Ricketts. (B. M.)

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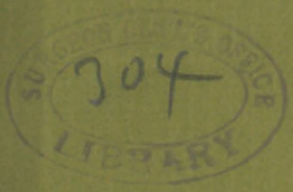
Its Etiology, Diagnosis and Treatment.

A Paper read before the Ohio State Medical Association, held at Akron, Ohio,

BY

B. M. Ricketts, M.D.,
Former House Surgeon, N. Y. Skin and Cancer Hospital.

June, 1886.



EPITHELIOMA:

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Mr. President and Gentlemen:

There is perhaps no disease which causes greater suffering or renders the patient's presence more disagreeable for a greater length of time than that of cancer. All tumors which destroy tissue and show a tendency to recur after having been removed one or more times, have been known as cancerous and the least amenable to treatment from time immemorial.

Authors writing upon this as upon all other subjects are inclined to elaborate and intensify rather than simplify their thoughts and investigations; in general they are too much so to be used to an advantage at a time when most needed.

Their productions are looked upon as being matter of reference and lie buried in indigested confusion in the various channels of medical literature. It is their voluminous and expensive character which renders them to a great degree inaccessable to the majority of practitioners.

The finding of trustworthy characteristics for a clinical conception of this disease was not attempted until the time of Bichat, Müller and Rokitansky, who clearly defined the histological tissue development—the last named gentleman describing them as fibrous, gelatinous, pigmented, papillary, epithelial, etc., and who said that "cancer consisted in the first place of nuclei and nucleated cells of the most various forms. These existing in greater or less abundance afford the elements of the cancer juice, and together with an interstitial substance, constitute the bulk of the cancer."

They form the essential, and generally owing to their short duration, exuberent production and accumulation, "the most important heteroplastic constituent of cancer."

The other less essential, though very important constituent is (new) connection tissue in the form of the so-called stroma. He says in addition that the clinical character of the growth is an indispensable feature.

(1) Parker, who has carefully studied this disease, says, "that it is the cause of one hundred and twentieth of all the deaths throughout the world, and that it does not prevail in certain localities, it being almost unknown upon the banks of the Nile, among the American Indians, Hindoos, Egyptians, and the native black population of Africa."

Upon the other hand, there are certain localities and countries where it prevails to a greater or less degree, as for instance upon the water courses of England and Wales, where it is perhaps more common than any other locality.

It is said that Liverpool, England, is the centre of such a district comprising one hundred square miles.

I will so far as possible systematically arrange the subdivisions that we may confine ourselves to one particular class of this disease, namely, Epithelioma, my object being to furnish trustworthy and accurate detailed information, at the same time avoid speaking of the absolute distinction there really is from a pathological view.

This will necessitate leaving out some very important factors but enables us to speak more extensively only of the most striking aspects. I might say, however, that the structure of epithelioma deviates less than all others from natural tissue and that it is the only form of cancer whose origin has satisfactorially been associated with previous local disease—constant irritation being the most common cause.

(2) "Mr. Shaw speaks of this disease, appearing in an issue of thirty years' standing."

"Mr. Chalk also mentions a case in which he successfully amputated both lower limbs of a man in whom bunions

1. Parker, on Cancer, 1885.
2. Holmes' Surgery, Vol. iii., p. 290.

after remaining for many years unhealed had become affected with epithelial cancer."

"De Morgan cites a case where this disease appeared in an unhealed surgical wound in the perinæum three months after the section of stricture urethra.

(1)Billroth gives a case where an epithelioma developed from a fontanel kept up for ten years with peas; also of the same disease appearing in an ulcer of the foot which had existed for years without any known cause.

It was not until 1840 that epithelioma was known as a distinct disease. To Rokitansky alone, who was a member of the Vienna school at that time, is due the great credit of placing our knowledge of this peculiar disease upon a higher plane. In our desire to praise this great man we do not forget his co-laborers such as Rindfleisch, Klebs, Thiersch, Volkman, Luck, Virchow, Waldmyer and numerous others that might be mentioned.

Besides being the first he (Rokitansky) has since established greater and broader avenues to advancement in this particular branch of medical science than any person therewith connected.

He has created within his associates a greater ambition and the result of his labor has been the stimulant to their exertion.

Until his time tumors were named according to their appearance as lupus, serpigo, noli-me-tangere, syphilis, fambrosia, ulcus rodens, fungus, cancer, phagadænicus, etc.

We now have the epithelioma of Hannover, epithelial cancer, carcinoma epitheliale, cancroid or pseudo-cancer of Lebert, and scrotal or sweep's cancer of Pott and Cooper, all amounting to the same thing and differing from all other varieties in being much less malignant and always growing in connection with a cutaneous or mucous surface. Virchow calls them the semi-cancerous. It is less painful and occurs most frequently upon the lower lip or lower eyelid.

Of the 102 cases reported by (2) Thiersch seventy-eight were in the region of the face, forty-eight of which were in the lips, ten on mucous membrane of the mouth, four on the extremities, several on the naval and one between the shoulders. He thinks that the upper lip has an immunity against the disease. However Hebra reports two cases of nodular epithelioma of upper lip having been cured. They may appear at or near any muco-cutaneous junction.

(1)Billroth says that he met with it once on the tongue of a boy eighteen years of age.

(2)Kaposi met with epithelial cancer on the face of a girl ten years old and in another eight years of age.

It has never been known to have occurred in the nostrils or air cells of the head, and seldom found in the internal organs. However the subordinate glands may become hard early in the course of the disease and increase until finally they become of an enormous size, break down, become ulcerative and involve any tissue, even bone, tendon or muscle.

The average time for it to destroy life, as shown by Mr. Stedling's deductions from the records of the (3) Middlesex Hospital being fifty-three months—longer than that of any other form of cancer.

Among the 10,759 cases of cancer treated at the (4) London Cancer Hospital from 1852 to 1874, 2,010 were epithelial, 1,423 males and 587 females. In the males 819 were upon the face and lips, while there were but 279 upon the face and lips of the 587 females.

Of the 102 cases reported by (5) Thiersch, eighty were men and twenty-two were women.

(6) Paget found eighty-six men and nineteen women in 105 cases with corresponding localities.

Thus the above tables show, as do the majority, that this variety comprises one-fourth the number of cancers, that it occurs oftener in men than women, and oftener upon the lips and face than any other part of the body.

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1. Billroth's Surgical Pathology, p. 693, 1881.
2. Hebra, Manual Dermatology, Vol. iv., 1875.

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1. Billroth's Surg. Path., p. 694, 1881.
2. Hebra's Disease of Skin, Vol. iv., p. 211, 1875.
3. Med. Surg. Trans. Vol. xlii., p. 125.
4. Marsden, Treat. of Cancer, London, 1874, p. 15 and 16.
5. Der Epithelial Krebs, namentlich der haut, p. 305, Leipsig, 1865.
6. Paget, Lectures on Surgical Pathology, 3d Edition, p. 733.

The means most urgently sought are those which will relieve suffering and cure the disease.

But before entering upon this part of the subject I wish to mention the various classifications which epithelioma have been subjected to within the past half century.

Thiersch seems to be content with classifying them as superficial or flat and deep or infiltrated.

([1]) Kaposi and Hebra have adopted that of superficial, deep-seated or nodular, and papillomatous. Schuh distinguishes them as first, superficial; second, granular; and third, warty or papillary, while some of the more modern authors have adopted the following, which, I think, is the most preferable.

First, superficial or "flat;" second, deep-seated or "infiltrated;" and third, papillary or "warty," ([2]) Billroth supplying the word "warty."

There is still another, adopted by ([3]) Alex. Marsden, which consists in classifying them as hard, soft, surface, deep, warty, and pedunculated, but as this is of no special practical value, I will pass it without further consideration.

As the treatment and its results vary somewhat in each of the three divisions, we will carefully study them separately.

The superficial or "flat" epithelial cancer, is the most common and occurs oftener between the fiftieth and sixtieth year, and as often in women as in men; appearing as small shining nodules about the size of a pin's head of a pale yellowish-white color, or it may start and grow as a warty excresence composed of one or more waxy nodules, with a disposition to excoriate early in its course. As a rule there is at first developed a small very adherent dry yellow scab, whose removal is followed by slight capillary hemorrhage, which becomes greater as the process of ulceration (which is much slower in this variety) progresses, seldom enters the subcutaneous cellular tissue, may heal in the center, continuing to involve the surrounding skin or ulcerate in the oldest part, in either instance producing an ulcer varying in size, from the sixteenth of an inch to many inches in diameter, covered with an offensive purulent fluid which was a clear sticky odorless serum, previous to the beginning of ulceration.

The edges may be round or irregular seldom sharply defined, but nearly always hard and everted.

Its most frequent seat is the eye-lids, nose, brow, and cheeks. The next most frequent place is the genitals, still it may appear upon any part of the body.

Fuchs calls them the "*Ulcus cancrosum vulgare*," ([1]) but they are more commonly known as *ulcus rodens* or ulcus phagadænicus.

They are a form of disease peculiar to old persons, and are the mildest and least infectious of all cancers. ([2])Green says that this is owing to the size and character of the epithelial elements which render them less liable to be transmitted by the blood and lymph streams than the cells of other varieties.

In his Boyleston prize essay on the anatomy and development of the rodent ulcer (Boston 1872) J. Collins Warren says; "rodent ulcer is a form of this variety of epithelial cancer. Its most frequent seat is upon the eyelids, and next to this upon the sides of the nose.

When fully developed it consists of a circumscribed sharply defined greater or less excavation, with a brownish-red or purpleish-red dry or scantily secreting mamilated surface, the ulcer having often a rolled border. Its course is very slow but relentless; it invades every tissue with which it comes in contact including muscles and bones. If neglected, great destruction of the parts may ensue, and even death from hemorrhage in very advanced cases.

A peculiarity of this form of epithelioma, is that it is a disease of the upper part of the face, occurring usually above a line drawn across the face horizontally on a level with the alæ nasi and the lower border of the ears. ([4])Mr Jonathan Hutchinson is of the same opinion.

It is not until the disease has involved

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1. Hebra, Dis. of Skin, 1875, Vol. iv., p. 202.

2. Billroth's Surg. Pathol., p. 689, 1881.

3. Marsden, Treat. of Cancer, London, 1874.

1. Die Geschichte des Ulcus rodens; bie Thiersch.

2. Green's Pathol. and Morbid Anatomy p. 160, 1878.

4. Illustra. Clinical Surgery, vol. 1, fasc. 1, p. 14. London, 1875.

the deeper tissues that any great pain or constitutional effects are manifested. Thus a superficial cancer may exist indefinately, allowing the patient to enjoy good health.

When it deviates from its superficial character it is no longer of this variety but has assumed the characteristics of the second variety — deep-seated or infiltrated,—the most common way by which the second variety occurs, although it may begin wholly of itself.

The course of the deep-seated or infiltrated cancer is much shorter than the preceding one, and accompanied with greater suffering and more serious consequences, having been known to run its fatal course in one year.

There is a peculiar shrinking of the older parts which produces the umbillicated condition so often met with, causing the edges to become elevated, hard, and of a dark bluish-red. They may break down and begin to ulcerate early or late in their course, the pain increasing with the progress of the disease, as does the cancerous infiltration.

Muscles, cartilage and bone may become consumed, and the glands in that locality become enlarged and undergo suppuration.

The third variety — papillomatous or warty cancer—and the most common of the three—consists of a new growth, varying from the fraction of an inch to many inches in diameter, having a broad base or may be pedunculated; the edges or the centre may be either depressed or elevated and bleed readily upon removing the scab, which sooner or later becomes fissured.

(1)Kaposi clearly describes it in the following manner, by saying that "it is hard, and its surface is either flat with depressed edges, or slightly drawn in at the centre, being at the same time dry and covered by a thin shining parchment, like epidermis, here and there superficially fissured and studded with brown, firmly adherent scabs. Or it is superficially ulcerated and the surface of the sore covered by granulations. Or lastly, it appears deeply fissured, lobulated or laminated, of a bright red or flesh color and œdematous, bleeds easily and secretes an offensive ichor, which if left to itself dries up into yellowish brown or greenish scabs which incrust the entire surface. When it appears fissured or ulcerated comedo-like friable plugs may often be squeezed out of it."

He continues by saying that a "papilloma is either superficial, its base situated in the deeper layers of the skin, feeling of the same consistence as the normal skin or it is deeply implanted, in which case the hard mass constituting it may be felt seated deeply on the skin surrounding its base and extending for some distance beyond, the pedicle of the papilloma feels hard and infiltrated. Sometimes its surface appears tuberculated and beset with cancer nodules. This difference depends upon whether the papilloma is developed upon a pre-existing epithelioma, since it may at one time develop as such from the first, therefore in a previously normal skin, or from a superficial epithelioma; the further course of a papillomatous epithelioma is similar to that of the nodular variety."

The only diseases which are likely to be confounded with epithelioma are lupus syphilis and rhino-scleroma, from which a differential diagnosis is comparatively easy.

The treatment, which should be both local and constitutional, varies as much in this as in any other disease, the age and general health of the patient, duration, location and character of the disease must all be considered in deciding upon the course to pursue.

That either form of the disease should be removed immediately upon its discovery there is no question, but there might be as to how it should be done.

Superficial cancer is the most likely to be cured by any plan of treatment, and is claimed by many to be the only form in which caustics should be used; there are cases where extirpation by means of the knife or actual cautery would be more preferable and effectual than caustics. However, it would be folly to adopt one plan of treatment to the exclusion of the other, as each has some particular advantage over the other.

Of the many patients operated upon at the University Hospital by Mr. Erichson few have returned with a recurrence. He says that he firmly believes that excision by means of the knife permanently cures the disease, even in those cases where the lips, gum and lower jaw had become involved has entirely ridded the patient of the disease.

1. Hebra, Dis. of Skin, vol. iv, p. 209; 1875.

(1)C. Heath has clearly demonstrated the efficacy of this plan of procedure. Should a superficial cancer of recent occurrence be found upon the eyelid, alæ nasi, ear or lip of a person under thirty-five or forty years of age, the prognosis would be more unfavorable than if found upon a person above sixty years of age, as the latter generally die from other causes before the disease has run its course.

Thus an early operation should be urged upon, especially in the young.

(2)Mr. Alex. Marsden says, "that a patient suffering from epithelioma coming under treatment at anything like a reasonable time from the first attack may in nine out of ten feel sure of a perfect restoration to health;" such was not the case twenty years ago.

Although having been brought into disrepute for many years by being left almost entirely in the hands of the charlatan, caustics occupy a very important position as a therapeutical agent in the treatment of epithelial cancer.

There does not seem to be any literature upon this subject that will throw any light upon the time of its introduction in the treatment of this class of diseases.

The actual cautery has been used in the treatment of chronic ulcer and wounds from time memorial, but the caustics which we most desire to study are the acids and salts which disorganize animal tissue. Sulphuric acid when combined with saffron in sufficient proportions to form paste makes a substance known as the *black paste*. This is used principally by the French and offers an excellent caustic. Then there is the chloride of zinc paste, made by adding one part of zinc (after deliquesence) to two parts of starch (canqaius plan). Lendolfi has combined chloride of bromine and antimony with the zinc, made into paste by adding pulverized licorice with a few drops of water; its use has entirely been abandoned owing to its severity. Hebra modifies Lendolfi's paste by substituting strong muriatic acid for the chloride of bromine. This should be used quickly after being spread upon linen or lint strips, not being allowed to remain on longer than twenty-four hours at a time. It is very painful, and like all escharotics should never be applied over joints, tendons or the face. This formula is also made into small, sharp-pointed cones, known as *caustic arrows*. They are to be inserted in the line of incision made upon and around the part to be excised, for instance the breast, which sooner or later sloughs off, leaving an open wound to heal by granulation.

The most desirable zinc paste is made in three strengths by adding wheat flour in the proportion of one to two, three, or four. It destroys tissue in a direct ratio with the thickness of the layer applied; is the safest and most popular form of zinc paste in use. It is known as Fell's paste, having been introduced into England by an American of that name, and is the only form of zinc paste that should be used upon the face, tendons or joints.

Arsenical acid seems to answer the purpose better than all other caustics, especially when used after the fashion of Marsden, who was the first to use it with an equal part of pulverized acaciæ made into paste by the addition of a few drops of water. It is however, used in a milder form in the proportion of one to two, three, or four. It should be applied after being spread upon a piece of lint or muslin cut not to exceed three square inches, and remain not longer than twenty-four hours. It may be used with safety at intervals of twenty hours each as long as indicated, but never upon a mucous membrane, being principally indicated in the superficial and papillomatous varieties. Indeed, some members of the profession confine its use to these two forms. I have, however, seen some excellent results obtained from its use in the deep-seated or infiltrated epithelial cancer, absorption being the thing to avoid where there is extensive infiltration. This may be done by applying it to surfaces not exceeding one square inch and allowing the secretions which are rich with arsenical poison to become absorbed upon cotton or lint with occasional removal. Its use is indicated and should be adopted in the recurrence of any nodule or unhealthy granulation until cicatrization is complete. This paste especially should be applied during the morning; if allowed to remain over night should be closely watched by an attendant, whose duty it should be to see that it is not dislodged or the poison fluid allowed to come in contact with the mucous membrane of either the nose, mouth or eyelids, in which case partial, if not fatal,

1. Erichson, Sys. of Surg., vol. ii, p. 394.
2. Treat. of Cancer, London, 1874.

poisoning might result. The paste and lint form a mass which becomes very adherent and may require the use of poultices to remove it. These should be kept as warm as the patient can well endure and continued until sloughing is complete—requiring from four to twenty days. Sometimes better results may be secured by thoroughly scraping, afterwards applying the caustic.

The amount of tissue and caustic effects may be governed by applying adhesive plaster in which a hole is cut to correspond with the area to be cauterized.

There is still another arsenical paste known as Mauce's, composed of white arsenic, cinnibar and burnt sponge, made into paste by adding water. This, however, is not used, having been discarded for milder ones.

Of the many other forms of pastes, I might say that none equal the simple zinc paste or that of Marsden, the latter seeming to have an affinity for new cell growths—their vitality being so low that there is but little power of resistance offered as compared to normal tissue.

This being so, the line of demarcation is not long in being formed between healthy and unhealthy tissue.

They are to be used much in the same manner and with the same precautions.

One of the latest and most novel forms of caustics is found in pyrogallic acid(1) made in the form of an ointment of five, ten, fifteen or twenty per cent. Its application, as a rule, is not attended with pain. However, I have had a case under my care in which a ten per cent. ointment caused pain to such an extent that it was necessary to keep the patient under the influence of morphia. It is a form of caustic introduced by Jarisch, who recommends its use for from two to twenty days, as the case may require. It is a German idea, and should be well rubbed in and kept constantly upon the lesion; the effects are more active and the results more promising if the surface is well curetted immediately preceding its application—an operation which Hebra, Kaposi, Auspitz, Geo. H. Fox and Bulkley strongly recommend.

If necessary, the patient is placed under the influence of an anæsthetic, that the scraping may be thoroughly done.

Dr. Broadbent claims to have had excellent results in treating epithelioma with a twenty-five per cent. solution of acetic acid applied three times daily until sloughing is complete; while Mr. Bergeron strongly recommends the use of chlorate of potash, both internally and externally.

Escharotics should not be applied except where there is extensive tissue beneath the integument, as is found upon the breast, buttocks and thighs; even then with the greatest precaution.

Some person has said that the milder forms of paste are indispensible in those cases of relapses where the disease is extensive with great infiltration.

Dr. Althaus is strong in his belief that electrolysis is the thing to adopt, as it is as effectual without pain or discomfort.

(1)Bryant strongly advocates the use of the galvanocautery.

Carbolic, nitric, muriatic, acetic, sulphuric and chromic acids, separate and together with nitrate of silver caustic and chlorate of potash, are all used to a greater or less degree with varying results.

The use of any cauterant, whether actual or not, should be followed by warm poultices, and subsequently carbolized oil dressing until the wound is entirely healed.

The nose held in the hand of that piece of marble statuary erected in the Anatomical Museum at Bologna to the memory of Gasparo Tagliacozzi is of more significance to lovers of this art of surgery than is generally supposed by the profession.

Surely it represents the genius and character of a man who spent most of his life in earnest endeavor to replace lost parts of the human body, namely, the nose, lips, eyelids and ears, as some one has said, not by wood, pasteboard, silver or gold, but (as was then at least currently believed) by true, veritable flesh.

It was not until the year 1597 that he explained to the people the methods by which he accomplished such great results. This was satisfactorily done by a work published by himself, entitled "De Chirurgia Curtorum per insitianum." It was the beginning of a new era in the art of plastic surgery.

Transplantation of tissue goes back to a high antiquity, the Egyptians and Hindoos having known how to restore a lost nose or ear.

This art necessitates the use of the

1. Cincinnati LANCET-CLINIC, July 11, 1885.

2. See paper with cases, *Lancet*, April 4, 1874.

knife, which is so frequently indicated in the deep seated, infiltrated or recurrent cases, the excised portion being replaced by a healthy piece of skin taken from the forearm or hand, with the pedicle attached in the manner set forth by Tagliacozzi, which consists in raising the skin so that a double edged knife may be passed through without cutting the subjacent muscular tissue. Oiled cotton is placed in the wound and allowed to remain four days, afterwards renewing daily until suppuration occurs, when the flap thickens and the edges become encrusted it should be divided at the upper end, taking in all about fourteen days before it can be adjusted.(1)

Garritson speaks in praise of this operation, adding that he has accomplished most satisfactory results.

Noyes and Knapp strongly advocate the use of one or more sliding flaps especially where the ali nasi, eyelid, ear or lip are involved, they being the first to introduce the method into this country.(2)

Union by first intention can only be secured by the greatest care in coapting the edges, which should be cut sharp and distinct, the result being more favorable when conducted upon the principles of asepsis throughout the entire operation, care always being taken to carry the line of incision as far beyond the lesion as possible, that all chances of cutting diseased tissue might be avoided.

Should a failure be made in securing coaptation, or there be left as a result of the operation a surface to heal by granulation, skin or sponge grafting may be resorted to with most agreeable results, after granulation has sufficiently taken place.

It should especially be resorted to in all such operations upon the face or hands, these being localities where the deformity resulting from the contraction by the formation of cicatricial tissue would be more objectionable.

Deformity is relieved to a great extent and the length of time for recovery much lessened by the use of either skin or sponge grafting.

The former may be done successfully by placing small sections of skin taken from the arm or thigh by means of a sharp pair of scissors—or what is still better, a sharp razor—upon the surface and kept in position by means of rubber tissue and bandages.

The tissue should be moistened several times daily by pure carbolized olive oil and should be the only part of the dressing allowed to come in contact with the grafts, the whole not to be disturbed for three or four days. If the pus is antiseptic their growth will not be interfered with by its presence; if in excess free drainage should be made.

Some prefer to spread the epithelium, after being cut very fine, over the granulating surface, claiming equal results. I myself have never practiced this method, having had such excellent results with the larger sections, to the size of which there is no limit.

Where a single graft is indicated of any very great size, say over one-half inch in diameter, it should be cut one-third larger than the surface to which it is to be applied, immersed in hot water, allowed to shrink to its fullest extent, adjusted with edges overlapping, and treated with oil dressings.

Sponge grafting is more recent and still a greater novelty, and posseses a few advantages over the former, especially in the treatment of chronic ulcers of great size.

The sponge should be thoroughly sterilized by first boiling and allowed to remain in a five per cent solution of carbolic acid or bichloride of mercury in the proportion of one to two or three thousand, and very thin sections made with scissors, varying in size, should be placed upon the surface and treated with the same care and precautions as in the former. Its meshes become filled with capillaries and correspond to the connective tissue, afterwards become absorbed and pass off with the product of waste and repair.

Since the introduction of cocaine, patients need not dread the suffering from either the operation or the effects of chloroform or ether. Its use has added one grand step in advance of anything heretofore offered, as it enables us to secure an early operation, which before would have caused more or less suffering or necessitated the use of an anæsthetic, a thing which too often causes the patient to postpone until it is too late an operation which would have been beneficial, if not entirely ridding it of the malady.

1. For further particulars see Holmes' Surgery, vol iii., p. 622; System Oral Surgery, Phila: 1873, also, *Phila. Medical Times*, September 25, 1880.

2. See Arch. fur Ophthal., xii., Arch of Opthal. et Otol., I. 1 and 2."

One-half of a drachm of a four per cent. solution of hydrochlorate of cocaine will render the patient exempt from pain if subcutaneously injected in the field of operation a few minutes previous to the application of caustics, the use of the knife, actual or galvano cautery.

Local anæsthesia can also be produced by the application of salt and ice, but there is great danger of carrying it so far that union by first intention cannot be obtained, indeed, it is many times followed by sloughing of the immediate parts, causing the wound to heal by granulation, thus producing an unwelcomed cicatrix, besides there is more or less pain attending the use of this remedy.

Special attention should be given to the general condition of the patient in the way of diet, tonics, fresh air and out-of-door exercise. Some form of iron, mercury, or arsenic, alone or in combination with some one or more of the vegetable tonics, will generally answer the purpose.

According to Mr. Erichsen, epithelial cancer may recur in three distinct ways:

First, local reproduction.

Second, neighboring but not local reproduction.

Third, immediate recurrence.

In either case rendering the prognosis unfavorable in proportion to the extent and number of times of recurrence.

More energetic and radical treatment should be adopted upon each return of the disease, the plan of procedure being left entirely with the operator in each individual case.

53 E. Fourth St.

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