

LYMPHANGITIS; LIPOMA; THE TREATMENT OF  
PALMAR ABSCESS; THE DIAGNOSIS AND TREAT-  
MENT OF ABSCESS OF THE LIVER.

CLINICAL LECTURE DELIVERED AT THE NEW YORK POLYCLINIC.

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LYMPHANGITIS.

GENTLEMEN,—This child has a fistula in the region of the lachrymal sac, which has been incised. There has also been a purulent discharge from the right ear, and in front of the ear you notice a well-marked but diffuse swelling, which on pressure does not elicit fluctuation. As you know, there is a group of lymphatic glands in front of the ear, which occasionally suppurate, and this seems to be the condition present here. What is to be done? In all glandular morbid conditions we must ascertain the cause of the trouble. We know that the glands are very rarely the primary seat of the malady, and hence whenever you find such a swelling you should always look for something in the vicinity as the primary cause. Thus, if there be a swelling of the glands in the submaxillary region, you should carefully examine the condition of the nose, eyes, ears, throat, and larynx, and in nine-tenths of all such cases you will find the primary cause in one of these situations, and not in the glands. Occasionally serious mistakes will arise from a neglect of this precaution. A middle-aged man, having a conspicuous swelling of the lymphatic glands, was sent to me by his family physician with a diagnosis of cancer, and with a request that it be removed by operation. It was indeed a cancer of the lymphatic glands, but when I heard the man speak I at once made up my mind that this was not the primary affection. I ascertained that he had had aphonia for over a year, and a laryngoscopic examination showed cancer of the larynx. Although his family physician had had him under observation for almost a year,

he had not even suspected the presence of this growth in the larynx. We all occasionally make mistakes, but the most important point in this case was not the mortification of the physician, but the fact that if the malady had been recognized early enough one-half of the larynx might have been removed, or the tumor excised, and the patient's life prolonged, and he would have been spared the disappointment to which he was subjected. Please remember, then, as a working rule, that in every case of glandular enlargement the primary cause must be sought for elsewhere. In the child before us, I not only look at the swelling but I look into the condition of the neighboring organs,—the eyes, the ears, and the throat,—to find the causal indication. A causal indication is that indication for treatment which is directed against the cause producing the malady. If there be otitis media causing this glandular infection, the rational treatment will be to treat the otitis media, and not the glands alone, and when the glandular affection is not of long duration this treatment will be sufficient. Suppose there is a small suppurating wound of the hand, and you find red streaks up the arm to the axilla, indicating extensive lymphangitis, and in the axilla several enlarged and tender lymphatic glands. These glands are threatened with suppuration from the absorption of poison from the small wound. You must not treat the axillary glands, but you must treat the small poisoned wound in the hand which has caused all this trouble, and the moment you evacuate the poisonous material from this wound the lymphangitis and the glandular swelling will begin to subside. This is an every-day illustration of the importance of finding the cause of a glandular affection. To be sure, there are cases where the causal indication might be fulfilled and yet the secondary trouble will not disappear, as, for instance, where actual suppuration or a caseous degeneration has been set up in the gland. Even in these cases the rational surgeon will, if possible, dispose of the cause also. There is nothing more precious in the practice of surgery than a clear knowledge of one's position, and a clear statement to those concerned with us in it, regarding the exact condition presented: the happy relation between the surgeon and his patient is more important even than scientific or financial success. It is no disgrace to say, "I do not know," for it takes some knowledge and understanding to be able to say it. But to come back to our patient. There is an otitis media here, and a threatening suppuration of the lymphatic glands about the ear, which has lasted only a few days. I believe that by improving the condition of the ear, and establishing proper drainage, this glandular swelling will subside; but

usually this condition will continue, acute suppuration will occur, and an incision will be required. The case should be referred to the ear department for treatment. Chronic suppuration, especially if of tubercular origin, will not get well after simple incision, but will leave a sinus for a long time.

## LIPOMA.

This man has a movable, lobulated swelling in the right loin, which is elastic but does not give the sense of fluctuation, and it has existed in all probability for a long time, but has not attracted the patient's attention until recently. Although in a rather unusual locality, it is in all probability a lipoma. I do not believe there is any solid connection between the tumor and the base upon which it rests. This is very important; for if the tumor be not freely movable upon the base, be careful about the diagnosis until you have made an exploratory puncture, for such a swelling may be a cold abscess. These abscesses increase in size very slowly, give rise to scarcely any symptoms, and are lobulated, instead of having the rounded appearance of an acute abscess. If we find that this tumor is only a lipoma, we shall propose to him to have it removed, for if left alone it will probably eventually grow to such a size as to cause inconvenience. If we find it is a cold abscess, we must at once look for the cause of this abscess: the most probable cause would be ostitis of one of the ribs. If any bone-disease be present, it will not be sufficient to evacuate the abscess, but we must remove all diseased bone, and leave behind a wound the walls of which are made up of healthy tissues. Under such circumstances the wound will heal promptly, and not only this, but it will remain healed. Of course this does not prevent other portions of the body from being independently infected with tubercular material. I find by puncture that this swelling contains no pus: so the diagnosis of lipoma is sustained, and I shall proceed to remove the tumor.

Lipomata generally occupy those places where we normally find an accumulation of fat, hence principally along the entire dorsum from the nape of the neck to the thighs, on the front of the thighs, on the belly, and on the breasts. The majority of them are well-defined encapsulated growths, the lobules of fat being enclosed in a capsule of dense connective tissue. There is, however, a form of lipoma called diffuse lipoma, which is an accumulation of normal fat under the skin in those localities of the body where there is normally the most fat, and it is difficult to say where the normal fat ends and the lipoma begins. The distinction between circumscribed lipoma and diffuse

lipoma is important only on account of the technical difficulties connected with the removal of the latter class. The probability is that as soon as you have exposed the capsule of such a growth you will find there are a great many septa to be divided, and that they are very much more vascular than in the circumscribed variety; and, more than this, you must draw an arbitrary line between the normal and the abnormal fat. Fortunately, diffuse lipomata are very rare; I have seen only three of them in twenty years of practice. Occasionally lipomata are found in strange places; I have seen one which worked its way between the layers of the neck in the lower cervical triangle down to the œsophagus. You find lipomata quite frequently in the vicinity of hernia; they are called subserous lipomata; they often extend between the abdominal walls, and are very difficult to excise. All these, however, are exceptional.

We have now introduced some cocaine solution subcutaneously over the site of the tumor, and, as the parts have already become anæsthetic, I make a free incision and dissect down to the tumor. There is no difficulty in dissecting out the tumor, and, having secured the bleeding vessels with catgut, the wound is closed with several interrupted catgut sutures, the lower angle being left patulous for drainage. Powdered iodoform, "protective," iodoform gauze, a compress of sublimate gauze, and a bandage complete the dressing, which will be changed after about two days. When these tumors are small, local anæsthesia will be sufficient; but when they are large, general anæsthesia must be employed, and, in fact, it is much more comfortable for all concerned to employ general anæsthesia, as the dissecting out of the deep adhesions is usually painful even though cocaine has been injected.

Regarding the prognosis of operations for lipomata, I would say that they pursue a uniformly favorable course at the present day; but if you will look back in the older text-books you will find it stated that operations for lipomata are peculiarly liable to be followed by suppuration and erysipelas. This was explained on the ground that fat was poorly nourished with vessels; but we know now that this is not the true explanation, and that these accidents were due to uncleanness in operating.

## PALMAR ABSCESS.

The next case is one which very frequently comes under the notice of the general practitioner: it belongs to a class of affections which probably make up the bulk of all surgery. The major part of surgery

does not consist in laparotomies, extirpations of goitres, gastro-enterostomies, and similar brilliant operations, but of much more modest work, which, however, is none the less important. A correct recognition of the condition will enable you to attack it and adopt a strictly conservative course. The word "conserve" means "to maintain in a normal condition,"—this is true conservation; but with some men the meaning of this term has been twisted out of its true significance, and they have told us that to be conservative means to be a coward, a temporizer, a man who is undecided and does not know what to do, and hence does not do anything. I protest against this construction of the term. A surgeon who is dealing with a destructive suppuration of the palm of the hand, and who, recognizing the true condition, takes a knife and evacuates even a few drops of pus, is a truly conservative surgeon, for he sacrifices nothing; whereas the false conservative waits until it is necessary perhaps to amputate a limb. The proper employment of the knife at the right time and in the right place is a properly conservative step.

The dorsum of this man's hand is œdematous, while a superficial examination of the palm shows but little. Glossiness and pallor with infiltration constitute an early indication of suppuration in this region. The pallor is due to the tension on the tissues, which keeps the capillaries empty. Thus, in an acute osteomyelitis of the thigh, in an early stage, an examination of the affected limb shows it to be swollen, glossy, and very pale, and it pits on pressure, but later on, when the pus has perforated the periosteum and has found its way underneath the integument, the skin flushes up: hence a careful observer should not be deceived by the presence of pallor instead of redness. The glossiness and pallor of the hand indicate a deep-seated inflammation, and the dorsum will be found also very much swollen, and sometimes red. It is on this account that young surgeons are sometimes deceived into making incisions into the dorsum instead of into the palm of the hand. Inflammations involving the palmar aspect of the hand are of peculiar significance, because they put in jeopardy the usefulness of one of the most wonderful and most useful parts of the human body, and they occur most frequently in those who most need the hands,—namely, among laboring men. It is from the little punctures and abrasions which they suffer in their work that these inflammations arise. If there be a deep wound and a profuse hemorrhage, unpleasant consequences are not common, and popular judgment has expressed this by saying that "a wound which bleeds well heals well." The reason is that such a wound terrifies the patient, and he will leave it alone, and

also that such a wound is thoroughly cleansed by this very outflow of blood, so that if it be left alone it will usually heal readily. But how different is it with these slight wounds and punctures! A little serum exudes from the broken surface, and any dirt which may have been deposited in the bottom of the wound is covered over by a crust of dried serum, and, as there is no great discomfort from the wound, the patient continues at his work, and the movements of the muscles help to drive the infection farther into the lymphatics, until finally there is a deep-seated and extensive inflammation. Now, what is to be done for injuries of this kind? In the first place, you must always thoroughly cleanse such a puncture with soap and water, or with vinegar, and then cover up the part to insure its rest. Later on, when inflammation has developed, and there is pus formed underneath an unyielding fascia where the chances of spontaneous perforation and escape outward are very slight, a certain tension is produced, and as the fascia opposes its action it burrows and breaks through into the sheaths of the flexor tendons, and if still unrelieved the suppuration may extend to a bone, causing necrosis, or into a joint, causing suppuration there. Now, what is the rational treatment? Is it plunging the hand into warm water, or putting on a poultice, or painting the surface with iodine, or using a piece of plaster? No: there is a septic collection, and it is bound to make its escape, and the most rational treatment is to let it out, as this will relieve the enormous tension of the parts whose vitality is not yet destroyed. Such an incision, if made early enough, will conserve the life of the tendons, of the phalanges, and of all the organs which are in imminent danger of being destroyed. But you may say to me, "This is all very well for a surgeon and a specialist, but it is a different matter with the general practitioner." While admitting that the general practitioner has greater obstacles in this direction to contend with, it does not follow that an effort should not be made to overcome these obstacles. There is a rule in surgery, laid down by the oldest authorities, "wherever there is pus, your duty is to evacuate it," and there is no region in the human body where there is an exception to this rule. I am not speaking now of cold abscesses, but of hot, acute abscesses. The fact that it is especially difficult to evacuate the pus in certain regions does not relieve us from this duty. By all means do not apply a poultice and endeavor to get out of the difficulty by this "*pons asinorum*." Let me show you by a rough diagram on the blackboard how and where you may safely make an incision deep into the palm. Looking at your own palms, you will see the lines corresponding in a general way to a capital M, the upper left-

hand stroke of the M being slightly curved and directed towards the thumb. Now, it is principally the superficial palmar arch which concerns us in connection with such deep incisions into the hand. You can make a free incision from the top of the thumb into the ball of the thumb as far as the up-stroke of the M; you can make a free incision along the entire index finger down to the M, and the same on the middle and fourth fingers, and along the little finger from its tip down to the wrist-joint. You can also make incisions from the right-hand stroke of the M down to the wrist-joint. The only portion you must not injure is a little quadrangular space, the middle of which space lies between the first and second down-strokes of the M. Here you must not cut freely, but this does not mean that you cannot evacuate pus. You can do this by making an incision below and another above, and then working your way cautiously with dressing-forceps. The diagram shows you, then, that there is hardly any spot in the hand that you cannot open freely, and even if you must run the risk of cutting the palmar arch you would better do this, if necessary, provided you open the abscess as well. If you do cut the palmar arch, throw an elastic ligature around the limb to check the bleeding temporarily, retract the edges of the wound, and hunt for the bleeding points and ligate them.

It is stated popularly that a felon on the little finger or the thumb is a great deal worse than one on the other fingers, and this is true; it is a curious fact, which I can confirm. Why is this so? Because the inflammation, if unchecked, is apt to run up the forearm and arm and endanger the whole limb. Farmers, cattle-men, sailors, and ship-captains all know this, for they have to cut open their own felons. If such men recognize this matter and act promptly, certainly we physicians ought to recognize it also, and should ascertain the reason. As you know, the deep and superficial flexor tendons run in sheaths, and it is the peculiar configuration of these sheaths which explains this well-known fact. Let me show you in another diagram the general arrangement of the sheaths of the tendons of the fingers. The sheaths of the tendons from the first, second, and third fingers are closed sacs, extending from the first phalanx down into the ball of each of these fingers, where the sac ends blindly. The tendon is attached to the sides of the sheath, and for about one-fourth to one-half an inch nearer the palm the tendons pass through loose connective tissue before they enter their respective sheaths again. Now, in the thumb there is no such blind sac, the tendon-sheath extending into the palm. This is also the common arrangement found in the little finger. Now you

can see the reason for inflammations of the thumb and little finger extending upward. Corresponding to the endings of the blind sheaths of the three middle fingers there is a weakening of the palmar fascia at the ball of each finger, and through this weak spot spontaneous perforation outward will often occur. In the case of the thumb and little finger the inflammation can travel unchecked to the palm, and thence up into the arm. Hence a free incision to liberate the pent-up poison and to relieve the enormous tension which threatens the death of all the tissues should be employed earlier here than elsewhere.

Now, having made this free incision, how shall you treat the wound? In these days of antiseptic surgery, you are often told to put on "an antiseptic dressing;" but the principles governing our selection of dressings have a rational basis. I divide all dressings into dry dressings and moist dressings, and it makes no difference what chemical is in the dressing. If you have to deal with an aseptic wound, there being nothing poisonous in the wound, the discharges are clean and consist simply of clean blood and serum, which, even if retained, will be absorbed. This escaping blood will form a crust and seal up the wound. But in the case of a suppurating wound, one in which there is apt to be poison for several days after you have made the incision, because there are sloughs which will not become detached at once, you must avoid inspissation and the formation of a crust, and hence you must employ a *moist* dressing. A moist dressing is one which is applied moist, and which is covered with oil-silk to prevent evaporation, and, as a result, the discharges will be diffused through the entire dressing, the mouth of the incision will not be clogged up by crusts, the moisture in the dressing will assume the temperature of the body, the circulation of the parts will be stimulated, and it will act very much as a poultice, but in a much more cleanly fashion, and if you use some antiseptic fluid to moisten the dressing the discharges will be kept sweet and clean. Hence make your incision adequate, pack the wound with a strip of moist gauze, over this place a pad of moist gauze large enough to catch the discharges for twenty-four hours, and over this a piece of rubber tissue to retain the moisture, and a bandage to confine the dressing. Such a dressing is also under your control, and you will not be asked to be responsible for the meddlesomeness of the patient. It is a very pleasant dressing, and a cleanly one, and, as you know, it should be changed only once or twice in the twenty-four hours. The moment the discharge becomes serous and scanty and granulations spring up, the time has come to change from a wet to a dry dressing. If you still persist in using the wet dressing, you will have exuberant

granulations, or "proud flesh." Under a dry dressing the wound heals kindly and quickly.

Now let me say a word about the cases which are seen very early,—those cases in which the best laurels may be won. How is the small collection of pus to be found? There is no redness, no fluctuation, and the pain is diffused. Imagine the focus to be in that little spot under which is the palmar arch. Assuring your patient that you will not hurt him, and asking him not to look at what you are doing, you proceed to touch various points delicately with the end of a probe, beginning at the periphery of this area, and moving in a spiral course until you touch the point where the patient insists he feels the most pain. Having determined this spot, plunge a small tenotomy knife directly downward until the pus wells up alongside of the knife, and then, as you withdraw the knife, widen your incision. Now introduce a small bit of gauze and apply a moist dressing, and the patient will be able to resume work within two or three days.

#### DIAGNOSIS AND TREATMENT OF ABSCESS OF THE LIVER.

The next case is that of a young man who has been suffering from violent pain in the region of the liver, accompanied by a marked increase in the area of hepatic dulness. The liver is freely movable during respiration, and hence does not appear to be adherent to the abdominal wall. He has continuous fever, which is aggravated towards evening. As his general condition is growing steadily worse, I deem it proper to interfere. Nature, as a rule, is a bad surgeon in the treatment of acute suppurative processes. You know it is a popular belief, and even some medical men still hold the opinion, that external applications will attract pus towards the surface of the body; but it is an entirely erroneous idea, for the pus extends along the lines of least resistance, and this is often along the lymphatics in planes parallel to the surface, instead of towards the surface. Hence the old surgical rule, to evacuate the pus as soon as detected, is the one to follow, and the importance of this rule increases closely in proportion to the depth of the suppurative process. Assuming that in this case the suppurative process is in the parenchyma of the liver, can any one say that the pus will find its way to the abdominal surface of the liver and through the abdominal wall? It is just as likely to break through the diaphragm into the pleural cavity,—a very dangerous condition. Again, the perforation might take place into the general peritoneal cavity, with even more serious consequences. We know that a large number of these abscesses of the liver are confined within the

capsule of the liver, and assume very large proportions before perforation takes place, and that adhesions are usually formed before evacuation of the pus occurs.

In considering this subject systematically, I shall speak first of methods of diagnosis, and secondly of methods of treatment. In making your diagnosis of this condition you must make a careful physical examination, and, more than this, you must have direct evidence of the presence of pus before you undertake to make an incision. This information is obtained by exploratory puncture. If your puncture is negative, then you will consider that the fever and other constitutional symptoms which have been present might be due to malignant disease instead of to an abscess, and you will not make an incision. Again, there may be chills and elevation of temperature from retention of bile, and if you can find even a few drops of pus your hands are greatly strengthened. It is important that you should make your incision, if it be an abscess, at an early stage, otherwise your patient is likely to die of exhaustion, even after the incision. Let me impress upon you, then, the importance of making an early diagnosis of abscess of the liver. Now, what are the means of making the diagnosis? If we have to deal with an intumescence of the liver, and signs indicating firm adhesion between the liver and the abdominal walls, you need have no fear of making an exploratory puncture. The physical examination will show that on deep inspiration and expiration the tumor of the liver does not change its position with reference to the abdominal wall, and I beg you to bear this fact very carefully in mind. Do not plunge in a knife, as you might do in an ordinary abscess elsewhere; this desire to be brilliant is a bad thing, and the modern surgeon foregoes this brilliancy and avoids this plunging of a knife into anything. He works carefully from layer to layer, being guided at every step by the eye. In accordance with this practice, then, you must incise the skin, the fascia, and the abdominal muscles, until you reach the peritoneum, and if there be adhesions you will then observe that all the tissues of the abdominal walls are oedematous and infiltrated, and that serum will ooze from them. This reassures you, and, proceeding cautiously, you will soon be rewarded by finding pus. The wound should be shaped like a funnel, wide at the surface and narrow at its deepest portion. When the pus oozes up through the apex of this wound, you enlarge the opening with a dressing-forceps and establish proper drainage by the insertion of a tube.

Sometimes the adherent part is under the diaphragm, and only a small portion is accessible. Would the method just described be ad-