A Thesis
on Ulcers their Varieties and treatment.

by James Long

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On Ulcers, their Varieties, and Treatment.

During the attendance of a Medical Student in the Wards of an Hospital of considerable size, and one which contains an ordinary number of patients, he cannot but remark the number of those patients who are lying with Ulcers on their limbs, and who are afflicted with that disease in a proportion nearly as great as any other Malady. An Ulcer on any part of the body excites but little interest in the generality of persons going round the Wards, while on the contrary, if a Case of Ankylosation or Lithotomy exists, every one is paying the strictest attention to them, and to their future progress. But it must be remembered that a case of Lithotomy occurs but seldom in Many Districts, and in most places it is never seen at all—Whilst an Ulcer is a matter of every day occurrence, and agreeing with Professor—From what I have seen—in saying that “the very frequency of their occurrence renders it Eminent Necessary that no art should be well prepared with an efficient remedy; the more especially when it is ne-
Membered that these accidents are most likely to befall those whose limbs are of most value.

With these few remarks, attempting to show that a surgeon may be of more use to his patients by being acquainted with the more trivial looking diseases, than of those capital operations in Surgery, which few of us are called on to perform. We shall proceed to notice the ulcers which are most commonly seen in hospital practice.

By the term Ulcer I mean a breach of continuity produced by Ulceration, and pouring out pus or some other discharge, occurring in all tissues and parts of the body, but more frequently in the soft textures, and on the lower extremities.

Both in study and in practice, the subject of ulcers is better understood by adopting a proper classification, and in treating of ulcers I shall use that classification laid down by Professor Miller—and taught by him in his course of Lectures.

The following are the more important, and include in the most part all the forms of
Ulcers with which we have to deal.

1st. The Simple, Healthy, Healing Sore.
2nd. The Weak.
3rd. The Scrupulous.
4th. The Incipient or Callous.
5th. The Irreversible.
6th. The Inflamed.
7th. The Sloughing.
8th. The Phagedenic.
9th. The Sloughing Phagedena.

1st. The Simple, Healthy, Healing Sore is one in which the granulations are neither too high, nor too low, but merely on a level with the surrounding integument. They are small, firm, pointed at the top, and generally emitting a small quantity of arterial blood. If they are touched rather roughly in dressing the sore, those that are situated around the circumference become smooth, and are covered by a semi-transparent film, which soon becomes opaque and forms a cuticle. Pain is neither severe, nor is it dull. The pus which pours forth is something of a consistency and colour of cream, innocuous, and of a healthy character. When examined by the microscope it is seen to be composed of a number of corpuscles or cells floating in a fluid. These corpuscles are found to be
Spherical bodies, having a cell wall or external envelope, and containing nuclei in their interior. The cell wall is rough and tuberculated in appearance, and when acted on by Acetic Acid, it becomes clearer and brings the nuclei better into view.

Treatment.

In the treatment of Ulcers we do not use just one application to each variety of sore, but we treat each symptom as it makes its appearance. A sore looking well to-day may be quite the contrary tomorrow. A healthy Ulcer may put on a tuberculated granulation, and become quite pale, and flabby; on the other hand it becomes inflamed so as to demand an opposite mode of treatment. Knowing that they have a tendency to pass from one form to that of another, they must be watched from day to day with Carefulness and Caution.

The treatment of this kind of Ulcer is simple. The patient is to be confined to bed, the part on which the Ulcer is situated must be kept on a level with the body so as to favour the return of Venous Blood towards
The heart, and not allow congestion to take place—which would be prejudicial to the healing process. This being done—a piece of lint is dipped in tepid water and placed on the sore, covered with as much oiled silk and both are retained by a few turns of a bandage. The oiled silk will tend to prevent evaporation, and so keep the sore longer moist than it otherwise would.

The dressing is not to be removed until cleanliness demands it, and nothing more. Seeing that the granulations are so tender, the manipulation which is necessary for the removal of the dressing will take away that excellent protective fluid—the pus—and expose them to the direct influence of the atmosphere, which cannot fail to be hurtful. For this reason we would permit the bandages to be soaked in the pus before we would interfere with it. Knowing that healthy pus is a bland fluid and one of the best and most delicate coverings which could come in contact with the surface of the sore. When the dressing
has been removed all redundant discharge is to be wiped off by a piece of lint or a little soft tow, leaving the centre of the sore un-touched for the reasons that we have already named — namely injuring the tender granulations and exposing them to the atmospheric influence. In an hospital which I attended for some time, it was the usual custom for each patient to be provided with a sponge and a basin containing some tepid water. They took off their dressings and bathed their ulcers until they made them quite clean and red — ready for the Surgeons inspection when the doctor came round.

This mode of treatment has several injurious effects on the future progress of an ulcer. The employment of sponges in a ward is bad in the first place — when Hospital Gangrene happens to be going about. One man will use the sponge that another has been cleaning the contagious disease with and so it spreads very often where sponges are used in such a manner. They prove injurious also because patients will rub their sores with them until
they take away all the discharge that may happen to become hard and dry about their edges. Bathe the face until the pus is all taken away admits the atmosphere. Atmospheric air is very easily excited on this tender surface. The atmospheric air is the exciting cause. And the rustling which it sustains also excites it. Inflammation soon changes the character of this sore. Most likely into that of the Wart.

If nothing interferes with the healing of the sore, the granulations next to the old skin become smooth, and are covered with a thin film, which, as we said before, soon becomes opaque and forms cuticle. The process of cicatrization goes on until the raw surface is diminished to the size of a pea. If this small extent of surface be touched with the nitrate of silver, or if a fine portion of lint is laid on it, covered with a drop or two of Colloideum, a crust is formed, on the separation of which the part beneath is completely healed. Care however must be taken that no matter forms beneath the hard crust, which would burn into the tef-
times beneath, on account of being confined.
While the local management is attracting our attention, we must not neglect the
constitutional symptoms if any exist,-
to clear out the bowels with a mild purge,
tive, to act on the different secretions with
the medicines which appear to be useful for
the alleviation of each.
Whether pain causes either local or constitutional
the cicatrization of a healthy sore is impeded.
It generally takes upon itself the character of
The Weak Sore.
This is one in which the granulations are
large and project beyond the level of the
surrounding integument, they are less
Numerous, paler and move flabby than those
of the healthy ulcer, with less tendency
to bleed when roughly handled, and the
blood being of a Dark Venous Character.
The discharge is thin and watery, not
being like true Cream like pus. Pain
usually is inconsiderable or it may be some-
times absent.
The parts surrounding and adjacent are
soft, and free from any effusion.
This kind of ulcer occurs in a part whose vitality is weak, and in those parts of the body which are far from the centre of the circulation. The weakness of the part may be depending on itself, or that of the system. The local weakness may depend on congestion of the blood, or deficiency of nervous power. Delay in the process of the healing of a healthy sore will cause the granulations to lose their primitive strength, and in this manner become a weak sore.

As regards the system being a cause of the weakness, it is well known that sores are greatly under its influence, and every thing which affects the health of the patient. When the constitution becomes stronger or weaker, the appearance of the granulations becomes changed accordingly. And this effect of constitutional weakness or strength, on ulcers, is seen better on the inferior extremities on account of being further removed from the centre of the circulation.

Treatment.
The treatment consists in the application of stimulating lotions, and in the employment
of pressure. We have seen that the granulations are tall, pale, less in number, and a general want of activity about them. This is the reason why we use stimulants so as to let the abscesses to walk, and bring them down until they arrive at the size and appearance of healthy ones. The stimulants must not be too strong at first, lest over-action be brought on. About two grains of the Sulphate of Zinc dissolved in water will be of sufficient strength, and will form a stimulant good enough for the purpose. A piece of lint is to wet with this lotion and placed on the sore—covered with a piece of oil-silk of the same size, and both are to be retained by a bandage. If the ulcer is situated on the lower extremities, the bandage is to be applied from the toes to the knee, for the purpose of giving support to the veins of the limb. By doing so, we assist the return of the blood by the veins—prevent congestion, and by the pressure of the bandage we give a stimulus to the whole limb. When the application of the Sulphate of Zinc lotion has been continued for some time, it loses
its stimulating effect on the ulcer. It will then be necessary to use another remedy—such as the Solution of the Sulphate of Copper, or the Nitrate of Silver. Any of these alternated with the Sulphate of Zinc will have the desired effect.

Pressure operates in the same way, by raising the absorvents and creating a healthy action in the ulcer. A Compress of dry lint no larger than the ulcer is laid on and retained in its proper place by a firm bandage. The pressure is continued until the surface of the sore is on a level with the neighbouring integument, and then it may be removed—the water dressing resumed, and if need be, it may be medicated.

A nutritious diet is generally requisite to give the patient sufficient strength, accompanied with tonic medicines. Everything which disagrees with the patient is to be avoided.

3° The Scrophulous Ulcer.

Is one which is late from the Commencement and occurs in Scrophulous individuals. Its most common place of occurrence is on the neck, the forearm, the hips and thighs. The cellular tissue in which it originates,
first becomes inflamed and swollen by the deposit of tubercular matter. A slow kind of inflammation then takes place which goes on to suppuration. The integument over the suppurating part becomes of a livid hue. Gradually it gives way by ulceration, and there appears a thin watery sort of Pus, something like skimmed milk or curds, mingling in a fluid. No Granulations can be seen on the surface. It is very loose, and of a greyish colour. After a while granulations may be seen to spring up but they are of the character of the week sore—tall, pale and flat. Around the sore there is done swelling owing to the chronic inflammation which is continually going on and to the effusion of serum into the tissues immediately sur- rounding it;

Irritative Fever disturbs the Constitution much, which sooner or later will glide into Hectic, if the Discharge be permitted to go on unchecked.

Treatment:

If these Sores are left to themselves, or treated by simple water dressing, they will heal.
over, but it is only for a very short time that they will remain in such a state, opening up as ill looking as they were at their first commencement. It is evident that there is no solid groundwork for the healing process in the scrofulous sore. It will never heal permanently until the boggy looking texture which composes the sore be taken away. For this purpose the Potassa Jusa is to be used. A piece of the Potassa is taken and well inserted into the substance of the sore, which however must be well dried before its application, or else the discharge which is coming from it will only serve to dilute the escharotic and to render it useless. The Potassa Jusa is to be well applied to the sore so as to convert it into a slough, on the separation of which healthy granulations will spring up. If this be not the case, a renewal of the application will be necessary. When healthy, firm, red granulations occupy the sore, we apply the water dressing as in an ordinary healthy sore. Constitutional Measures.

As this sore depends chiefly on a peculiar state of constitution. It is obvious that our
Treatment must be mainly Constitutional, and therefore our line of treatment must be tonic.

The best tonic treatment suited to this disease consists in due regard to diet, nourishing and not of a stimulating nature—in the proper regulation of the bowels by laxatives—not by purgatives—in the state of the warm skin which is to be kept, and moist by flannel worn, kept the skin clean, and perspirable by daily bathing in sea water if the season permits it, in breathing a pure atmosphere, living in an elevated and dry situation.

The internal administration of the Subacid of Potassium, in the dose of two to three grains given thrice a day, some of the preparations of iron, particularly the Sodium Ferris and Liver oil. All these will assist very much in renewing the vigour of the Constitution, and proving very beneficial in the treatment of the Scrophulous Diathesis. Accordingly we find as the general health improves, the character of the ulcer improves also.
The Indolent or Ballous Ulcer.

It is very common, and occurs most frequently in the labouring class of people. It may have been a healthy sore at first, but delayed by the accidents to which it has been exposed. It is distinguished by its edges being high, hard, and of a cartilaginous appearance. The surface of the sore is depressed, smooth, having no granulations and bearing a resemblance to mucous membrane. The discharge is thin and watery, having very few pus globules. The surrounding integument is hard and swollen. The pain which accompanies it is variable, usually not of an acute kind.

Treatment.

As this sore occurs generally on the lower limbs. The treatment best adapted to it is to place the limb in the horizontal position, and apply pressure with the object of causing the absorption of its thickened margins and to stimulate the sore also. Pressure to this form of ulcer is best applied by strips of adhesive plaster from half an inch to an inch in breadth.
Each strap is to be first applied by its middle to that part of the limb which is opposite the ulcer, and then the two ends are to be brought forwards over it, and they should be long enough to overlap about two or three inches. Before applying the adhesive plaster however, it will be necessary to take a bandage and bandage the limb from the toes until we come within two inches of the sore; the bandage is then laid down and the plaster applied. When this has been done the bandage is again taken up, and proceed with it until we reach the knee. The straps of adhesive plaster should not only cover the ulcer, but they should be applied about an inch below on the sound skin, and the same extent above it. The edges of the sore should be drawn with a moderate degree of tightness, but not too forcibly, lest the limbs might be strangulated. If the patient feels the straps too tight, the application of a little cold water will generally afford relief. However if this does not relieve the patient, a grooved director is to be incriminated between the plaster and
the limb, and on this the strips are
divided so as to relieve the limbs of constriction.
If circumstances do not occur which render
the speedy removal of the plaster necessary,
the limb is not to be touched for a couple of
days. The dressing is then taken off, and
the appearance of the sore examined. We
repeat the dressing according to the change
which has been effected.

"The application of a large blister, covering
the sore and a considerable part of the limb,
greatly hastens the cure, and frequently
proves sufficient for its completion,
without the use of any other means than
moist dressings applied afterwards." (Professor Syme).
The state of the stomach and bowels are to be
put to right by Active Purgatives, and
Antimonials are to be administered if fever
is present.

5. The Irritable Sore.
occurs generally in the skin, and is
accompanied with smart stinging pain. The
surface is unequal, and has you granulations
and of a dark angry red colour. The margins
are jagged and elevated, terminating in
Sharp edges. The discharge is thin, serous, and tinged with blood. The surrounding integument is slightly swollen, and also of a dark red colour.

Accompanying these local symptoms, we have a disturbed state of the constitution, restlessness, want of sleep, depressed appetite, with a general disorder of the secretions.

Treatment = Is for the most part constitutional. In most cases the state of the constitution will be found to be the predisposing cause, and in order to make any amendment in the home, we must mainly treat it through the system by alteratives and tonics.

A Plummer's pill taken each night at bedtime, or two pills of the following Composition will be found serviceable:

Pil. Hydrarg. gr. v

Ext. Hyosciani gr. v

Colocynthisis Comp. gr. v

in pilulas duas. Hora sonni imminente.

In addition to the constitutional management, we keep the part quiet, relaxed and elevated.
Irritrate of silver applied in substance to the sore and its margins has a beneficial effect, and almost the only one which gives speedy relief to the patient. By its slight escharotic effect, the pain is increased for a short time, but it soon passes off on the application of the tepid water dressing or a soft poultice. The irritate is pencilled slightly over the sore from day to day, until the character improves, which usually takes place in a short time, when the local and constitutional treatment go together.

6. The Inflamed Sore.

In the original form of almost all sores and one which the nurse to treat very often on the admission of patients into an hospital. It may however be of secondary occurrence, supervening on the Indolent Sore. The labouring man who has got a callous ulcer on his leg is exposed to all sorts of bruises and injuries, and long continued exercise of the part. In this way many examples of Inflamed sore of Secondary occurrence come under
The notice of the surgeon. The surface of the sore gradually becomes larger as long as active inflammation is present, showing a raw, soft substance, having no granulations, and pouring out a profuse ill formed pus. The surrounding integument is hard, swollen, red, hot and painful. If the patient remains in the erect posture, and keeps moving to and fro, the pain is greatly increased. The constitution is disturbed with excitement, and the stomach is out of order.

Treatment.

This consists in Antiphlogistics. The part is kept at rest, and on an elevated position, fomented with hot water, and afterwards a warm soft poultice applied. Purgatives are to be given to clean out the bowels. Antimonials also with the view of relieving the feverish excitement. Sometimes the parts surrounding the sore may be acutely inflamed as to require a few punctures with the point of a Lanceet, or the application of a few Leeches. Leech bites however are apt to irritate the parts,
And ulceration may be extended by the wounds which they leave, taking on the Ulcerative Action. The practice must not be kept on too long, or else the sore will be certain to degenerate into the Weaken.

7. The Sloughing Sore.

It frequently met with in persons whose constitutions have been hurt by intemperance, and among those also who are emaciated, and reduced by want. The sloughing which accompanies this sore differs from the sloughing which now and then takes place in the inflamed sore—by not being temporary—but beginning with it, and going along with it.

A sore not originally a sloughing one, may take on that action, and continue throughout its course, so as to continue through.

It receive the name of Secondary Sloughing sore. Such a secondary sore may, and does occur on the penis for example— as the result of paraphymosis.

The slough is generally of a moist nature, but sometimes it is very much pain is present.

The stomach and bowels are disturbed, and the tongue is loaded. Whatever may have been
The state of the ulcer previous to the commencement of the sore, it will now be found to be in an irritable state. When the slough has formed it begins to separate. Its edges become detached first, showing the commencement of another beneath it. In this manner slough after slough will form, destroying the part, and reducing the patient to a very low degree.

The sore has a peculiar dark colored appearance, pouring out a thin, fetid discharge. Considerable hemorrhage may take place if a vessel happens to cross in the track of the ulcer.

**Treatment.**

The principal—and almost the only local treatment required—is the strong escharotic to cut out the disease, and to convert it into a healthy sore. We stated before that the slough is generally of a moist nature. And on the application of the escharotic it will not do to be satisfied with applying it to the slough in such a moist state, for the fluid would only serve to dilute it, and to render it useless. But we must take a piece of lint and
Any sore completely as long as we see any discharge continuing to be poured out from it, and any detached or superabundant pieces of slough are to be taken away also, so as to ensure the effective application of the escharotic.

The kind of escharotic most commonly used is the strong, undiluted nitric acid. A small piece of wood with some lint rolled round its extremity, is dipped into the nitric acid bottle, and then applied to the sore thoroughly, so as to convert it, and its edges, into one slough. The part is then covered with a soft poultice, and on its removal, if the slough separates leaving an unhealthy surface beneath, the nitric acid is applied as on the first application, and so on until, on the separation of the slough, a healthy appearance is found corresponding with the simple sore.

The bowels are to be acted on by a smart purgative—two pills—each containing four grains of the extract of colocynth, and one grain of calomel, followed by two drams of the sulphate of magnesia, dissolved in two drams
If the infusion of Senna will do all that is required, on the following day the patient is to commence with Dover's Powder—from five to eight grains three times a day. This will relieve all the suppressed secretions, mitigate pain, restore sleep, assuage the general irritation, and will have a most beneficial effect on the sore itself.

The Phagedenic Sore.

Is a peculiar kind of sore, spreading rapidly wherever it makes its appearance. It is frequently met with in syphilitic cases, but it occurs also under many other circumstances—thus cancerous or is an example of phagedenic ulceration of the mucous membrane of the mouth. The surface of the sore is of a yellow, livid appearance, very irregular, and void of granulations. The margins are swollen, red, hard, and frequently eroded; they are very irregular, and jagged, presenting the appearance of a mouse nibbling at them. This sore is attended with severe darting pain, which is at first remittent, but afterwards incessant. The surface of the sore is covered with a
Straw Colored flocculent substance, and a viscous secretion. The surrounding integument is occupied with a halo of dusky red inflammation. Haemorrhage often occurs, and returning from time to time, contributes seriously to the reduction of the strength of the patient. In its commencement, it is sometimes attended with little febrile disturbance, but in its advanced stage, the general indisposition is somewhat serious. The patient is sleepless from constant pain. The appetite fails. The tongue becomes coated with a white or brownish fur. The pulse is accelerated and very frequently diarrhea sets in.

9th Slaughtering Phagedena.

This form of Ulcer is beyond common ulceration, but it does not go so far as complete gangrene. It may make its appearance by attacking the acute Phagedenic sore, or on an unbroken surface in the form of a pustule or vesicle. The pustule or vesicle becomes surrounded by a dusky red sort of inflammation, and accompanied by sharp, shooting pain. When the pustule
Opens a slough is formed which continues to extend along the skin, and into the deeper textures beneath. The edges are evected, and attended with a circumcised thickening, and diffused swelling. A very fetid discharge continues to be secreted which is so characteristic of the disease, that a person cannot enter the ward without being conscious of its peculiarity, and any person who has experienced it, recognises it almost as a proof of the nature of the disease. Occasionally blood comes away from it as the eating action of the bone proceeds. Constitutional irritation is soon set up, which passes into one of the typhoid type. This may be easily accounted for, by the absorption of the putrid matter, by the loss of blood which follows when a vessel of considerable size is eaten through, and by the severe pain which attends it. This disease may be caused by great local irritation, attended with an irritated state of the constitution. Or it may be caused by bad ventilation, particularly if too many patients are crowded together in one hospital. It may be communicated from
one to another, by using the same ointments that another person has been using. This Slaughing Phagedenic sore with
Treatment.

As the two Phagedenic sores now desired require the same treatment as the
Slaughing Ulcers, it need not be repeated again. But as regards the Slaughing—
Phagedena we must be particular as to the
air which is circulating through the apartment. Pure air, free ventilation. Cleanliness, purify
ating the ward. Sprinkling it with the
Chloride of Lodoine. All these are proper
measures in the treatment of these Contagious ulcers. Many Phagedenic ulcers arise from
the patients being in an improper atmosphere.
And then the best medicines and applications do no good, unless the patient be removed
from the pernicious influence of the air=
= wholesome air to which he is exposed. The
diet must be good— but not stimulating, fresh,
light and nutritious.

Although we find ulcers corresponding to the
descriptions of the preceding. Still there are
Many complications and peculiarities attending some of them. We have ulcers on the lower extremities connected with a varicose condition of the veins. They are usually the indolent or irritable ulcers, and the varis is the cause. In the treatment of ulcers, the chief indications are to remove the exciting causes which gave rise to their formation. In the treatment of these ulcers complicated with varis, we act on the same principle—that is, to remove the varis which is the exciting cause. The veins most commonly the saphenous major become dilated on account of some obstruction to the flow of blood through it. As it goes on dilating, it consequently separates the valves wider and wider, until in some parts of the vein they are rendered quite inactive. Where the valves become ineffective, a bulging of the vein takes place, so that the dilatation is not uniform. In consequence of this impaired circulation, passive congestion of the limb is the result. It is liable to take on inflammatory action on its surface, and by its being induce ulceration which terminates in one or other of the ulcers which we have mentioned—namely, the indolent
or irritable. In seeking to remedy the varicose condition of the veins, we must look to the cause that obstructs the return of blood through them. The Gravid uterus, or a distended rectum are frequent causes of the disease. Very often it occurs in men who are accustomed to dig on a hard soil. The wearing of tight garters often. Should we find any of these causes producing the disease, we are to remove them if possible. The ulcer connected with varicose veins is treated according to the symptoms which it presents. But we do not attempt that until the veins are remedied in the first place, and for this purpose the limb is retained in the horizontal posture to as to favour the return of the venous blood towards the superior vena cava, and bandaged from the toes to the knee for the purpose of giving support to the dilated veins, and in consequence of this support, congestion no longer remains, and the ulcer heals. Scarification having been completed, it is very apt to return again if due support be not given to the limb. For this purpose we cause the patient to wear a laced stocking, or a bandage.
When Ulcers occur on persons who have a tendency to Aphoplexy, or those who are troubled with the Gouty Diathesis—They are to be healed with Caution, more especially if the Ulcer seems to inflame and extend during Constitutional Disturbance, Contracting again when this subsides, yet never approaching to complete Cicatrization without the health suffering. Such an Ulcer as this must not be healed without another being set up in its stead, and the Cicatrization of this secondary one must proceed gradually and cautiously.

The Menstrual Ulcer is another of a peculiar kind which occurs in females as the result of a disorder state of the Catamenia. It forms out a changeous discharge during the time that the Catamenia usually appear. We need not attempt to heal this Ulcer until the functions of the Ulcers are duly restored. For this purpose some of the preparations of Iron, coupled with Myrrh and Aloe—ar very efficacions. As the functions of the Ulcers returns, the Ulcer will commence to heal accordingly, and continue in a Sound State—unless the cause which gave rise to it returns.