

parts often show places in which this differentiation has entirely disappeared, and in which it is very difficult or impossible to distinguish the quality of the individual cells. Not alone is it often impossible to state which are epithelium, which are granulation cells, and which will become and remain the one or the other variety, but even the fully formed epithelium cancer cells present such a manifold character as regards size, shape, etc., that we are led to question whether they are really derived from epithelium. All these conditions are readily explained if we assume that the various types of tissue are capable of producing embryonal cells, which, under certain circumstances, may be converted into epithelioidal elements. This is shown very clearly in the drawings of microscopic sections furnished by Rindfleisch, Gussenbauer, C. O. Weber, and others. Embryology also furnishes a weighty support to this theory. The most recent embryological studies have shown that in the first period of the formation of the ectoblast and endoblast, and also of the mesoblast derived from the latter, embryonal cells are imbedded between the primary epithelial boundary lamellæ, and that these, in combination with some of the archiblastic elements, develop into connective, muscular, and nervous tissues, blood-vessels, and blood. In this event, there can be no absolute differentiation of connective tissue from epithelium, etc.

From all these considerations, it appears more plausible that all the tissue elements involved in the carcinomatous process first pass into a condition of embryonal cell formation, and that these, according to the individual predisposition of the affected organ, are converted in a great measure into atypical proliferating epithelium, to a slight extent into connective tissue corpuscles, etc., and thus finally give rise to the complete clinical and histological picture of carcinoma.

Symptoms, Course, and Termination.—Cancer develops either upon the normal skin or upon that which is changed by a pathological process. In the latter event, the neoplasm may develop from the elements of the morbid products, *i. e.*, those of a lupoid, syphilitic affection, of an idiopathic, irritative condition, of various types of new growths (adenoma, etc.), or it may develop in the integument which has been rendered atrophic, cicatricial, etc., by the morbid process in question. All these features possess no inconsiderable influence upon the course of the cancerous affection.

At the beginning, cancer of the skin presents either a circumscribed infiltration or a nodular form, and in both cases it may attain dimensions of extremely variable proportions. Smaller tumors are usually situated superficially, the larger ones are generally situated more deeply from the beginning. Although all cases pursue the same general course, *i. e.*, a tendency to unrestrained growth followed by softening and degeneration, nevertheless there are certain differences. For example, superficial cancer, as a rule, remains in the upper layers of the cutis, requires a disproportionately long time for its destructive process, and only exceptionally involves the lymphatic glands, and gives rise to metastases. A carcinoma in the subcutaneous connective tissue is often accompanied from the beginning by ominous phenomena. On this account, cancer of the skin has been divided into the superficial and deep varieties.

Cancer of the skin, if not situated upon parts exposed to view, may exist a couple of years or more without attracting the attention of the patient. More observant patients first notice that the little pimple does not disappear, that the crust upon it is continually renewed, that constant itching is present. More attention is paid to it when the patient notices its constant growth. The physician then observes that the process has a chronic look, that despite its long continuance it presents an elevation of scarcely a few millimetres, that the removal of its crust reveals an eroded, readily bleed-

ing, slightly excavated surface, and that it possesses a firmness or hardness disproportionate to its small size. This condition may continue unchanged for many years, and finally undergo progressive or retrogressive changes. In the latter event, the proliferated epithelioidal cells undergo granular degeneration, and are then absorbed, so that when the process has run its course, an atrophic portion of the skin remains, surrounded by a slightly elevated border. If all the cancer cells have been destroyed or are surrounded by the constricting connective tissue in such a manner that they are unable to develop further, the entire process must be regarded as extinct. This occurs quite frequently, at least in places, in old people.

But if a few of the cancer cells retain their capacity for proliferation, a condition again develops which is similar to that existing before the atrophy occurred. When this has taken place, a similar retrogressive process may again develop or the carcinoma may continue to increase in extent. This growth may continue for years, until the tumor is as large as the palm of the hand.

Before superficial cancer has reached large dimensions, the parts affected usually undergo secondary changes. As a rule, these develop spontaneously, inasmuch as the upper layers of epithelium undergo granular degeneration, a hyaline metamorphosis with subsequent necrobiosis in consequence of insufficient nutrition. Such a growth is usually shining, like mother of pearl, dry, and of diminished consistence. Finally, lamellar exfoliation occurs, and a small erosion results.

Another form of degeneration is due to the fact that, in consequence of the pruritus generally present in the beginning, the neoplasm is scratched or it is injured by instruments, etc.; the lesions due to the scratching, etc., then initiate the destructive degeneration. In the first event, the erosion is covered with a rather firmly adherent, whitish gray, or yellowish crust; in the latter event, with a brownish crust composed of dried blood. The removal of the crust shows a rounded excavation, with sharp borders; it may remain unchanged for months.

A carcinomatous ulcer situated in the corium is first of a round shape, later it becomes irregular. The base is pale red, shining, finely granular, hard, and secretes a scanty serous fluid containing very few cellular elements. The edges are irregular, steep, and present the pathognomonic hardness even if the imbedded nodules degenerate. These foci of degeneration do not occur singly or with any degree of regularity, but a cancerous surface contains a number of spots of loss of substance, some of which are isolated, some confluent.

Sometimes the cancerous mass imbedded in the corium at the site of ulceration is entirely destroyed by the degeneration, giving rise to a sort of spontaneous recovery. Normal granulations then form on the base of the loss of substance, and gradually a new epidermic cover is formed, or by the coalescence of grayish white islets of epidermis larger or smaller portions receive a new tegumentary covering. As this process is repeated quite frequently in superficial cancers of the skin, ulcerations and cicatrices are found alternating with one another.

If the spontaneous recovery by destruction of the morbid products continued uninterruptedly, there would be a chance that the recovery would extend not merely to a circumscribed spot. But unfortunately the cicatrization not alone takes place very slowly, but it often ceases to advance, is attacked by the proliferating cancer, and finally destroyed.

The cancer may pursue a still more unfavorable course, if it spreads more deeply in one or more places, and thus leads secondarily to the development of the deep-spreading

variety. Or cancerous nodules form at the outset in the deep layers of the corium, the subcutaneous connective tissue and the cutaneous glands. This condition is characterized by the presence of an extensive infiltration or one or more large nodules. In the beginning the affection is not readily recognized on account of its deep localization. But, as the disease spreads, it becomes more evident until finally the skin is thoroughly infiltrated and the neoplasm is palpable as a prominent, either rounded or flat tumor. The surface may be smooth, furrowed, nodular, or papillary, is of a waxy, pale rose to livid red color, traversed by vessels and shining in appearance. Whether in the form of an infiltration or nodules, the growth is very little or not at all movable upon its base and is strikingly hard. After the lapse of years, central or peripheral degeneration usually sets in. This process may develop spontaneously or be excited by injuries. If a crust forms over a slight erosion, the same conditions are observed as in superficial cancer, but annoying pains may be experienced and hemorrhages occur readily. But if the degeneration occurs *en masse*, it is preceded by a deep, dark red color, a doughy or elastic, fluctuating feel and increased temperature; this may be associated with moderate hemorrhage. The cancerous ulcer which results varies from the size of a pea to that of a walnut, is round or irregular in shape, has an irregular, nodular, dirty yellow, hard base, covered with necrotic shreds of tissue, and its edges are sharply defined. The surface of the ulcer secretes a moderate amount of sero-purulent matter, which soon dries and is removed with difficulty. Upon exercising lateral pressure, comedo-like plugs emerge from pin head openings or a yellowish white, fatty pap mixed with pus is discharged. In the most favorable event, ulcerations of this kind heal after extensive destruction of the cancer bodies; their complete and permanent cicatrization is an event of the rarest occurrence. As a rule, when the cancer is left to itself, it continues to proliferate towards the surface as well as into the deeper parts. In the former event, it projects like a mushroom to a variable height above the level of the surrounding parts, and appears as a lobulated, compact, pale red ulceration, which is covered with a viscid or purulent fluid, bleeds readily, and is cartilaginous in hardness. Its decomposing secretion, etc., give rise to irritative conditions, ulcerations, etc., in the surrounding tissues.

Or the cancerous material which is spreading inwards does not retain its nutrition, so that proliferation and degeneration keep equal pace, and the ulcer then has a crater-like shape, its base consisting of gangrenous tissue covered with pus and ichor. Here and there small granulating spots may be observed.

The descriptions just given refer to carcinoma simplex and its varieties. In addition there are other forms of cancer which require special consideration.

Papillary cancer of the skin (carcinoma papillare).—Thiersch has called attention to the differences between warty cancer, a cancer due to excrescence-like proliferation of the base of the ulcer, and the cancerous wart, *i. e.*, a wart in a condition of cancerous degeneration. But he arrives at the conclusion that, because the cancerous wart in its further course is as malignant as the papillary, cauliflower proliferation of the base of the ulceration, there is no reason for regarding the first stage as a separate disease. I believe, however, that differences may be observed both in structure and clinical relations.

From a glandular, papillary base or a wart which has existed for years, papillary cancer of the skin may attain dimensions as large as the palm of the hand and has a broad or pedunculated base. When it reaches its highest development, it presents various stages of ulceration, from the initial to the fully developed. At the outer parts projections like hypertrophic papillæ are observed, either singly or in groups. They are small, hemispherical or cylindrical, pale or bright red, finely granular or rough, and

situated on a reddened, moist, infiltrated base. Towards the centre of the tumor the papillary outgrowths become higher, broader, vascular, firmer; they are either single or branched, and either covered with a glistening layer of epidermis or with yellowish to dirty brown crusts. If these crusts are removed, the surface beneath is usually found eroded and fissured. If the papillæ are separated from one another, it is found that the majority of the supposed solitary ones have a common trunk, which is hard and has a broad base. This and other parts of the tumor contain a smeary, decomposed mass or a foul swelling, purulent secretion. Upon lateral pressure comedo-like plugs, mixed with blood, make their appearance. The closer we approach the site of ulceration, the greater the number of destroyed papillæ. At the ulcer the papillæ are irregularly fissured, covered with crusts, surrounded by ichor; between them are scattered several small ulcers or a single crater-shaped ulcer, the base and edges of which are similar to those of other cancerous ulcers.

Papillary cancer of the skin is observed most frequently upon the lower lip in males and upon the external genitalia of both sexes. They pursue a slow course, and are therefore less infectious and better suited for radical operations.

Pigment cancer (carcinoma melanodes).—This should be regarded as a special disease, on account of its occurrence in a "mother tissue" (pigmented spots in general), its rapid and unfavorable course, and its greater tendency to relapses. It varies in color from gray or grayish brown to black. The pigment is deposited either in the cells or the intercellular substance, but some cancer cells may present an entirely normal color. With each relapse the growth usually becomes more pigmented. The nodular shape and multiple development are comparatively frequent, but the superficial variety of pigment cancer may also be observed (eyelids, scrotum). It is the most infrequent of melanotic tumors and is therefore often mistaken for other varieties of pigment growths.

Localization.—The integument of the face is more frequently attacked by cancer than any other part of the general integument, constituting indeed nearly three-fourths of all such cases. In this situation it usually appears as a superficial induration or as a nodule. Often, also, it starts from a wart—a sebum wart of old people—and then presents a papillary appearance. In places which are abundantly supplied with sebaceous glands (tip and wing of the nose, chin, scalp, etc.), it often has an acne-like beginning and the yellowish brown crusts of sebum upon the nodules constitute the first symptom of the important process. In very exceptional cases the cancer appears in the beginning as a deep circumscribed nodule.

In the large majority of cases the further course of cancer of the face corresponds to its beginning, presenting the original superficial induration, the aggregated nodular or the papillary form, entirely independent of the size of the growth or the secondary changes (ulcerative destruction) which occur in places. But I do not mean to imply that severe and grave symptoms are more rarely observed, because the deep seated nodular form is so very infrequent in this locality. These cancers often proliferate and ulcerate very rapidly in the first few years (particularly papillary carcinoma) and we are never able to tell at what time the superficial ulceration will change into a deep-seated destructive process. Experience teaches, indeed, that cancers increase in malignancy in this locality as in others; their advance, however, is slower. They do not possess much infective power. When situated superficially, cancerous degeneration of the lymphatic glands scarcely ever occurs, and in hardly more than ten per cent of the cases which spread deeply.

The significance of cancer of the face and scalp lies mainly, therefore, in its tendency to spread superficially, and its consequent liability of affecting the periosteum and bones. It also possesses a tendency to spread along various canals and cavities to important organs. Thus, a cancer of the ridge of the nose has no very great significance so long as it remains superficial; but this changes when it spreads through the entire thickness of the tissues or makes its way into the nasal cavity from the edge of the wing of the nose. The cartilaginous and osseous portions of the nose and its septum are then destroyed, and by spreading externally over the upper lip and cheek and internally upon the nasal mucous membrane, the cancer may pass into the pharynx, and through the horizontal plates of the palatal bones into the mouth, etc. Similar devastation may result when the carcinoma develops on the cheek and spreads through the skin and muscular tissue. If the upper maxilla is infiltrated, it becomes necrotic and, according to the part affected, the teeth are lost, the antrum of Highmore is perforated, and the process may spread through the orbital fissure to the orbital cavity and even to the dura mater.

If the carcinoma extends to the eyelids, the eyeball is in continual danger even though the cancer is situated superficially. The upper and lower lids may be destroyed to such an extent that a plastic operation must be performed in order to relieve the resulting ectropium.

It is not very infrequent, also, to find the entire lid destroyed or the conjunctiva involved in the process, thus causing imminent danger to the globe. It should not be forgotten, however, that the process may stop at any stage of its development, and become extinct.

Cancer of the lower lip is not infrequent, but is much more common in men than in women. The beginning of the disease is manifested by a projecting infiltration or infiltrated nodule at or near the vermilion border; this receives manifold injuries on account of its location, leading to the development of fissures. Nevertheless one to three years elapse before ulceration occurs. Upon examination, the affected spot presents an elevated, sharply defined, hard little tumor, which may be mistaken for a syphilitic ulcer. The lower lip is freely movable, as is also the integument of the chin. As the neoplasm develops, it grows in all directions. It spreads to the mucous membrane, which becomes infiltrated and swollen, and also towards the chin, which becomes more resisting and rigid. Later the process spreads more deeply into the lip, which is then moved with difficulty; the gums are loosened and the teeth are not so firmly imbedded. The new growth then forms a flattened, hemispherical prominence, possesses either a finely granular or papillary, fissured surface, and, upon lateral pressure, discharges numerous convoluted plugs, composed chiefly of epithelium and fat, and also a fatty pulpy mass which, in addition to the above-mentioned constituents, contains pus cells. At a later period the cancerous degeneration may involve a considerable portion of the surrounding tissues, extending on the one side to the floor of the mouth, the tongue, pharynx and larynx, and on the other side to the alveolar process of the inferior maxilla, causing caries and necrosis. The submaxillary and cervical lymphatic glands are also implicated. In such cases metastatic nodules develop not alone upon the general integument, but also in internal organs. Death often is due to hemorrhage, but usually to marasmus.

Cancer of the external genitalia varies according to its situation. The superficial variety predominates upon the scrotum, in which it very often begins in the form of a traumatic or dyscrasic ulcerative process, chronic eczema, etc. Not infrequently it contains a considerable amount of pigment, forming carcinoma melanodes, but even then it

retains the tendency to spread superficially. Infected lymphatic glands or metastatic deposits are rarely observed during its course. Scrotal cancer may extend to the thighs, penis, and the lower part of the abdominal walls.

Superficial cancer is also observed quite often upon the outer layer of the prepuce, but by no means so often as upon the inner layer and upon the glans, on account of the numerous exciting causes (irritating secretions, uncleanliness, etc.) to which these parts are subjected. For this reason, also, cancer spreads more rapidly in this region. If it begins in a previously normal spot, the epithelial covering of the new growth is first raised like a vesicle or pustule, which bursts after the lapse of one or more weeks, leaving an erosion. The process usually does not receive any serious attention until the new growth and ulceration have extended more deeply as well as superficially. It is distinguished from syphilitic ulceration in the following manner: The cancerous ulcer, as a rule, is deep-seated, of very slow growth, has an irregular, discolored, extremely painful and very hard base, containing necrotic tissue, and bleeding readily on contact; the edges are steep and sclerosed. The surrounding tissues are strikingly hard, and extensive œdema may be present, the dorsal blood-vessels and lymphatics are converted into hard strands as thick as the finger, and the inguinal glands become hard and painful, their size varying from a hazelnut to the fist. Under increasing pains the glands break down, the ulcerations assume the carcinomatous character, and the vital forces are steadily sapped. The diagnosis of cancer becomes more difficult when the process begins in a condyloma acuminatum. For this may grow into a papillated tumor as large as a goose egg, may ulcerate in places and perforate the prepuce or corpora cavernosa (Foerster's destroying papilloma), while its appearance at the circumference may remove the suspicion of malignancy. In such cases the character of the ulcer must be very carefully observed. Whenever possible, little pieces should be removed from suspicious localities for purposes of microscopical examination.

Carcinoma of the labia majora begins either as a superficial nodule, or a trifling wart or a deep-seated infiltration; the further course of the disease varies in a corresponding manner. At times the process spreads over the surface, extending beyond the mons veneris, inguinal region, and introitus vaginae. At other times it extends deeply, either in a circumscribed locality, or devastating the vagina, perineum, and rectum. Cancer of this region rarely assumes the papillomatous, cauliflower form.

The trunk is rarely the site of idiopathic cancer, the process usually spreading to it by contiguity from the back or neck, the external genitals, or the limbs. It presents no clinical or etiological peculiarities.

In the majority of cases cancer of the upper or lower limbs occurs in connection with surgical diseases, such as caries, necrosis, fistulous canals, ulcers, etc., or in parts which have cicatrized after the termination of such diseases. The deep spreading form is, therefore, observed more frequently, or the papillary variety if the previous inflammatory irritation has lasted a long time. The devastations caused by the growth are very extensive, and, to render matters worse, old and debilitated individuals are usually attacked.

Paget's disease of the nipple (carcinoma) occurs often after chronic eczema of the part. In 1874, Paget reported fifteen cases of this kind, and others have since been reported by Munro, C. Anderson, Sherwell, etc. If we study carefully the clinical histories of these cases, we will arrive at the conclusion that they present no features entitling them to a separate classification.

Prognosis of Cancer of the Skin.—The prognosis should always be made with great caution, although it is not as unfavorable as when the disease is situated in other local-

ities. Daily experience teaches that we are only able to limit its progress or extirpate it in the beginning of the disease. Nor can we expect very much from its spontaneous recovery, as permanent and complete results in this direction are extremely rare.

The serious prognostic significance of the cancer resides in the fact that any small remnant of the process, which had been regarded as extinct, may suffice to light it up again to the previous dimensions. So long as this takes place slowly and over a small extent, the patient suffers injury merely because the part implicated and the surrounding inflamed tissues lose their function. But as it progresses, the tendency to spread deeply develops, and the hope of radical recovery then diminishes more and more.

Cancers of the skin which are deep-seated and extensive exert a deleterious influence in many ways. In the first place, important organs may degenerate, may be stenosed or atrophied by pressure, may ulcerate, etc. Furthermore, such cancers very often ulcerate and become gangrenous. In consequence of the continued suppuration, much material, which would be useful to the economy, is lost; the vessels upon the surface may be ulcerated and hemorrhages ensue which are checked with great difficulty; septic infectious particles enter the blood and the vital forces are destroyed by the disturbed sleep due to the constant pain, the loss of appetite, and the fever which develops at a later period. If the cancer is situated in a locality provided with numerous lymph spaces, lymphatics and venous plexuses, the adjacent lymphatic glands and then more remote organs become the seat of metastatic growths.

Treatment.—On account of the malignancy of cancer, the first indication is to remove the new growth as soon and as thoroughly as possible. At the present time the only measures recommended to effect this object are, 1. parenchymatous injections, 2. caustics, and 3. instruments of various kinds.

Injection of fluids was first practised by Simpson (1856), who injected a few drops of chloride of zinc, sulphate of zinc, etc., by means of hollow acupuncture needles. Luton made injections of sulphate of copper, tincture of iodine, alcohol, etc., and Broadbent employed 30 to 50 drops of a solution (1:15) of acetic acid. The latter agent has since been discarded on account of the danger attending its use. Thiersch and then Nussbaum used injections of nitrate of silver (1:2000), followed by a solution of chloride of sodium. Of 15 cases treated in this manner by Nussbaum, the cancer disappeared in four cases after the development of suppuration and gangrene, in six the result was moderate, and slight in five cases. Heine also obtained good results from the injection of 0.1% of hydrochloric acid. On the whole, however, the method of parenchymatous injection has been employed too little to warrant a positive opinion concerning its value.

The effect of the different caustic remedies varies greatly. Some of them are quickly precipitated by the fluid in the tissues, and are thus effective on the surface alone; other are dissolved and destroy the tissues over a wide extent.

The solid caustics (fused nitrate of silver, caustic potash, sulphate of copper, chromic acid, the mitigated stick, etc.), are used in the form of a pencil, if we are justified in expecting that repeated applications will destroy the entire neoplasm. They may be applied to the surface in the form of a powder, when we wish to produce atrophy of the cancerous mass, improve the granulations, diminish the ichor, and relieve the foul odor. With this end in view, Esmarch has recently recommended the application of half a drachm of the following powder: acid. arsen. and morph. muriat. āā 0.25, calomel 2.0, and gumm. arab. 12.0.

Liquid caustics (fuming nitric acid, concentrated sulphuric acid, acetic and chloroacetic acids, solutions of nitrate of silver, corrosive sublimate, etc.) are employed with

relative infrequency and in the superficial varieties, as they are liable to invade the healthy tissues.

As a paste, caustics are employed most commonly and in the following forms:

a. Vienna Paste, consisting of caustic potash and unslaked lime. It is prepared immediately before application, the caustic potash and unslaked lime, in the form of powder, being poured into a saucer and sufficient alcohol added so that, when thoroughly rubbed up, the mass has a soft pasty consistence. After the healthy integument in the vicinity of the carcinoma has been protected by adhesive plaster, the paste is applied with a wooden spatula and allowed to remain from 10 to 20 minutes. In order to remove the paste, the patient is either placed in a cold bath or the part washed with water. The pain produced by the caustic then subsides, and a dirty gray to dark brown, mortified mass of tissue is revealed. At the end of eight to ten days this is exfoliated and, if the carcinoma has been entirely destroyed, a granulating surface makes its appearance. If the effect has been insufficient, the procedure must be repeated.

b. Chloride of zinc paste, consisting of liquor zinci chlorati with a sufficient amount of flour to give it a proper consistence. It is best to prepare it immediately before using it, the proportions varying according to the effect desired; it is spread upon linen and then applied. The site of application should first be made sore or at least moistened with a solution of caustic potash, in order to produce a more vigorous effect. The paste is kept applied for four to twelve hours. After its removal, a dirty, greenish brown, dry scab is visible, which is cast off at the end of ten to fourteen days; a granulating surface then makes its appearance. Chloride of zinc paste penetrates deeper than all others, but it also causes more pain.

c. Arsenic paste, consisting of pulvis cosmi (hydrarg. sulphurat. rub. 120, carbo animalis 8, resina draconis 12, acid. arsenios. 40) rubbed into a pulpy mass with some water. This is spread on linen and kept applied for three to five days, being renewed every twenty-four hours. The bluish red scab which is produced requires on the average two to three weeks for its exfoliation. This caustic produces severe reaction in surrounding parts, acts slowly and quite superficially, but it causes less pain than other caustics. On account of the danger of poisoning it is rarely used at the present time.

The use of the constant galvanic current, either in the form of the galvano-cautery, electrolysis or catalysis, constitutes a transition stage between treatment with caustics and purely surgical measures, though electricity is very rarely used in this disease.

In the extirpation of cancer, the surgeon resorts to the knife and scissors. The dermatologist will often dispense with these instruments, even when he proposes to extirpate the tumor. The Bruno-Volkman sharp spoon is such a useful instrument that cutting instruments are only necessary when the tumors are pedunculated or involve the largest part of the circumference of a limb. To operate successfully with this instrument, the neoplasm must be scraped as thoroughly as possible, and the remaining parts will be exfoliated at a later period by the necrosis and suppuration resulting from the mechanical traumatism.

In a few words we will now give a rapid sketch of the measures to be selected in the treatment of cancer of the skin. When scattered, moderately large and superficial nodules or infiltrations are present, a solid caustic, particularly nitrate of silver, will be most serviceable. A single vigorous application often destroys the entire morbid process and the wound left over after the exfoliation of the scab may heal permanently within a few weeks. If the cancer spreads superficially, the fluid caustics and the sharp spoon are indicated. In anxious patients, who are afraid of loss of blood, fluid caustics should

also be employed. I make use of the following procedure: a pellet of charpie dipped in hydrochloric acid is rubbed upon the affected surface until it causes a superficial wound, and immediately afterwards cauterization is performed with another pellet dipped in a solution of nitrate of silver. The pain produced is not considerable and if the fluid penetrates into healthy tissue, it gives rise to very insignificant injury. The use of caustic pastes is reserved for the deep-spreading or rapidly proliferating forms of cutaneous cancer. Without entering into a comparison of the results following surgical operation and the use of caustic pastes, it may be stated with positiveness that the number of cases which should be treated by the latter means it is at least as great as the former. The use of caustic pastes is also indicated strongly in anæmic, cachectic, and old individuals, on account of the trifling loss of blood occasioned thereby.

In neglected cases, which cannot be operated upon, in old individuals, and the like, palliative treatment alone remains. Ulcerations should be kept thoroughly clean and dressed with finely powdered charcoal, chloride of lime, hypermanganate of potash, etc. When a larger blood-vessel is eroded or a considerable parenchymatous hemorrhage takes place, compression may be employed either with dry lint or pieces dipped in chloride of iron. The most important indication for such cases is the relief of pain; this is done by the administration of opium or morphine, either subcutaneously, internally, or applied to the ulceration.

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