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SURGICAL LECTURES

DELIVERED BY

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Theatre, St. Thomas's Hospital,

MONDAY EVENING,

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LECTURE TWELFTH.

HAVING in former Lectures endeavoured to explain to you the process of Granulation, and the means by which Granulations are covered in by the process of cicatrization, I shall now proceed to direct your attention to the subject of

ULCERS.

In treating of this subject, I shall first describe the appearance of ulcers in what may be termed their healthy state, I shall then detail the several circumstances which render their cure difficult, and proceed to point out to you the remedies which are found to be the most efficacious in practice.

An ulcer may be defined to be a granulating surface secreting matter. When an ulcer is in a perfectly healthy state, the appearances which it exhibits are as follows:—The granulations are florid; the blood vessels possess a considerable quantity of arterial blood, and the freedom of circulation produces this florid appearance. The granulations are equal on the surface of the sore, rising a little above the edges; for it is necessary, in order that a sore should heal kindly, that the surface of the ulcer should be a little more elevated than the surrounding edges. The surface of the sore secretes matter which has a milky appearance, or rather the appearance of cream. The edge is whitish in colour, and adapts itself to the surface. In this manner the granulations springing from the surrounding skin, are very nicely adapted to the circumference of the sore, so that the granulations on the edge unite

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with those on the surface. When, therefore, you see the surface of an ulcer red, the granulations equal, the surface rising a little above the edge, the discharge of matter healthy, and the edge of the sore nicely adapted to the surface; you will say that this ulcer is in a healthy state. In order to produce this state of the sore, the best practice which you can generally pursue is to apply poultices and plasters. When you open an abscess, or when a wound is produced which cannot be healed by the adhesive process, the best application is a poultice, for the purpose of exciting the growth of granulations. This poultice must not be too warm; it should be gently stimulating, so as not to repress the growth of granulations, but to form a soft bed to which they may spring. The effect of the poultice is, by its warmth and moisture, to encourage such a degree of action as may promote the rising of the granulations. When the granulations have risen to the edge of the sore, then our practice alters; and it becomes our object to adapt the granulations of the edge to those of the surface. For this purpose adhesive plaster or unctuous substances are employed, with a view of pressing down the granulations of the edge of the sore on those of the surface, so as to make them unite. These are the principles of treatment in the cure of ulcers. We first encourage the growth of granulations by the application of the gentle stimulus of poultices, and when the granulations have risen to the edge of the surrounding skin, we press down the granulations of the edge on those of the surface, either by the application

of adhesive plasters or of unctuous substances. The more unctuous such substances are the better; for the vessels will have a greater facility in shooting towards the centre, and the granulations embedded in this unctuous matter will more readily extend along the surface of the sore.

Such are the principles of treatment applicable to ulcers in the healthy state; we will proceed to consider the impediments to the healing process which frequently occur, and which render a different mode of treatment necessary.

The first circumstance which renders the cure of ulcers difficult, is the too prominent state of the granulations, producing what is vulgarly called proud flesh. In this state the granulations rising considerably above the edge of the surrounding skin, are necessarily prevented from uniting with those of the surface. In order to prevent the continuance of this state of the sore, the common treatment is to apply dry lint to the centre of the sore, and some unctuous substance to the edges. The lint, by its pressure, prevents the growth of granulations in the centre, while the unctuous substance allows the granulations on the edge to proceed and inosculate with those on the surface of the sore. The lint should not be applied to the edge of the sore, for if it is, the granulations will be prevented from proceeding towards the centre of the sore. The nitrate of silver, and the sulphate of copper, are employed for the purpose of destroying luxuriant granulations near the edges of the sore. Here our practice is just reversed. Lint is applied to the

centre of the sore for the purpose of keeping down the granulations on the surface ; whereas the caustic is applied for the purpose of keeping down the granulations which are nearest the edge of the sore. In this way we promote the healing of the sore, forming a little circle by the caustic from day to day until we arrive at the centre. Adhesive plaster is used with the same view—keeping down the granulations. The common adhesive plaster is, however, too stimulating for this purpose ; a plaster composed of equal parts of the *emplastrum galbani* composition and the *emplastrum saponis*, is a much better plaster to promote the healing of ulcers than the common adhesive plaster. This is a point deserving attention ; because, if the application is of so stimulating a nature as to excite inflammation and excoriate the skin, we are often under the necessity of leaving off the adhesive plaster. It sometimes happens, that the action is so great as to oblige us to apply a sheet of lead to the surface of the sore : when this is necessary, you may apply a piece of lint covered with the *ceratum cetacci*, over these a piece of sheet lead, and round the whole a roller should be passed of about five yards in length. These are the various modes of treatment in this state of the sore.

The next circumstance to which we shall advert, as giving rise to difficulty in the treatment of ulcers, is a languid state of the sore, in which its action is too slight. What is the character of such a sore ? You may know that a sore is in this state, by the glossy and semi-transparent appearance of the granulations ; instead of the florid hue

which characterises granulations in their healthy state, a considerable portion of them is bloodless. The fact is, that the vessels near the surrounding parts have not sufficient power to throw the blood to the extremities of the granulations. To remove this glossy appearance, and produce a healthy state of the sore, the application most commonly used is the *unguentum hydrargyri oxidi rubri*. This is a strong stimulating application, which occasions a determination of blood to the part, and produces a florid redness in the granulations, instead of the semi-transparent appearance which they assume in the languid state of the sore. It produces, however, a white appearance in the edge of the sore, arising from the thickened state of the cuticle, which prevents the growth of the granulations on the edge. This may be corrected by the application of the *unguentum hydrargyri fortius* to the edge of the sore. Lotions are frequently applied with the same view ; such as the sulphate of zinc, in the proportion of two grains to one ounce of water ; or the sulphate of copper, in the proportion of one grain to three ounces of water. The oxymuriate of mercury, and the liquor calcis, are also used for the same purpose. In addition to these applications, it will be necessary to bind up the sore with a roller, and to allow the patient to take a great deal of exercise ; for, without exercise, a healing disposition will not be produced in the sore.

It will be highly useful in these cases to employ some stimulating plaster, such as the *emplastrum galbani compositum*, for the adhesive plaster will not answer the

purpose; the sores are languid, and the object is to increase the action in the part; this will be greatly assisted by giving the patient a nutritious diet, allowing him at the same time to take exercise; and in fact by doing every thing to improve the constitution.

Well, the next stage of ulcers we come to, is that to be met with in patients on their admission into the hospitals. When the surgeon goes round the hospital on the first day after the taking in, he will meet with a number of persons with inflamed ulcers on their legs; and what, I ask of you, is the character of these sores? You know that there is a serous discharge from these wounds, a bloody ichor, composed of serum and the red particles of the blood, a disposition in many cases to slough, that the surface is covered with a brown incrustation, and the skin and surrounding parts are highly inflamed. Well then, you will find that the same treatment, which is applicable to inflammation in general, will be of service in these cases, where inflammation has been kept up for a long time to a high degree. Rest must be enjoined; the patient must also keep in bed in the recumbent posture. Fomentations and poultices must be employed: fomentations will tend to produce a secretion from the part, and poultices by their soothing quality to promote the growth of granulations; both will evacuate the matter from the wounds. Then with these applications the vessels begin to form, the sore assumes a better appearance, healthy secretions are thrown out, and granulations shoot up, fibrous matter is deposited, and in a little you will

have the skin covering the wound. Fomentation, poultice, rest, and the recumbent posture, must be enjoined, and the patient must be purged; the best cathartic that you can administer is calomel and compound extract of colocynth, five grains of each at bed time; and a draught of the infusion of senna and sulphate of magnesia on the following morning; by this plan you will do more to subdue the inflammation than by any other I know. If the part in the neighbourhood be much inflamed leeches had better be applied near the circumference of the ulcer; with this treatment in a very few days granulations will spring up, pus will be secreted, and the surrounding edges will assume a healthy appearance. Without, however, attending to the constitutional treatment, all your local applications will be of very little avail.

GANGRENOUS ULCERS.—This kind of ulcer you very frequently see; a man who has been in poverty and distress for a long time, going up and down the streets of London, looking out for an asylum where he may rest his head; this person comes to the hospital at last in a reduced and emaciated state. When you see a wound of this description, you will know it by the surface being perfectly free from discharge, the surrounding edges of a livid appearance, with small vesicles or blistered spots on them, and the patient suffering much from irritative fever; seeing this state of the wound, then you enjoin on the patient the recumbent posture which is essentially necessary to promote absorption of the dead parts. The principle of treatment in these cases is to pro-

duce a very slight stimulus in the part; sometimes, when the action is excessive, you must, on the contrary, sooth the part; both will be sometimes good. When there is debility of the part, slight stimulus should be employed; and when there is excessive action, it is not desirable.

The best application that I know for producing a slight stimulus and checking gangrene of the part, is the nitric acid; there is none equal to this: fifty drops of it to a quart of distilled water will be found a most useful remedy, the acid may be carried to a drachm; this may be done or not, just as it may give pain to the part; but generally the average dose is fifty drops. I have seen in a short time after this application, a quick separation of the parts from sloughing, to which there is always a tendency; and healthy granulations spring up, being, as the chemists would call them, oxygenated; that is to say, the carbon being thrown off from the arterial blood in the vessels with which they are supplied. Here the granulations are of a beautiful florid red; this then is a most useful remedy.

Oiled silk should be applied to the wound, so as to prevent the smell arising from the parts tainting the room; for it is always considerable when the process of sloughing is taking place, and granulations are arising; an advantage, though a slight one, compared with the others, in the use of the nitric acid, is that the offensive smell is nearly taken away by it, the sulphuretted hydrogen is destroyed. Another very good application to sores of this kind is nitre, in the proportion of

one drachm to a pint of water; this agrees very well with the sore, and has the same effect, though in a diminished degree; it appears that all the preparations of the nitric acid are good. Sulphuric acid is of use also in these cases, six drops of the acid to an ounce of water; the muriatic acid has not the same effect as the other two. If nitric acid be applied to the wound, the granulations will assume a red and healthy look; if the sulphuric be, they will have nearly the same appearance; but if the muriatic acid be put to the wound, it will be seen that it will have a comparatively slight effect on the granulations, and, therefore, it is an inferior remedy in the treatment of these wounds. Poultices made of port wine, porter, dregs of lees, yeast, a large spoonful of it to a pint of meal, may be all used. Gentlemen, you must have recourse to a great variety of applications; for after you have tried one, which at the beginning did good, you will, from the wound getting worse under its use, be obliged to change it for another, and so on. There is at this time a girl in the other Hospital with sloughing of the pudendum; a variety of means have been used, which all, at the outset, relieved her a little; but none continues to do her good for any length of time, and she will, most probably, in the end, fall a victim to the disease: it is upon this account that I mention to you so many remedies. The carrot-poultice is also a very good application. The constitution of the patient must be attended, or else the local means will do very little; therefore, local applications must be aided by constitutional

remedies, and what is the best medicine that you can administer? Opium and ammonia, Gentlemen, twenty drops of tincture of opium, three times a day, with ten grains of the ammonia, in an ounce and half of camphor mixture, and a little (one drachm) of compound tincture of cardamom.

R. Mist. Camph. ℥iiss.

Tinct. Opii gr^{tt} xx.

— Card. Comp. ℥i.

Ammon. Carb. gr^r. x.—M.

Fiat haustus ter die sumendus.

This is the medicine which agrees best with the patient; he must be well nourished, or at least he must have as much as his digestive powers will allow; port wine also must be given, and spirits must be allowed to those who have been addicted to their use: by brandy and opium I have seen these sores cured; in fact, they are our sheet anchors in the treatment of these ulcers. But more of this in another Lecture, as I shall have to speak of gangrene again.

The next kind of ulcer that I come to is the IRRITABLE ULCER.

This sore is extremely difficult to cure. How then are you to know it? When you find the granulations most unequal. In some parts they are very high; in others very low. The discharge from the wound consists of a bloody pus. I do not know what to compare it to better (though it is not quite so good) than strawberry cream (*a laugh*). It is pus mixed with the red particle of the blood. This sore, then, may be known by the inequality of the granulations, the nature of the discharge, and the great pain and tenderness in the part; so that the patient, when touched in that part, is like a sensitive plant. As you may be sure

to find considerable difficulty in the treatment of these sores, I will tell you, the best application that you can make use of is one compound of the cetaceous ointment, red oxyde of mercury, and powdered opium.

R Unguent. Cetacei }
 ^{a a} } ʒ ss.
 — Hydr. Nit. Oxyd. }
 Pulv. Opii ʒj.—M.

Fiat unguentum.

This must be spread on lint, and applied to the part twice a day. What are the internal remedies you ought to exhibit in these cases?—Gentlemen, calomel and opium: these are the medicines on which you are to rely: a grain and a half of calomel and a grain of opium morning and evening.

R Hydrarg. Subni. gr^r iss

Pulv. Opii gr^r j. M.

Capiat nocte maneque.

Nothing will be of so much service as this medicine. It should not be carried so far as to produce ptyalism, or to affect the constitution severely; but it should be given so as to restore the secretions, and to diminish the action of the nervous system. The calomel will do the first; and the opium will lessen the nervous irritability. The treatment of inflammation has been improved of late by calomel and opium. The effect of this medicine in chronic inflammation may be seen in the disease called Iritis. Here calomel and opium must be exhibited, nor should a deposit of white matter, having the appearance almost of pus, into the anterior chamber of the eye, be any barrier to their use. Give five grains of calomel and a grain of opium night and morning; and in the space of a week, if the eye has not suffered a good deal, nor has

been disorganized, this remedy will correct the inflammation. There are other aids we use, such as the compound decoction of the sarsaparilla. Some think it a placebo; others have a very high opinion of its efficacy. I do not think much of it myself in those cases; but after the use of mercury it diminishes the irritability of the constitution, and soon soothes the system into peace. With this view, its aid, combined with other remedies, may be of use. So much for irritable ulcers. Before I conclude this part of the subject, however, I will mention a case which just occurs to me: I allude to that of Mr. Lucas, the surgeon of the other hospital. That gentleman, in consequence of having pricked his finger, had a very irritable sore, which obliged him to go into the country, where he remained for a considerable time. The remedy which he found most efficacious for bringing the sore into a healing state was the application of a solution of nitric acid, very much diluted, and the compound decoction of sarsaparilla. From the latter he thought he derived considerable benefit. By these means, and by attention to his general health, he effected a cure; but his life was in considerable danger from the irritable sore produced by this apparently trivial accident.

SINUOUS ULCERATION.—It is necessary to explain here well what I mean. Whenever, therefore, a sore extends to any considerable depth, so that the discharge has to travel through a channel before it arrives at the surface, such an ulceration is called sinuous. There are two reasons why these ulcerations are difficult to heal: first,

from matter forming at the bottom, forcing its way through the passage, and thereby disturbing the healing process by breaking down whatever adhesions or granulations form on its sides; and, secondly, the same interruptions occur from the actions of the muscles, when these ulcerations happen in muscular parts; thus, if the healing process has commenced in fistula in ano, when the sides of the fistula are at rest, the first time that the person has a motion, the sphincter ani, by its action, will destroy all the newly formed adhesions and granulations, consequently, if the sphincter be divided and the parts have rest, granulations will form, remain undisturbed, and a cure be the result; this clearly shows that the motions of the sphincter occasioned a continuance of the evil. Sometimes in these cases, for the purpose of exciting the adhesive inflammations, injections are used; now which is the best? In my opinion, tinctura lyttæ; it readily produces inflammation; adhesive matter becomes thrown out; you take care to keep the sides of the sinus in contact; and by these means, the parts will permanently coalesce. Sinuses of the rectum, however, are seldom cured without operation; indeed, I have met with but two such cases; one was that of a gentleman who came from the North of England; he had been annoyed by a fistula on each side of the anus, and one of which was operated upon by the late celebrated Mr. Hey, of Leeds; he was cured on that side by the operation; but as it was attended with great loss of blood, the patient was too much frightened to be cut again, and came to town for my

advice. I examined him; and finding that there was considerable space between the anus and fistula, I advised him not to submit to the operation, and said that I would try to relieve him without it. I injected first port wine and water: this did not answer; it was not sufficiently powerful. I therefore threw in port wine alone, and succeeded in obliterating the canal. I was fortunate in this instance; for I can assure you, that fistula in ano is seldom, very seldom completely cured, without operation. When you do not succeed by injection, you may then employ the caustic bougie. Still pressure will be necessary; and it is quite impossible that you can succeed without it. When the fistula is very deep, it may be divided into two; or a seton may be introduced, and kept in for a fortnight or three weeks, with a view of stimulating the parts for the purpose of filling the cavity with granulations.

St. Thomas's Hospital.

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 WEDNESDAY EVENING,
 Nov. 19, 1823.
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LECTURE THIRTEENTH.

IN this Evening's Lecture I shall continue the subject of Ulceration. Ulcers are frequently formed for the purpose of allowing the discharge of extraneous bodies; when such substances become lodged, therefore, in any part of the human frame, inflammation is excited—pus becomes secreted—which, pressing towards the sur-

face, ulceration takes place, and the extraneous substance is thus afforded an opportunity of escaping. Ulcers frequently occasion, to a very considerable extent, exfoliation of bone; here you can assist nature by applications, which act chemically on the parts; apply for this purpose, a lotion composed of muriatic acid and water, or nitric acid and water; this wash will dissolve the phosphate of lime, or earthy matter of the bone, and by removing this inanimate substance, the power of the absorbents will be increased, and a quicker separation of the diseased from the healthy parts, be the consequence. The acids, however, have not so great an influence in these cases as you might be led to expect from what chemical writers have stated; still, however, you will find them to be of use, and they should therefore be employed.

Ulcers that occasionally form on the fingers and toes, are sometimes exceedingly difficult to heal, from an irritation caused by portions of the nails; you may think this too trifling a subject to require a moment's consideration; but I can assure you the truth is far otherwise. A nail, for example, from pressure or some other cause, shoots into the skin beside it; a fungus springs up; the surgeon applies caustic, and destroys it; in a short time it rises again; the caustic is repeated, and the fungus disappears; it speedily, however, returns, and will continue to do so, notwithstanding all his efforts to the contrary, unless he remove the irritating cause; now this cause is the projecting portion of nail, as soon as that is got rid of, the fungus will cease to grow,