerts considerable influence in allaying the disease; they are, on the whole, more generally beneficial than cold lotions, but the sensations of the patient will often guide us aright in our choice between these opposite measures. When the inflammation attacks the surface, as in cutaneous erysipelas and superficial burns, great relief is afforded by dredging the part all over with flour; this is often more agreeable to the patient, as well as more cleanly, than either warm fomentations, cold lotions, or carded cotton. I suppose it acts in the same manner as oil, by screening the inflamed and smarting skin from the irritating influence of the air.

I have endeavoured to point out the general principles only of the treatment of acute inflammation with inflammatory fever, and must leave you to fill up the detail, and gain a further acquaintance with this, the most important branch of your study, where alone it can be effectually done, at the bed-side of the patient. There you will see the mischief of treating diseases by name, of commencing the indiscriminate use of the lancet, and pouring in volleys of calomel and opium, of purgatives and saline medicines, because an affection is pronounced to be inflammatory. You will discover the necessity of modifying the treatment according to the symptoms of each particular case, and the powers of the patient, and the advantage of occasionally adopting the humbling and difficult resource of leaving the case entirely to nature's therapeutic skill.

Occasionally we are called to a patient during the preliminary stage of his illness, before its particular features have declared themselves. We find him feeble, chilly, and miserable; some kind of attack is evidently impending, but we cannot tell what it may prove, or where it may be displayed. Under such circumstances we can only treat the existing symptoms, and by applying warmth and stimuli of various kinds, endeavour to rouse the system, so as to break the first appreciable link in the chain of disease, and arrest it at its very commencement. A good dinner will sometimes check a rising fever, a day's hunting will prevent an attack of rheumatism, and wine whey, with a warm bed, may stop a coming cold; agreeable remedies, but unfortunately not altogether unattended with danger, and more likely to be successful when prescribed by the patient than by the medical man, who is seldom called in till the time for such proceedings is gone by, and who cannot so easily judge of the capabilities of the patient to rouse himself to exertion. We are, therefore, generally obliged to content ourselves with less decided measures and, there is no doubt, that by endeavouring to mitigate the preliminary depression, we are taking the best preventive measures with reference to the severity of the succeeding illness.

The application of stimulus to a part in which inflammation is impending, may, in like manner, occasionally succeed in arresting the incubating process, of whatever kind it be, and so prevent the subsequent stages of the disease. But we have rarely an opportunity of employing any such treatment, because the stage of depression in a part preliminary to the reaction, as I mentioned in the last lecture, is seldom to be

recognized; and the first notice of the local disease is not generally observed till the inflammation has fairly commenced.

When inflammation results from the application of a poison, as in gonorrhœa, the regular march of the disease may be sometimes broken, and the poison hurried, as it were, through its stages, or ejected from the system by a strong stimulating application, such as a solution of nitrate of silver, which is quickly followed by acute inflammation; the inflammation so excited, being freed from the peculiar influence of the poison, subsides in the same manner as it does when occasioned by any other accidental cause. To be successful this treatment must be adopted at an early period, before the inflammation caused by the poison has fairly set in, otherwise the original disease is aggravated rather than superseded by the additional inflammation; secondly, the stimulus must be strong enough to impress a new character upon the inflammation; the superadded disease must take the place of the primary inflammation, which cannot be ensured without risk to the structure of the part, if the latter have attained to any great degree of severity.

Very frequently after the acute symptoms have subsided, the inflammation lingers in a languid, sluggish, chronic condition, or it may have presented these characters from the beginning. Chronic inflammation, in its chief features, corresponds with acute inflammation; it is attended by the same disposition to effusion of serum and lymph, interstitial absorption, ulceration, and mortification, but the difference consists in the greater languor and inactivity of the process, the greater relaxation of vessels, and the more tardy current of blood through them, and the heart's action is not increased, either in force or rapidity. General bleeding is, therefore, very rarely required in the treatment of chronic inflammation; it may be rendered necessary, by other co-existing circumstances, such as a plethoric condition of the individual, but independently of these, it is scarcely ever required for the cure of the local disease itself. Abstraction of blood from the part is very often beneficial, more particularly in those numerous cases which occupy the wide intermediate space between acute and chronic disease, to which the term subacute has been applied. You will not forget that the object in these cases is rather to produce a continuous or repeated effect, than to cause a sudden impression, more relief being generally derived from the repeated application of a few leeches than from a larger number at one time, and, with a few exceptions, such as the os uteri and eyelids, they should be placed as near the inflamed part as can conveniently be done.

You must beware of continuing this treatment too long, that is to say, beyond the time during which its good effect is evident, because there can be no doubt that the repeated application of leeches tends to weaken an organ, and render it more liable to further attacks of inflammation. I am quite disposed to credit the experience of the patient at the hospital, who frequently suffers from inflammation of the eye, and who told us the other day that leeches once or twice applied afford her relief, but that a more frequent repetition of them

makes the eye weak, and protracts the period of its recovery. The injurious effects of repeated local depletion are particularly observed in the cases in which inflammation does not exceed its congestive stage, such as the determinations of blood to the head, so common about and soon after the period of puberty, attended with the sensation of fulness, as though the head would burst, which makes the patient most anxious to lose blood, and the temporary relief afforded by leeches or cupping is so great, that he is no less impatient to repeat the treatment, when the symptoms return with unabated force, and he is less able to bear them. The commencement of these symptoms may be often traced to free and repeated local depletions, instituted for the purpose of arresting some inflammatory affection of the eye or other part of the head, and they are observed most frequently in persons of languid circulation, with feeble pulse, and blue cold extremities.

Mercury is also a very valuable remedy in chronic inflammation, attended with effusion of lymph, as in chronic iritis. Its effect will, probably, require to be maintained for some time, and it should, therefore, be introduced into the system gradually, by small and repeated doses, so as to avoid the disorders caused by its more free administration. By caution in its use, the patient being under surveillance during its influence, allowed his usual exercise, if possible, and that simple diet which suits him best, mercury may be given so as to produce sufficient effect upon the system, and continued for a considerable time, without injury to the health; indeed, the patient very often improves greatly in appearance and vigour during its administration. The slightest effect upon the gums, so slight that the patient is scarcely aware of any soreness, or even of an unpleasant taste in the mouth, is sufficient, in most cases of chronic inflammation. A more powerful impression is attended with certain injury to the constitution, without corresponding alleviation of the disease.

In treating chronic inflammation more than any other form of local disease, it is essential to pay much attention to the state of the constitution, for the continuance of the malady is often dependent on some disorder of the general system, particularly of the digestive organs, which impedes our remedies, and is likely to be felt more severely, or to show itself in some other form, if the local disease be cured. It is the more important to be on the watch for constitutional ailments, because during the existence of the local disease, they are often in abeyance for the time. A patient is admitted into the hospital with a sore leg, and we should not discover that he labours under any constitutional defect, did we not learn that previous to the appearance of the ulcer, he was for some months out of health, suffering under indigestion, headache, languor, or some other symptoms, which have ceased since the existence of the local disease; perhaps we may further learn that the ulcer had appeared on several former occasions, each time being productive of relief to the general indisposition which again returned when the ulcer was healed.

Chronic inflammation is very often connected with a debilitated state of constitution, associated, it may

be, with disorder of the digestive organs, and requiring tonic treatment by medicine, or more nutritious diet, exercise in the open air, cold ablutions, &c. Exercise in the open air is so essential to the maintenance of the general health, especially of persons whose occupation is chiefly out of doors, that we are unwilling to confine them to bed unless such complete rest be essential to the cure of the local disease. I have frequently seen affections of the joints progress more rapidly to suppuration, destruction of the synovial membrane, and ulceration of the cartilages, in consequence of the routine treatment, by rest and confinement to bed, being pertinaciously adhered to, in spite of the intimations given by the pallid countenance, the failing appetite, and the increasing perspirations. It is often advisable, more particularly in mild weather, to allow the patient to move about and go out of doors, even at the apparent risk of injury to the local disease. When general exercise can be combined with rest of the affected limb by means of splints and crutches, it should almost invariably be permitted.

We employ besides, three chief local remedies in the treatment of chronic inflammation,—namely, stimulants, counter-irritants, and pressure.

Our usual intention in the employment of stimulants is to brace the weakened organ, to astringe its relaxed and dilated vessels, and to give an impulse to its nutritive energies. To effect the first of these purposes, we apply cold, either exposing the part to the air, or using cold water or lotions. Of course such treatment is incompatible with the continuance of poultices and warm fomentations, and I may take this opportunity of warning you against regarding such applications as mere negative agents, and prescribing them in a routine indifferent manner, or continuing their employment too long in cases of chronic inflammation of the skin, or in erysipelas when the acute symptoms have passed away, for the chronic stage of inflammation is very often prolonged by perseverance in these applications, which have the effect of weakening and relaxing the part upon which they are placed. Unless there be some additional cause, rendering poultices desirable, they should rarely be employed in superficial inflammations after the acute stage has passed away, and the part has acquired a blue languid appearance. I have seen several cases of chronic inflammation of the eye, with swollen conjunctiva, marked with blue dilated tortuous vessels, where the disease was evidently kept up by poultices and fomentations applied in a thoughtless manner, and which were cured merely by the discontinuance of the local treatment, and the exposure of the part to the air. The profuse discharge, and the slow healing of wounds after phlegmonous erysipelas, are not unfrequently owing in part to the same cause. It is, I suppose, from the observation of the injurious effects of the heedless and routine prescription of poultices, in cases of chronic cutaneous inflammation, that some surgeons have discarded them altogether, and, falling into an opposite extreme, have erased from their list of remedies an application which is often very useful, as well as comfortable to the patient.

These observations on the injurious effects of long continued poultices and fomentations to superficial inflammations, apply in a less degree to the instances in which the disease is deeper seated, because the influence is less marked, but it is, nevertheless, equally true, that chronic diseases of joints and glands are sometimes maintained and aggravated, and suppuration induced, by a careless adherence to these relaxing applications.

The stimulants applied for the purpose of strengthening and bracing an inflamed part should be mild, so that they may be frequently repeated. They are often of much service in chronic inflammation of the external tunics of the eye, and you will find a lotion of alum containing one or two grains to each ounce of water generally sufficient at first. Weak solutions of sulphate of zinc or copper may be required after a time, but be careful not to employ them of too great strength so as to produce more than a slight smarting sensation, which passes off in a few seconds, for much injury is done to the delicate textures of the eye, and a most troublesome condition of chronic inflammation, with thickened villous, or even warty state of the conjunctiva is often engendered by the repeated application of strong stimulants, more particularly by the nitrate of silver. The disease thus produced has peculiar characters, which may be generally recognized at once by the experienced surgeon. I do not mean to say that solutions of nitrate of silver and other salts of the same kind are never to be used, but that they are not very often required in chronic inflammations of the eye unattended by ulceration, and I wish more particularly to caution you against their long continued or repeated employment.

There is another mode in which stimulating applications sometimes succeed in curing chronic inflammation, namely, by exciting a more severe inflammation, which seems to eradicate the former disorder, and then itself passes off in the ordinary manner. An attack of erysipelas of the face is often followed by the cessation of an inflammatory affection of the skin or eyes, which had long resisted treatment; and you remember how quickly the ulcers of the leg healed after the occurrence of erysipelas in the two men who lately left the hospital. We sometimes avail ourselves of this hint of nature by applying strong irritants to chronic inflammations of external parts. A blister or sprinkling with savine powder or cantharides will sometimes cure a chronic cutaneous disorder by exciting a smart attack of inflammation. A solution of nitrate of silver or sulphate of copper dropped into the eye once or twice will occasionally bring to a favourable termination an inflammation of the conjunctiva, which has long resisted milder measures; and our journals contain accounts of the cure of obstinate diseases of joints with effusion, having sometimes been obtained by the bold expedient of injecting a solution of iodine into the synovial cavity.

But this heroic method of treatment is, of course, not unattended with danger. The newly excited inflammation may not subside so kindly, and the surgeon then must bear the blame of having aggravated the

disease ; so that the practice of applying strong stimulants to chronic inflammations with the view of exciting acute disease, is not, except in a few safe instances, adopted by educated practitioners. It constitutes one of the great resources of the quack, who is not in the habit of considering the mischief done by his panaceas, and who is not very careful of the limbs or lives of his patients or of his own reputation. That it is sometimes employed by him with success there can be no doubt, and you will do well to take opportunities of acquiring information from the bold experiments of these fearless empirics. An inhabitant of this town had long suffered under that very troublesome complaint,—a chronic inflammation of the Schneiderian membrane, with discharge from the nostrils, disagreeable smell, &c. He had consulted several physicians and surgeons without benefitting by their advice, and had used a variety of mild astringent solutions and powders in vain. One day he happened to be in company with a quack, who discovering his ailment promised him a speedy cure, and gave him a powder to snuff up, telling him to persevere in it for two or three days, in spite of the pain it would occasion. He did so, although a severe attack of inflammation ensued, causing such pain that he thought he should lose his senses, a profuse discharge followed which soon subsided completely, and left him quite well. From that time, now four or five years ago, he has suffered no return of his old complaint. A strong injection thrown into the urethra will sometimes cure a gleet in the same manner, and the ordinary treatment of hydrocele consists in exciting smart inflammation of the tunica vaginalis testis by an injection of port wine, iodine, or other stimulating fluid.

The application of nitrate of silver in substance or strong solution, in some instances proves a very expeditious mode of curing inflammatory affections, particularly certain ulcers of the tongue, os uteri, and cornea, and erratic erysipelas occurring in feeble persons. It is not quite clear in what manner the salt acts to produce these good effects, neither can I tell with any certainty in what cases it should be employed, for I have seen each of the above affections aggravated by its use.

The natural stimulus to the healthy state of the circulatory and nutritive processes is the natural exercise of the function of a part. This is to be permitted when the inflammatory affection has passed away, or when it has nearly subsided. The morbid condition of the hysterical joint is best removed in this way. If the patient cannot be made to exercise the limb herself, it is well to effect passive movements, and if she can be induced to walk about, the weakness of the joint which commonly co-exists with the hysterical pain, and which probably depends upon some slight inflammatory disorder, will soon begin to amend. It is worthy of observation that the joints of the upper extremities, which are in more incessant motion than those of the lower limbs, rarely become the seat of this peculiar disease.

A remarkable illustration of the benefit to be derived from exercising a painful joint in which there are no other very decided evidences of inflammatory disease,

was afforded by the young woman who was admitted into the hospital about four months ago, with her knee bent beyond a right angle and fixed in that position, the slightest attempt to move it causing excruciating pain, so that perseverance in such attempts was out of the question. Gentle pressure also caused severe pain, and she was reported to be kept awake nearly all night and day, by the darting pains in the joint. She had long been confined to her bed, and her suffering and the apparant severity of the disease were so great that amputation had been recommended before her admission, and she was sent to the hospital for that purpose. The absence, however, of proportionate impairment of her health and of the usual physical signs of disease in the joint, together with her ability to bear the weight of the leg in the flexed position of the knee, when she was standing upright upon the other foot, the muscular resistance which was offered to attempts to extend the joint, the absence of pain upon firm pressure when her attention was withdrawn, and the utter futility of all remedial measures which had been employed, combined to lead us to the opinion, that although there might be some slight disease in the joint, it was by no means proportionate to the pain expressed. Having, therefore, subjected her to the influence of chloroform, we extended the limb without much difficulty, and kept it so by splints. No disposition to retraction was evinced. Passive movements of the limb, frictions, &c., were maintained for a time, she was then urged to move about by dint of main force, each day being obliged to do a little more, for if left to herself she never advanced in the slightest degree, though she was evidently most anxious to get well, and was delighted at the improvement. By perseverance in this treatment alone, she gradually regained the use of the limb so as to be able to walk without assistance when she left the hospital. Some obscurity was thrown over this case by the swollen blue cold condition of the limb; and I am by no means prepared to say that there was no disease in the joint, but that it must have been very slight, whereas the pain really experienced was very great.

You will find that it is often no easy matter to decide as to the propriety of permitting or prohibiting the exercise of an inflamed organ. As a general rule it is essential to keep the patient, as well as the part affected, as much at rest as possible during the acute stages of the inflammation. In chronic inflammation it is conducive to the health of the patient that he should be allowed to move about, while we still endeavour to ensure the rest of the organ. In a still later stage, when the inflammation has nearly or completely passed away, and a sense of weakness only remains, dependent upon the structure of the part not having been restored to a natural condition, it is not advisable to maintain these restrictions as to its use quite so strictly. For the exercise of function being the stimulus to healthy nutrition, we can never expect a muscle or joint to resume its healthy condition so long as the movements of a limb are prevented by splints and bandages. At such a period, therefore, it is wise to allow the moderate and cautious use of the part.

Sometimes, indeed, it is necessary to do more, and to stimulate the part to exertion. This is particularly true with regard to the delicate fabric of the nervous system, where a slight degree of inflammation may so spoil the structure as to render it insusceptible of the ordinary impressions. Under such circumstances, if some extra influence be not applied, by exciting the exercise of function to supply the stimulus to nutrition, the texture will still further deteriorate, and a paralysis which might have been cured, by the timely use of strychnia or electricity, will become permanent.

In adopting such treatment, we must not forget that we are dealing with a part recently inflamed, and that a recurrence of the disorder is almost sure to be produced if the stimulus to exercise be commenced too early, or continued too freely. The condition of the part is analogous to that of a patient recovering from illness who requires to be roused to the exertion necessary for health, but who will assuredly lose ground, and perhaps be subjected to a relapse, if his powers be tested too early, or urged too freely.

I suppose that frictions and chamooping, which are sometimes so very successfully employed in the treatment of chronic affections of the joints by persons who devote themselves to this occupation, owe their curative effects in some measure to the stimulus and the movements communicated by the rubbing, kneading, and pummeling to which the part is subjected.

With reference to the effect of movement and rest upon a part which is the seat of chronic inflammation, it is to be remarked that the patient generally suffers the greatest uneasiness and stiffness when he begins to move after the rest of the night, and that these wear off when the limb has been in exercise for a short time, though they probably increase again towards night, especially if the limb have been much used during the day. The lame horse shows his defect at the beginning and end of his journey, and the horsemaster knows that to confine him to the stable for a few days would have the effect of disabling him altogether. These facts seem to prove that moderate exercise exerts some influence in restraining chronic inflammation. I grant that it is not easy to turn this hint to a practical account, for it is often difficult to decide whether the tender part will bear the exercise of its function, but it is well not to lose sight of it, and it may modify your directions in some particular cases. I have often observed slight inflammatory affections of joints to be aggravated by too strict an adherence to the rule of keeping them fixed and at rest, and have found them do better, and recover more quickly, when the retentive apparatus has been applied somewhat less accurately, so as to admit a little movement; for instance, when the splints have been discontinued, and strapping and bandage alone employed.

In speaking of the effect of leeches in relieving deep-seated inflammations, I mentioned the sympathetic relation which appears to exist between the internal organs and the superjacent skin. It is in consequence partly of this relation that the integuments of an inflamed joint become red and tender; and it is probable

that impressions are conveyed more readily in the opposite direction,—namely, from the skin to the synovial membrane, so that soothing applications to the former produce a corresponding effect upon the latter; and an irritation of the skin will in like manner be communicated to the joint. This sympathetic relation between the coverings of the body, and the organs placed beneath them, affords, in some measure, a clue to the explanation of the effects of counter-irritants, and furnishes some important practical information as to the principles which should guide us in the employment of these very valuable remedial agents.

If the effect of a blister placed upon the skin of an inflamed joint depends, not according to the commonly received notion upon its drawing the disease from the inflamed part to the skin, but upon the extension to the joint of a slight degree of the same condition which is excited in the skin, we may consider the measure as tantamount to the application of a stimulant to the joint itself, a very mild one, it is true, because its operation is confined to a sympathetic influence conveyed from the skin; it may, therefore, be expected to be beneficial or otherwise, precisely under the same circumstances as would a slight amount of stimulus applied directly to the inflamed part. This accords with what we find to be the general result of experience. When the inflammation of a synovial membrane is acute, the stimulus of a blister on the skin invariably aggravates the disease. It is not till the acute stage has passed away, and slight inflammation alone remains, that the extension of a slight stimulating influence from the integuments can be borne, or is likely to be beneficial.

This view of the *modus operandi* of blisters assists us also in the selection of the spot to which the counter-irritant should be applied, for the radiating influence is felt most strongly in the immediate neighbourhood of the irritant, and we may regulate the effect upon the inflamed part by the distance at which we place the blister upon the neighbouring skin. An inflammation of the eye is sometimes increased by a blister upon the temple, which might have afforded relief had it been placed behind the ear, and it is only in very slight inflammation of the internal tunics of the eye that we can venture into such close quarters with ordinary stimuli, as to apply them to the conjunctiva itself. You probably remarked the request made by the patient who is now in the hospital recovering from a fourth attack of iritis, and who has therefore some pretensions to be a judge of the value of remedies in his own particular case. "Don't you think, Sir," he asked, "that a blister behind the ear would do my eye good now," when I inquired why he wished to have it behind his ear, he replied, "because when it is placed on the temple, it terrifies the eye so much." In the great majority of cases, however, in which it is advisable to apply a blister at all it should be placed immediately over, or as near as convenient to, the inflamed part.

The repeated effect of a succession of blisters is generally productive of more benefit to slight inflammatory affections or the slight remnants of acute inflammations, than one blister kept open by savine

cerate. But when the inflammation has been longer continued and has proceeded to structural alterations, I think that a continued impression upon the skin attended with the discharge of pus is more efficacious. In slight conjunctival inflammations, where a counter-irritant is required, a blister or a succession of blisters will generally answer the purpose; but in cases of chronic corneitis, where that tunic has been rendered partially opaque, and its surface is roughened and more or less covered with fine red vessels, greater benefit is derived from an open blister, combined perhaps with mild astringent lotions than from a succession of blisters. The same remarks apply also to diseases of joints, where much thickening of the synovial membrane and other structural changes have occurred, and to chronic inflammations of bones with thickening. You have had many opportunities of witnessing the decided benefit which commonly follows the formation of a caustic issue, whereby a portion of integument is killed, and suppuration, granulation, and cicatrization excited, upon a diseased joint in which ulceration of the cartilages forms the prominent feature. These issues should be placed as nearly over the immediate seat of the disease as can conveniently be done, and they are maintained with best effect by the occasional re-application of the caustic potash.

The good effects of counter-irritants are not to be attributed entirely to this communication of a stimulating influence from the surface to the inflamed part, for they act besides, more particularly those which are long continued, such as setons, issues and open blisters, by furnishing a drain to the system, and supplying a new disease in place of the one we are anxious to cure. It appears, in some cases, that local disease, either in consequence of its long continuance or a diseased state of the body, is essential to the general health, and a chronic inflammation will, under such circumstances, resist our efforts to dislodge it, or is driven from one region only to make its appearance in another. This happens more particularly in delicate children, and in persons who have passed the middle period of life, or whose constitution is broken by intemperance, anxiety, hard work, and so forth. The maintenance of a purulent discharge by issue or seton is by far the most effectual local treatment of chronic inflammation in such persons. There is no need to produce a copious discharge, for a slight effect is generally sufficient to answer the purpose. Any little accession of constitutional disturbance will probably vent itself by an increase of inflammation and suppuration at the issue, which becomes a sort of barometer of the health, and should be merely kept open by a pea or thread, and not worried by savine cerate and other irritating applications.

In persons advancing in years, it is rarely safe to allow the issue to heal; but in children and persons in whom the local disease depends upon a disordered state of the constitution, the issue may be closed when the general health has been re-established, or when the child may be supposed to have outgrown the disposition to disease. An issue should not be maintained longer than necessary, for the artificial disease unquestionably

does some injury to the surrounding parts, and unless its presence be required to combat another local affection, or to relieve a particular state of the constitution, the sooner it is closed the better. This is equally true of blisters and other counter-irritants. The inflammation excited by them injures and weakens the limb or joint to which they are applied, and does positive harm unless there be some counteracting good effect resulting from them. Moreover, in young and delicate persons, they are often followed by ulcers and boils in the surrounding skin, which occasion a good deal of trouble. The apprehension of these consequences makes us unwilling to resort to irritating applications, unless they be absolutely required.

Rubefacient liniments, such as the common *Linimentum Terebinthinæ*, or the oil of turpentine itself, which act in the same manner as counter-irritants, and combine the advantages of friction, are often very serviceable in the treatment of slight inflammations of joints. The rapid impression of a mustard poultice renders it exceedingly efficacious in a great number of sudden slight affections, or even occasionally in the preliminary stage of those which, having been preceded by a chill, promise to be more severe; the effects, too, of a mustard poultice pass off so quickly, that they do not entail much evil, even if it does not succeed in arresting the inflammation. An excellent mode of producing instantaneous counter-irritation, which is likely to be very serviceable in sudden seizures of lumbago, sciatica, and other similar affections, is the old plan recently revived, of passing a heated iron quickly over the skin, so as to produce redness, and a smarting or burning sensation. These applications, whose effects are so transient, are not much suited to cases in which disease has been of long continuance, or in which structural changes have occurred.

I do not commonly use the tartarized antimony as a local application, because its effects are not very easily regulated, and I am not aware that it possesses any advantage over other counter-irritants. An issue may be sometimes conveniently established by dressing a small blister from which the cuticle has been removed with *Unguentum Antimonii Tartratis*, and is well adapted to the treatment of some of the severe diseases of joints occurring in children.

Pressure is one of the most effectual means of preventing inflammation, and of checking it when it exists in a slight degree. The lung compressed by serum effused into the pleural cavity is rarely inflamed. A sprained joint is least likely to swell and inflame if it be bandaged at once, and fractured limbs which are enclosed in well adapted splints and bandages soon after the accident certainly swell less, and are less painful, than when subjected to the old fashioned treatment of placing them upon pillows, and applying lotions. The well regulated application of pressure is also one of the best means of preventing the occurrence of injurious inflammation in wounds, and you may often see inflammation of the integuments, and deep-seated structures of a limb, terminating abruptly at the line where a bandage has been applied. This treatment requires to be employed and watched with caution, and

the pressure should be removed if pain increases, for its continuance, when the inflammation proceeds in spite of it, may be productive of disastrous results. I have once or twice known extensive sloughing take place in consequence of inattention to this precaution.

Pressure is used in a variety of ways in the treatment of chronic inflammation. When the integuments are swollen and purplish, or indurated, in cases of chronic ulcers, in enlargements and indurations of glands, in swellings of joints from synovial disease, attended with thickening of the membrane, or effusion into the joint, pressure, by means of plasters, bandages, or splints, is the most usual and the most effectual means of treatment.

It is not quite clear in what manner it controls the inflammation, or promotes the removal of effused products. Its good effects are not limited to the dispersion of swelling, for it is very beneficial in cases where no swelling exists, such as certain painful affections of joints, attended perhaps with slight crepitation, but unaccompanied by thickening of the synovial membrane, or effusion into the articular cavity.

You have probably remarked, that each of the three methods of local treatment which I have been describing,—stimulants, counter-irritants, and pressure,—are occasionally effectual in arresting the onset of an inflammation, as well as in curing its later or chronic conditions; they are employed before the acute stage has set in, and after its termination, and their good effect at these two periods is confirmatory of what I said respecting the nature of the preliminary stage of inflammation, and the state of the part in which it exists, for it accords with the view I gave you of the enfeebled energies of the organ about to suffer an acute attack of inflammation, that it should be roused to its natural condition, and enabled to break the first link in the chain of disease by remedies of the same nature as those which serve to stimulate and brace it after the storm has burst upon it, and which assist in dispelling the lingering remnants of the attack.

CASES FROM PRIVATE PRACTICE.*

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SCORBUTUS.

REMARKS.—On reference to the writings of all authors who have described this disease, particular allusion is made to the great prevalence of scurvy in former times—before its nature and treatment were so well understood as they now are. Amidst maritime communities the affection is by far the most common, and our naval history of the last century gives the most appalling details of its ravages, which were sometimes so fearful as to threaten the entire destruction of a

fleet, and often making far greater havoc than the most sanguinary battles. So remotely back as the time of the holy wars, mention is made of the complaint, and it is pretty certain, from various sources of information, that it prevailed in the kingdoms of northern Europe prior to that date. Some of the older writers state its occasional epidemic occurrence in this and other countries; and during some of these visitations many were swept off by the disease. There is one fact now thoroughly substantiated, that of all the alleged conditions entering into the causation of scurvy, diet lacking a proper proportion of acid fruits and succulent vegetables, is immensely the most important—a truth that has been abundantly corroborated by positive and negative proofs. To some of our naval commanders* is justly due the greatest credit for their correct and philosophic observations relative to many important particulars associated with a study of the affection. Being men accustomed to habits of reflection, and exceedingly desirous to banish from their crews so destructive an assailant, they carefully watched its progress and decline, tried different remedies, and endeavoured to trace to its true cause the rapid recession which it would make when the ship reached a distant port, and the diet of the men thus became changed; it was in this manner that the wonderful virtue of the acescent fruits and fresh vegetables was unequivocally established. Military medical, and other records† also furnish us with instances of its calamitous occurrence amongst the troops; and these have generally occurred after the men had been debilitated by long and laborious campaigns, and when so circumstanced as to be unable to procure the proper amount and right kind of provisions. Fodéré tells us that the soldiers in the army of the Alps suffered by it very severely, and Larry remarks the prevalence of scurvy during the siege of Alexandria. The reports, which during the last ten or twelve years have been given to Government authorities, relative to our prisons, gaols, and hospitals, have attested the fact that error in kind, or insufficient quantity, of diet constitute the most fertile of all causes in the production of scurvy. The general failure of the potato crop two or three years ago, undoubtedly gave rise to the unusual prevalence of the complaint in question—a position which those who saw much of the mode of living amongst the poor, the immensity of their destitution, and the general distress which the loss of this valuable article of food gave rise to amongst them, can indubitably attest. Turning from these general observations respecting the disease, and confining these brief remarks more particularly to the case now given, it will appear manifest that causes brought into operation in a solitary case, from a combination of circumstances of a nature similar to those

* Cook, Parry, Berkeley, Bridport, Hawkins, etc.

† Larry. *Thém. de Chr. Militaire*; *Hist. de Louis ix.*, par le Sieur Joinville; Hume, Lingard, Alison, etc.