

Zeissl, however, extols the basic lead acetate in the highest terms as a substitute for iodine in the local treatment of bubo. His method is to soak three or four compresses in a solution of the acetate of lead and bind them upon the tumor, wetting them again with the same as often as they become dry. Dr. Patzelt<sup>1</sup> confirms this high recommendation after a trial of the lead acetate in sixty-seven cases.

Goulard's extract is a solution of the basic acetate of lead, and may be used for this purpose. My opportunities for trying it have not been sufficient to enable me to express a decided opinion as to its effect, but I cannot forbear stating my belief that no special virtue is to be found in this or in any other of the topical applications here mentioned. Counter-irritation is doubtless of value, but, with a commencing bubo, rest is the main thing after all.

A strong solution of the solid crayon of nitrate of silver is highly recommended by Sir Henry Thompson.<sup>2</sup> The strength of the solution is three drachms of the nitrate of silver to the ounce of water, with the addition of twenty minims of strong nitric acid. This is freely applied to the whole surface of the tumor, and repeated as soon as the eschar comes away; or the solid nitrate of silver may be employed by first moistening the part with water and then rubbing the crayon for a few minutes upon it.

The application of a blister—first shaving the part—is also resorted to. Diday recommends reviving the blistered surface as it commences to heal by pencilling it with the silver nitrate in stick.<sup>3</sup>

Ricord recommends that the blister should be dressed twice a day with half a drachm of strong mercurial ointment, and be covered with a rye-meal poultice, which is to be changed three or four times in the twenty-four hours. Any ointment containing mercury should, however, be used with great caution; I have known three applications to a bubo to produce very severe salivation. A caustic solution of the bichloride of mercury, proposed by MM. Malapert and Reynaud for the treatment of buboes after suppuration has taken place, has also been employed by some surgeons for the purpose of inducing resolution.

A few years since a favorite mode of treatment of subacute buboes in the French hospitals was by means of "cautérisation ponctuelle," or the rapid application of a pointed iron heated to a white heat to numerous points over the tumor. The dread rather than the pain of the application, which does not exceed that produced by many caustics, interferes with its adoption in private practice.

Compression is another means employed to induce resolution of buboes, and is said to have been suggested by the observation that these tumors do not occur wherever a truss is worn. The most ready method of applying pressure is by means of compressed sponge and a spica bandage, and the application of hot water to cause the sponge

<sup>1</sup> Arch. f. dermat. u. syph., Prag, 5 Jahrg. 1873, 4 Heft.

<sup>2</sup> London Lancet, Am. ed., June, 1855, p. 536.

<sup>3</sup> Ann. de dermat. et syph., Paris, 1 année, 1869, p. 64.

to swell. An interne of the Hôpital du Midi invented a truss or pad for the same purpose, consisting of a rounded piece of wood covered with leather, and provided with straps to pass round the waist and thigh. This may be obtained at most instrument makers, and is very convenient and serviceable. It is generally called "Ricord's pad for buboes." Reynaud<sup>1</sup> combines heat and pressure by heating the half of a common brick, the edges of which have been chipped off, wrapping it in a napkin, laying it upon the bubo, and changing it at the end of three or four hours, or as soon as it becomes cool.

The application of collodion, which, by its power of contraction, exerts pressure upon the tumor, has been recommended by Dr. J. H. Clairborne and others.

*Methods of Opening Buboes.*—So soon as matter can be detected, and it is evident that resolution is impossible, the abscess should at once be opened. Delay will allow the pus to collect and undermine the skin, which, becoming thin and deprived of its vascular supply, will be destroyed to a greater or less extent, thereby increasing the difficulty of cicatrization and adding to the dimensions of the unsightly scar.

But even before the presence of matter is evinced by fluctuation, valuable time will often be saved by an early resort to the knife, and this is the case when abortive means show no prospect of success, and especially if we have reason to believe that we have in hand a virulent bubo, which must necessarily terminate in suppuration. Under these circumstances, no method of procedure can, I believe, equal that proposed by Auspitz, which is most simple in its performance, which can do no harm even if it should prove to have been uncalled for, and which will often be found of invaluable service in averting extensive suppuration and degeneration of the gland and neighboring tissues. It is based on the philosophical idea of removing "the thorn in the flesh" at the earliest possible moment, and it is described as follows by its able author:

"As soon as I can feel and grasp the hardened and somewhat painful gland,—and this is often as early as the patient first complains of pain in the groin,—I press it between the thumb and forefinger of the left hand towards the skin, and make a puncture, with a sharp, narrow bistoury, perpendicularly over the most prominent point of the swelling, no deeper, however, than is necessary for me to feel certain that I have simply penetrated the skin. I then lay aside the bistoury, and enter the wound with a thin bulbous-pointed probe, *still keeping up the pressure exercised by the left hand.* The point of the probe sometimes strikes against the underlying fascia superficialis, which however will give way without the least use of force. In most cases this fascia has been cut through together with the skin, and the probe penetrates immediately into the deeper part of the gland, which offers little resistance. When sure that the probe

<sup>1</sup> Traité des maladies vénériennes, p. 76.

is within the gland, I move its point about with a prying or lever-like motion in all directions, and thus bluntly *tear up* the connective tissue. This excites only moderate pain, and does not require much force. In most cases a small quantity of matter appears either on the first introduction of the sound or after the completion of the above movements.

"The gland being still firmly held in the left hand, the probe is now withdrawn and the pressure with the left hand somewhat increased and directed concentrically against the tumor. The effect of this, no matter whether matter has been let out or not, is almost always an immediate and very marked diminution in the size of the gland and a subsidence of the pain. I have never met with bleeding after this proceeding and, if it should occur, it could readily be controlled.

"To complete the operation, I apply to the point of puncture a pledget of carbolized lint, and exert pressure upon the tumor by means of compresses and a suitable bandage. This dressing is allowed to remain for twenty-four hours, when, after again lightly pressing the tumor to force out any matter, it is renewed. In many cases, in the course of forty-eight or even twenty-four hours, it will be found that the puncture has closed, the gland shrunk to a small hardish lump, and the pain has disappeared. After this there is no further danger of periadenitis.

"When several glands are involved, a puncture should be made in each. *For a single gland, one puncture and one stirring up with the sound is usually sufficient.* Should, however, a repetition of the operation appear necessary, there can be no objection to it.

"In case the point of puncture has not closed, pus continues to be discharged through the opening. The edges of the glandular capsule gradually become adherent to the external skin without the occurrence of periadenitis, and finally the cavity of the abscess closes by the contraction of its walls and by granulation. Occasionally ulceration of the puncture takes place, but this is confined to the skin and does not extend in depth."

In case more or less matter has formed in a bubo before the surgeon has an opportunity to interfere, two methods for its evacuation are at his disposal, either by the knife or by caustic. The former is, with rare exceptions, to be preferred; and, in our opinion, a free opening is better than a number of small punctures.

The hair should first be shaved off from the surface to facilitate the after-dressing and promote cleanliness. The longest diameter of the abscess is in most cases parallel to the inguinal fold, yet if the incision be made solely in this direction, its edges are approximated whenever the thigh is in a flexed position and healing from the bottom of the cavity is interfered with. It is therefore desirable to secure one incision at least parallel with the median line of the body and to cut on either side as circumstances may require, making in the end a crucial opening. Any fistulous tracks which may exist at the

time, or which may subsequently form, should be fully laid open, as soon as discovered. It is often desirable to pare off a portion of the skin from the flaps. This is absolutely called for when they are so thinned and purplish in color that their further vitality cannot be expected. But in the absence of such marked symptoms of degeneration, experience shows that the removal of a portion of the integument favors the healing of a bubo which has extensively suppurred, without adding to the subsequent cicatrix.

On opening a bubo, especially in strumous subjects, we often find that we have merely penetrated into an abscess of the cellular tissue, within whose cavity lie one or more disorganized glands, infiltrated with pus and almost isolated from their surrounding connection. Now, it is absurd to look for healing of the bubo until these glands are got rid of by the slow process of ulceration or are removed by a quicker process. The latter is best accomplished, the patient being anesthetized, by tearing them out with the fingers or scraping them out with a Volkmann's spoon; or, again, when they are large and sessile they may be tied off by means of a double ligature passed through their base.

The hæmorrhage from this operation is seldom so severe that it may not be arrested by exposure to the air, by ice, or pressure; but should it be profuse, or continued even in a small quantity, the bleeding vessel must be secured. Carbolized lint or cotton is now introduced into every recess of the cavity, paying particular attention to any short sinuses which it was not thought necessary to lay open with the knife, and the whole may be covered with a water dressing. Care should subsequently be taken to keep the wound clean and avoid the collection and stagnation of matter by daily syringing or a sitz-bath. If the bubo be a virulent one and its surface chancreoid, the same local applications are indicated as those mentioned when speaking of the chancreoid.

In private practice it will rarely be desirable to open a bubo either by incision or puncture otherwise than in one of the methods above mentioned. Many other plans, however, have been advocated, but we regard most of them as unworthy of more than mere mention, and some of them not even of that.

Perhaps the one most deserving of notice consists of multiple punctures in buboes which have extensively suppurred, in which the skin over them has been undermined to a very considerable extent, and in which a single large incision, freely exposing the cavity of the abscess to the air, may be regarded as injudicious. In such cases, multiple incisions, recommended by Vidal, Langston Parker, and others, may be resorted to with the idea of evacuating the collection of matter, and securing by rest and pressure a contraction of the walls of the tumor, while still holding in reserve a free incision in case it should be required.

Langston Parker's favorite method was as follows: "When a bubo is ready to be opened, we should not suffer the skin to become

too thin, but make several very small punctures over its thinnest part with a grooved needle, perhaps six, eight, or ten; through these the matter will ooze out till the cavity of the abscess is empty. Through one of the punctures the point of a very small glass syringe may be introduced, and a very weak solution of the sulphate of zinc injected, in the proportion of two or three grains to the half-pint of water. When the abscess is quite empty, place over it a large compress of lint, and use moderately tight pressure by means of a roller. In many instances, if we can keep the patient quiet for twenty-four hours, we get either partial or total adhesion of the sides of the bubo, and a speedy cure will be the result; in other instances this may not be the case, but by the daily use of the injection through one of the punctures, which should be kept open for that purpose, we succeed in a few days, in almost every case, in effecting a cure." Judging from my own experience, I am confident in stating that this result is overestimated, although the method of multiple punctures has recently received the highest praise from no less an authority than Zeissl,<sup>1</sup> who speaks of it as "a triumph of conservative surgery." In all cases of incised buboes it is well to use all of the available procedures of antiseptic surgery, since by these means we avoid possible dangers, and obtain more speedy and satisfactory healing.

The following methods have also been recommended:

Aspiration of the contents of the abscess (Grünfeld).

A filiform seton recommended by Bonnafont, by Mr. Parker, also by Dr. Hammond (op. cit. p. 56), and reported against by a committee of the Soc. de Méd. de Paris, in 1859.

*Caustics* have been employed for the opening of buboes, particularly such as are of large size and with the skin over them much thinned, but they are painful in their application and without any special advantage. Any powerful caustics, as Vienna paste, may be used for this purpose. A method proposed by MM. Malapert<sup>2</sup> and Reynaud<sup>3</sup> was at one time in vogue, but has fallen into disuse. It consisted in the application of a blister over the tumor, and of a pledget of lint soaked in a solution of corrosive sublimate (gr. xv. to 3j of water) to the vesicated surface previously freed from all secretion of serum. The caustic was allowed to remain for two hours, or until a superficial eschar was formed, when a large poultice was applied. The authors of this method claimed that, as the eschar was detached, the contents of the abscess oozed out through minute openings in the integument, the whole substance of which was not destroyed, and that the walls of the cavity were so stimulated and modified by the caustic that they rapidly contracted and adhered. As stated upon a previous page, this method, although designed by its authors solely for the treatment of buboes after suppuration has taken place, has been applied by others for the purpose of effecting

<sup>1</sup> Op. cit., vol. i., p. 235.

<sup>2</sup> Arch. gén. de méd., Paris, Mars, 1832.

<sup>3</sup> Traité d. mal. vén., p. 70.

resolution. The excessive pain attending the application is not counterbalanced by any advantage over milder methods.

Dr. M. K. Taylor, U. S. Army, advocates the use of interstitial carbolic acid injections in buboes and inflamed lymphatic ganglia generally. He injects from ten to forty minims of a watery solution of the agent of a strength of from eight to ten grains to the ounce. When used before the formation of pus he claims that he has not failed to arrest the morbid process. When pus has formed he evacuates the abscess by aspiration, and throws in the carbolic solution. When the abscess cavity is small he evacuates the whole of the contained pus, if large only a part, and then throws in sufficient of the fluid to take its place. When spontaneous opening has occurred, the cavity is to be washed out with the same fluid and compression applied. Care is to be used to reach the centre of the tumor, and according to the author the needle should be thrust to the extent of two-thirds of the depth of the narrowest diameter of the tumor. The method has been used by him for seven years in nearly one hundred and fifty cases. It is claimed that by this method pain is much relieved, and very little loss of time is incurred.<sup>1</sup>

Dr. Hermann Kümmell<sup>2</sup> claims good results from the following method of treating buboes. He removes all of the glands, healthy or unhealthy, dries the wound with sponges, and inserts drainage-tubes into pockets if they exist. The edges of the wound are brought together with sutures, except a small dependent portion left for drainage. The parts are then covered with pads of gauze saturated with a solution of bichloride, or with little ash-bags, a large one being placed over all, and then firm pressure is made with a roller bandage. The leg is kept extended by means of a splint. In a week or ten days the dressing is removed, and a new one applied, if necessary. When abscess of glands has already formed, all infiltrated tissues must be removed with scissors or the dermal curette, and the cavity filled with sand saturated with a solution of the bichloride of mercury, and covered with layers of gauze, which may be removed when soiled. The sand should not be removed but should be wet, when necessary.

Sulphide of calcium is recommended by Dr. F. N. Otis<sup>3</sup> in the treatment of chancroidal bubo. He details eighteen cases, and claims that resolution took place in fifteen, while in three incision was necessary. The dose used was gr.  $\frac{1}{2}$  of the agent, given every two hours. I have tried the remedy under these circumstances and found it inert.

F. Jackubowitz<sup>4</sup> recommends parenchymatous injections for syphilitic adenitis and inflamed ganglia, due to any cause. He uses a solution of iodide of potassium fifteen grains, tincture of iodine five drops

<sup>1</sup> The Abortive Treatment of Buboes and Lymphadenitis generally by Carbolic Acid Injection. Am. Jour. Med. Sciences, April, 1882.

<sup>2</sup> Centralblatt für Chirurgie, Dec. 30th, 1882.

<sup>3</sup> N. Y. Med. Journal, 1880, page 472.

<sup>4</sup> Wiener Med. Presse, Nos. 3 and 4, 1875.

in one ounce of water. By means of a hypodermic needle this is thrown into the substance of the glands. The needle is thrust obliquely into the most prominent part of the swelling and a fourth part of the contents of the syringe thrown slowly in. In four such manœuvres the syringe is emptied. Several such operations are often necessary for a cure. The pain is stated as being mild, though slight uneasiness is felt owing to the distension of the tissues. In those cases, not uncommon, in which the glands are very much swollen, as well as in some cases of subacute adenitis of simple origin, this method may be employed.

Frictions with green soap have been used and are advocated by Beetz.<sup>1</sup> In chronic glandular indurations he uses the frictions daily for three or four times, omitting for one day if the skin is too much inflamed. In acute adenitis a layer of lint soaked in tincture of green soap may be laid and covered over with gutta-percha tissue, the whole retained by a bandage. A fluid glycerine soap may also be used, and again a spirit of soap prepared from it. This treatment limits the inflammation, and shortens the healing of the abscess. It is supposed to act by reducing the infiltration, and perhaps by constricting the vessels of the parts.

Gangrene attacking a bubo must be met by the same means as those already mentioned when speaking of the gangrenous chancre. Continuous immersion in a bath, described upon page 417, is a most valuable mode of treatment, which has been found successful in many cases where other means had failed, and it relieves the patient from the excessive pain which often attends the change of dressings. Attention to the general condition of the patient; the administration of tonics, cod-liver oil, and of opium, when indicated; the local application of iodoform and, in obstinate cases, of the more powerful caustics, as the carbo-sulphuric paste or the actual cautery, should not be forgotten.

Zeissl advises, on the first appearance of any symptoms of gangrene, filling the cavity of the bubo alternately with lint soaked in a solution of chloride of lime and with "gypstheer" (one part of coal tar and twenty parts of gypsum), and covering it with ice-cold compresses. He says that the extent of the gangrene can sometimes be limited by the use of "campherschleim" (one drachm of camphor to an ounce and a half of mucilage).

Any sinuses which form, as they may do either below or above Poupart's ligament, terminating in counter openings a long way off, must be treated according to the principles of general surgery, keeping in view the general condition of the patient and his consequent ability to withstand a cutting operation, and also the course of the sinus, its proximity to important vessels, etc. In some cases free incision may be resorted to; in others, we must content ourselves with

<sup>1</sup> Ärtzl. Intelligenzblatt, July, 1882, and Monatshefte für Prakt. Derm., Sept., 1882.

a ligature passed through the fistula and gradually tightened, or with injections into the passage followed by carefully adjusted pressure over its track. Drainage-tubes are often very useful where there are deep pockets or sinuses. They are always to be used as an auxiliary means of treatment.

In the hæmorrhagic bubo, the indications for the general treatment of the patient are evident. As to local applications, Prof. Gamberini is in the habit of using the liquor ferri perchloridi, or he sometimes sprinkles a thin layer of caustic potash in powder over the surface, so as to form an eschar. A light touch with a red-hot iron may be useful. The cavity should be thoroughly exposed by free incisions, the impaired integument be pared off, and the glands removed by enucleation, ligation, or cauterization in severe cases.