The treatment of cancerous diseases by caustics : a critical enquiry into the modern therapeutics of cancer : being 'the address in surgery' delivered at Birmingham on the occasion of the 24th annual meeting of the Provincial Medical and Surgical Association / by Langston Parker.

With the author's Compts.

THE TREATMENT

OF

CANCEROUS DISEASES

BY

CAUSTICS.

A CRITICAL ENQUIRY INTO THE MODERN THERAPEUTICS OF CANCER.

BEING

"THE ADDRESS IN SURGERY"

DELIVERED AT BIRMINGHAM ON THE OCCASION OF THE 24TH ANNUAL MEETING OF THE

Provincial Medical and Surgical Association.

By LANGSTON PARKER,

SURGEON TO THE QUEEN'S HOSPITAL, BIRMINGHAM,

ETC. ETC.

LONDON:

JOHN CHURCHILL, NEW BURLINGTON STREET.

CORNISH, BROTHERS—BIRMINGHAM.

J. & T. CORNISH—MANCHESTER.

1856.

LONDON:
SAVILL AND EDWARDS, PRINTERS, CHANDOS-STREET,
COVENT GARDEN.

THE TREATMENT

OF

CANCEROUS DISEASES BY CAUSTICS.

Mr. President and Gentlemen,

After having accepted the honourable task which your Council imposed upon me in August last, wishing me to deliver to the present assembly an Address on Surgery, I had for some time considerable anxiety as to the mode in which that duty could best be discharged. The domain of Surgery is now so wide, its modern improvements so numerous and great, that it must be evident that a mere passing allusion to these would occupy more than the customary time allotted for the duration of this annual discourse. I was unwilling to make this a mere catalogue of surgical novelties, which are not always improvements, and I had also again a strong objection to press upon your attention my individual experience simply on any branch of surgery, to which I might invite your attention, from the record of personally observed cases only, drawn either from private practice or from the wards of an hospital. After much thought and deliberation, I at length determined to

address you on a branch of surgery of vast importance, and to which I have for some time past directed much attention, viz., "The Modern Surgical Therapeutics of Cancerous Diseases," and to inquire what is the exact position in practical surgery which "the therapeutics of cancer now occupies:" in fact, I shall hardly go so far as to consider the whole surgical treatment of cancer, but only one branch of it, and that is, "the treatment of cancerous diseases by caustics or by enucleation," a subject to which little attention has been paid in Great Britain, at least, systematically, although there are many isolated cases recorded, as I shall presently show, which point to this mode of treatment (under certain circumstances) as valuable, effective, and safe. On the continent of Europe this practice is fast gaining ground, and many systematic works have been published within the last eight or ten years on the effects of different caustics in the cure of cancer, whilst some French hospital surgeons have devoted courses of Clinical Lectures to this branch of surgical inquiry.* The three modes at present known and practised amongst surgeons for the cure of cancer are three: ablation or excision, compression, and the destruction or enucleation of the disease by escharotic or caustic substances. I shall not occupy your valuable time by any allusion to the first mode

---

* "Leçons Cliniques sur les Affections Cancéreuses, professées à l'Hôpital Cochin." Par M. le Dr. Maisonneuve. Paris. 1852—1854.

of practice, viz., that by excision. It may be sufficient for me here to observe that, without weighing the merits of excision and cauterization, the latter practice may be adopted in cases where excision is utterly out of the question. Hence, on this point alone, cauterization becomes a legitimate subject for inquiry. I shall not enter into the question of the little success which excision, as a curative measure, has met with, nor enumerate the nineteen reasons brought forward by Dr. Walsh against its performance. Much has been ably written on this subject during the last few years, especially by Mr. Paget, who, in balancing the duration of life between cancerous diseases which have been suffered to run their own course, and those which have been removed by the knife, believes that there may be a "small advantage in favour of the operation." The latter remarks, however, refer more particularly to the removal of scirrhous cancer of the breast, whereas what I have to say will bear upon the treatment of cancer in all organs. I shall not detain you further than by a passing allusion to the statistics furnished by M. Canquoin, who gives eighty-two per cent. of cures as the result of the practice of enucleation, and ten per cent. as the result of excision.*

The second treatment to which I shall direct your attention for a few moments is by compression.

---

* "Traitement du Cancer: Exposé complet de la Méthode du Docteur Canquoin, excluant toute Operation par l'Instrument tranchant."—Page 131.

This was first suggested by Mr. Young, a surgeon of Bedford, early in the present century. It is needless for me to enter, before this learned assembly, into the details of the mode in which compression is practised. The mode originally suggested by Mr. Young has been modified in various ways; but I believe the most modern and approved mode is that suggestion by Dr. Arnott of the air-pad and spring. Compression had many and powerful supporters, and the late Dr. Denman addressed a pamphlet to Sir Benjamin, then Mr. Brodie, strongly advocating this plan of treatment.* Compression, first suggested by Mr. Young, found on the Continent of Europe many advocates, and amongst the chief of these may be mentioned M. Recamier of the Hôtel-Dieu.† In the work of M. Recamier, published in 1829, many cases of the cure of cancer by compression are recorded. Thirty cases of absolute cure of cancer are there given. It is true these cases have been analysed by M. Lebert in his treatise on cancerous diseases, who throws much doubt on the real nature of the disease and the results of treatment; but then, it must be recollected, that the histologist will have nothing cancerous unless the microscope has pronounced it so; and modern research has at least shown that

---

* "Observations on the Cure of Cancer, with some Remarks upon Mr. Young's Treatment of that Disease." By Thomas Denman, M.D. London. 1816.

† "Recherches sur le Traitement du Cancer par la Compression méthodique, simple ou combinée, &c." By J. C. A. Récamier, Médecin de l'Hôtel-Dieu de Paris. Paris. 1829.

the microscope is not infallible on these points. Bayle, in the fourth volume of the "Bibliothèque de Thérapeutique," published in 1837, gives the results of 127 recorded cases, out of which were seventy-one absolute cures. In commenting on these cases, Dr. Walsh observes, that "in some of the cases alleged to be cancerous, neither of the anatomical species of that affection existed; but it is, on the other hand, perfectly unquestionable that many of the absorbed growths were not only actually schirrous, but had already become the seat of ulceration when submitted to compression."

Compression has found many advocates amongst very recent writers, especially Dr. Bennett, Dr. Walsh, and Dr. James Arnott. Its advocates, however, speak rather theoretically, than practically, of its merits, and there are few or no data to guide us in estimating the present real position of this method as a curative agent in the "treatment of cancer." If we take the modern theory, or rather pathology of cancer as the basis of our explanations, Dr. Bennett tells us that pressure, "restraining the growth of and favouring the disintegration of the cancer cells, necessarily leads to their re-entrance into the blood, and their subsequent excretion through the emunctories."* Should pressure have the effect here described, is it not possible, or even probable, that the cell re-entering the blood may be deposited as a nucleus of cancer

---

* "On Cancerous and Cancroid Growths." By John Hughes Bennett M.D. Edinburgh. 1849.

in some other remote organ, either external or internal? and there have occurred cases where such consequences have appeared to follow the employment of pressure. It is too much, however, to say that such secondary deposit was actually due to the employment of pressure, since such consequences frequently take place, whatever mode of treatment may have been employed. A question naturally arises here, upon the solution of which the whole argument on the curability of cancer unquestionably turns; and that is, the primary nature of a cancerous tumour;—whether a cancerous disease be a local manifestation of an already existing constitutional taint, or whether it be a local disease, the result of injury, or some other local and hitherto unexplained cause? I need not inform this assembly that both these theories have had, and even now have, their advocates. It would be a waste of time, even were such time allowed me, to enter into the arguments, or rather into the histories, of those facts by which each of these theories have been supported. The most prevailing modern opinion is, that a cancer is the local manifestation of an already existing constitutional taint. This may be true in many cases, but surely it is not correct in all. I lately watched a case, in the wards of the Queen's Hospital, where a schirrous tumour existed in both mammæ, and such tubercles were also present in the glandular system generally, in the skin of the abdomen, in the uterus, and even in the pericardium. This patient had, on different parts of the body, externally and internally,

between fifty and sixty tumours, possessing both the clinical and microscopical characters of schirrous or hard cancer. Whilst I write, there is again another female in the wards of the same institution, who now has no less than seven of these tumours, one on the mamma of the right side, one in the opposite axilla, four on the back, and one on the skin of the thorax. There can be no question as to the nature of such complaints, that they are local evidences of a general constitutional taint; neither can there be a question as to the utter futility, not to say criminality, of interfering surgically by operation with cases of this nature.

On the other hand, where a disease arises spontaneously in a part—the mamma, tongue, lips, or elsewhere—and where the origin of such mischief may be traced, as it frequently may, to local irritation or injury, where, otherwise, the patient's health continues good, no evidence of general cachexy, and no complication, glandular or otherwise, can be detected, are we not warranted in supposing such mischief may be on the onset local, and that if we suffer such disease to continue, the patient frequently sinks from the discharges and hæmorrhages, which are due to local causes alone, and which are consequent upon the ulceration and spreading of the tumour? Numbers of patients perish from the local irritation produced by cancerous sores, without any other complication, glandular or otherwise; and if the constitution become subsequently tainted, or a general cachexy induced, is it not reasonable to suppose that

it may be due to the spreading of the local disease to the system generally? It is on this very principle that the early extirpation of tumours, reputed cancerous, has been recommended by the great majority of practical surgeons in all countries—"the disease is to be removed before the system generally becomes tainted by its presence." What is this but a recognition of the principle which I have just enunciated, that some forms of cancer are in the commencement local? Some French authors, quoted by M. Velpeau at page 610, have contended for late operations in cancer, but the recommendation is so at variance with all good surgery, and with all sound pathology, that it would be an insult to the common sense of the sound and practical surgeons I see around me to consider the arguments by which such a practice is defended. Mr. Paget, in speaking of certain epithelial cancers, uses these remarkable words, "They usually lead to the formation of structures like themselves in the lymphatic glands connected with their primary seat, and they lead sometimes to similar formations in more distant organs."* This passage, if I understand it rightly, clearly recognises the principle of the occasional contamination of the system generally, from a cause at first purely local. Again, M. Lebert, (Introduction, page xxii.,) tells us, "that while the symptoms of cancer are strictly local, it is legitimate and sound practice to remove

---

* "Lectures on Surgical Pathology," vol. ii. p. 480. By James Paget, F.R.S.

the disease by an operation, since," says he, "by so doing, we take away the chief or principal auxiliary for the general propagation of the cancerous agent or element; and this principle," continues he, "is as equally applicable to relapses as to primary diseases." I have quoted his words literally, and they clearly imply or admit what I have just contended for, that some, if not many, forms of cancer are, in the commencement, local diseases.

It is manifestly to such a class of cases only that operative measures of any kind are applicable, and it must be to such apparently local diseases that they must be limited. I am of opinion that cancer, like syphilis, manifests itself in two ways: first, as a local mischief, the constitution secondarily becoming contaminated: and secondly, the local mischief being the first evidence of a constitutional taint, and in the latter class of affections, complications affecting the system at large are not long in showing themselves, and thus proving the position. Having indicated the nature of those local cancerous growths in which operative measures alone are to be employed, and having glanced at two out of the three of those procedures which are recognised by modern surgeons in the treatment of cancer, I proceed to the more immediate object of this address—the indications for the employ of caustics in the treatment of the local forms of cancer. In this country I know of no systematic treatise or essay on the employment of caustics in cancer, in which the nature of the cases is pointed out which would be proper for their employ, which

includes the forms of remedy proper to be used, and to what cases particular forms of remedy are or are not suited. Now and then an isolated case of the apparently successful employment of the chloride of zinc, or the potassa cum calce, is to be found in the pages of a medical periodical; but I believe I am correct in saying, that nothing definite on this point exists in English medical literature. Even on the Continent, although there are many set treatises on the use of several caustics, an impartial history of the effects of these several remedies has yet to be composed.

The chief caustics which have been used in the treatment of cancer are arsenical pastes, chloride of zinc pastes, the concentrated mineral acids, the nitric and the sulphuric, the potassa cum calce in a solid form, known as the caustic Filhos (a very valuable remedy), and the chloride of bromine, used either alone or in combination with the chlorides of zinc, antimony, or gold. There are many other preparations which I could allude to, for I have paid considerable attention to the subject, but our time will not permit it. Again, I think all that can be done by caustics may be accomplished by one or more of the preparations I have already mentioned.

French literature is rather rich, although ours is so defective on the subject of the use of caustics in the treatment of cancer.

Canquoin's treatise on the chloride of zinc appeared in 1838; one on the solidified nitric acid, by

M. Rivallié, in 1850;* another on the use of the solid potassa cum calce in cancer of the neck of the uterus, &c., in 1847,† by M. Filhos, who first suggested this remedy; the clinical lectures of Maisonneuve, at the Hospital Cochin, in 1852; on the uses and employ of caustics in cancerous diseases, of which lectures M. Velpeau speaks very highly; M. V. himself, in his treatise on diseases of the breast, enumerates eleven or twelve different caustic preparations. The "Dublin Quarterly Journal," for November, 1855, contains a translation of M. Lasègue's critical review of Llandolfi's "Treatment of Cancer by Caustics," the chief of which is the chloride of bromine. The chloride of zinc is perhaps the caustic best known in this country, and the one now most commonly, though too rarely, employed in the treatment of cancerous or cancroid diseases. This salt, as a caustic in the treatment of cancer, was first introduced by M. Canquoin, of Paris, in 1834, who, in that year and the succeeding, addressed two communications to the Academy of Medicine, stating the success which he had obtained in removing cancerous growths without the aid of the knife. The preparation, at first known as Canquoin's plaister, was soon ascertained to consist of about equal parts of chloride of zinc and flour made into a paste of proper

---

* "Traitement du Cancer par l'Acide nitrique solidifié." Par A. Rivallié. Paris. 1850.

† "De la Cautérisation du Col de l'Uterus avec le Caustique solidifié de Potasse et de Chaux." Par M. le Dr. Filhos. Paris. 1847.

consistence with water. In 1838, M. Canquoin published a complete account of his remedy, by which 600 cases of cancerous disease had been treated with a confessedly great amount of success. M. Canquoin, in his work, gives four formulæ for the preparation of the chloride of zinc paste. 1. Equal parts by weight of zinc and flour. 2. Zinc one part, flour two parts. 3. Zinc one part, flour three parts. 4. Zinc one part, muriate of antimony one part, flour one part and a-half. Water from twenty to thirty drops to the ounce for each of these preparations. The first preparation, applied four lines in thickness for forty-eight hours, destroys the parts to the depth of an inch and a-half. The same preparation three lines thick, applied for the same period, acts to the depth of about an inch only.

The paste Nos. 2 and 3 are to be applied in carcinomatous ulcerations, which are not deep, but spread over a greater or less extent of surface. No. 3, on account of the greater dilution of the chloride of zinc, acts slowly and with a less amount of pain. No. 4 is combined with the chloride of antimony; this preparation when well made has the consistence of soft wax, and is particularly suited to growths which are uneven on the surface, to the inequalities of which it is easily moulded, and does not alter its form or run when applied. M. Velpeau* speaks very highly of the chloride of zinc as an

---

* "Traité des Maladies du Sein, et de la Région Mammaire, &c." Par A. Velpeau. Paris. 1854.

application to cancerous ulcers and growths. It is a preparation easily manipulated; it possesses no action on the epidermis or on mucous membranes covered with epithelium; it may be moulded with the hand to any shape, form, or thickness; it does not fuse or run, its action being strictly limited to the surface to which it is applied. Its action, again, is expended on the parts which it touches; unlike the arsenical pastes, there is nothing to fear from absorption, its action being strictly limited to the local effects to which it gives rise.

M. Maisonneuve, in his Clinical Lectures on cancerous diseases, gives very favourable testimony to the effects of the chloride of zinc, especially in reference to its application to large, fetid, bleeding cancerous or cancroid ulcers where the knife is utterly out of the question, and where the patient is sinking from local irritation and hæmorrhage. M. M. mentions a case in which an enormous cancer of this kind was entirely removed by the remedies I have mentioned. This case is quoted at page 63 of the first number of Maisonneuve's "Clinical Lectures."

Dr. Gillespie refers to a case of cancer cured by the chloride of zinc paste in the "Edinburgh Monthly Journal" for January 1856, and remarks that in similar cases the paste should be tried before recourse is had to the knife. Mr. Miller, in the debate on this case, bore testimony to the efficacy of the chloride of zinc.

I have used the chloride of zinc paste in several cases, which I shall hereafter detail, with a gratify-

ing amount of success. The two chief objections which may be raised against the use of the chloride of zinc are the necessity of first destroying the epidermis before the remedy is applied; and, secondly, the pain occasioned by the prolonged contact of the caustic with the disease, which varies from a period of twelve to forty-eight hours, according to circumstances.

The pain, however, may be vastly diminished, if not entirely removed, by the application of ice and salt on the plan recommended by Dr. J. Arnott. I removed, by means of the chloride of zinc paste, a growth of the size of a walnut from the back of a lady, who had been twice operated on before with the knife for the removal of a similar growth in the same situation, without the remedy causing anything like severe pain. The moment the burning power of the caustic was felt a large bladder of ice and salt was applied, which entirely removed it in a few seconds—this was continued for a short time, and then removed; when the pain of the caustic began again, a fresh bladder similarly filled was applied, with similar effect, so that, although the caustic remained in contact with the skin for six hours, the pain experienced was of a most trivial character. I have tried this plan with other cases, with almost an uniform amount of success, and I believe some modification of this kind, properly carried out, will effectually remove the chief evil attendant on the application of caustic remedies to the destruction of cancerous growths, which is the

amount of prolonged pain they occasion. The chloride of zinc may be applied with a degree of precision unattainable by any other remedy, it destroys the tissues in direct relation with the thickness of the layer of paste applied; and this with a little practice may be calculated to a great nicety, it never runs or fuses, it destroys only those parts which it covers, and these it divides from the surrounding structures as cleanly as though they had been cut with a knife. The crust or scab formed by this caustic is hard, dense, and white, there is no sanguineous or other discharge produced by it. The eschar separates at the end of twelve or fourteen days, leaving a clean, healthy, granulating surface underneath.

The concentrated mineral acids have lately been much employed as caustics in the treatment of cancerous diseases. I allude especially to the nitric and sulphuric acids. A set treatise on the use of one of these acids, the nitric, has been published by M. Rivallié, in which monohydrated nitric acid is made into a paste with scraped lint or charpie. This M. Rivallié describes as solidified nitric acid. Many successful cases are given by this surgeon of the total and rapid destruction of cancerous growths by his method. M. Velpeau and M. Maisonneuve speak favourably of this preparation, the latter prefers it mixed with asbestos. It is neither so easily under command, nor so destructive as the concentrated sulphuric acid.

Concentrated sulphuric acid, made into a paste

with saffron, has been described by Velpeau and others under the title of "black caustic," "caustique noir."

In speaking of this remedy, M. Velpeau says:—"No caustic has afforded me similar advantages, its action is prompt, energetic, and deep, it is easily manipulated, gives rise to no sanguineous oozing like the alkaline caustics, nor to inflammatory re-action or swelling. One is sometimes surprised," says this surgeon, "to see a vast fungoid surface secreting daily an immense quantity of blood, and sanies converted in a few hours into a black crust, from which issues no moisture whatever." "It is," says M. Maisonneuve, "our caustic 'de prédilection,' of which I most frequently make use in the destruction of hard and large tumours."

"The day or day but one after its application, the surrounding integuments are neither red nor swelled, and hardly more sensible than the healthy skin. One would say, in fact, that the patient was already cured, and that the black crust reposed upon a cicatrix already formed."—Velpeau, 666.

The alkaline caustics, or those which have potass for their base, are powerful, effective, and manageable remedies in the treatment of many forms of cancer. The remedies chiefly applicable are the Vienna paste, or Heister's caustic, in the form of powder, composed of five parts of the hydrate of potass and six of quick-lime, rubbed together as a dry powder, and when applied mixed into a paste with a little spirit of wine; or the same remedy, now much

in vogue on the Continent, consisting of the same ingredients, though in different proportions, fused and run into leaden tubes, like nitrate of silver or potassa fusa. In this form the remedy is known on the Continent as the caustic of "Filhos."

It is composed of two parts of potass and one of lime, and is a most convenient, active, and useful remedy. Its inventor chiefly employed it in destroying fungoid growths from the "uterus," what he terms "fungoid ulcerations," and which, according to the cases detailed by Dr. Filhos, appear to be varieties of epithelial cancers, some of them probably of the nature of what are termed "cauliflower excrescence."

In a Clinical Lecture, reported in the "Association Journal" for March 29, 1856, Dr. West reports a case of similar disease cured by the galvano-caustic, applied by Mr. Paget.

This physician also remarks, in the same lecture, that the chief cancerous or cancroid growths from the uterus are of the epithelial kind, and it is to precisely this class of cases that the caustic of Dr. Filhos is suited. By the application of this remedy, which I have frequently used, the diseased mass may be gradually rubbed away into a kind of putrilage, or soap, with a very trivial amount of pain.

The amount of pain produced bears no relation to the activity and destructive agency of the caustic in such cases. All the alkaline caustics have the effect of producing a sanguineous oozing from the parts to which they are applied. They are unlike the chloride of zinc and the mineral acids in this

respect, which have the effect of coagulating the blood in the smaller vessels in the immediate vicinity of cancerous growths, whilst the alkaline caustics give rise to a sanguineous discharge to a greater or less extent.

The last novelty to be mentioned in reference to escharotics for cancer is the remedy of M. Llandolfi. An account of this method appeared in the "Archives Générales" for May, 1855, by M. Lasègue—a translation of which paper may be found in the "Dublin Quarterly" for November, 1855. "Dr. Llandolfi," says M. Lasègue, "does not belong to the habitual blazoners of secret remedies; his method is not enveloped in any mystery. He is surgeon-in-chief of the Sicilian army, and clinical professor of cancerous diseases in the hospital of the Trinity, at Naples; and he has made it a point of duty to court a publicity in reference to his peculiar treatment, which is honourable to himself, and must be beneficial to humanity. In this spirit he has gone through the great scientific centres of Germany and France."* The essential novelty in M. Llandolfi's remedy is the chloride of bromine, which remedy, when employed alone, is made to consist of $2\frac{1}{2}$ to 4 drachms of the chloride of bromine, made into a paste with powdered liquorice. This paste is employed pretty much in the same way as that of the chloride of zinc and other caustics, the manipulation of which I have just

---

* "Dublin Quarterly Journal of Medical Science," November, 1855, p. 482.

passed in review. The time for remaining on, and the thickness of the paste employed, must depend mainly on the depth and extent of the humour. The means for relieving pain during the period of the application of the caustics are also the same. Dr. L. recommends the exhibition of opiates; chloroform may also be employed for this purpose; but as I have already shown, the most efficacious and safe plan is the application of benumbing cold, which should always be employed where the situation of the disease permits it. In Italy, M. Llandolfi employed a remedy composed of equal parts of the chlorides of bromine, zinc, gold, and antimony, mixed with a sufficient quantity of flour to make a viscid paste. In Germany, or at Vienna, these proportions were a little varied, and the paste was made to consist of chloride of bromine, 3 parts; chloride of zinc, 2 parts; chlorides of antimony and gold, of each 1 part, made into a paste of proper consistence with liquorice root.

According to M. Llandolfi's views, the chloride of zinc is indispensable in ulcerated cancers, in which it acts as a hemostatic. The chloride of gold is only rarely useful: it is particularly indicated in cases of encephaloid cancer, on which it is said to exercise a special, if not specific, action.

The integument and parts surrounding the disease are, where it is practicable, to be protected from the action of the caustic, by being covered with stripes of cloth spread with a pommade composed of four parts of chloroform and thirty of lard, or, what is said to be better, cold cream.

A number of cases have been detailed as cured by M. Llandolfi's method; but it is exceedingly probable that some of these diseases were not, according to modern opinion, cases of veritable cancer, nevertheless it is equally certain that many of them were so.

There can be little doubt of this, since several of the cases operated upon were submitted to the opinions of Rokitansky, Meckel, and other distinguished histologists, and were pronounced the cases of true cancer, according to modern theories on the subject.* I have now glanced briefly at the principal modern caustics which may be employed in the treatment of cancerous diseases. There are a variety of others which I could have mentioned; but I believe all that is to be done by remedies of this class may be accomplished by one, or a combination of those to which I have already alluded. I shall now speak more especially of their particular indications. It must not be supposed, neither do I believe, that any of my hearers would suppose that in this address I am advocating the employ of caustics to the exclusion of all opera-

---

* It may be here perhaps necessary to state that a French Commission, appointed to inquire practically into the working of M. Llandolfi's method, have reported very unfavourably as to its results. They consider the preparation a mere alteration of Canquoin's parts of the chloride of zinc, disguised and altered by its mixture with the chloride of bromine. It is stated to be more painful in its application than the chloride of zinc paste, and not so certain or efficacious in its action. The Commission (the details of whose report may be found in the June number of the "Archives Générales") report but one case of decided cure. This Report refers chiefly to the employment of the remedy as a paste, after the manner of the choride of zinc. As a fluid caustic, used where pastes are inapplicable, I have had abundance of evidence of its utility.

tions with the knife; but I wish to point out in what class of diseases, in what situations of disease, in what stages of disease, caustics are particularly indicated.

In most cases, where a cancerous tumour is circumscribed, moveable, and uncomplicated, where the integuments covering such tumours are healthy, or only very slightly diseased, where the malady springs from the bone or periosteum, or where these are more or less implicated, in diseases which are of a cystic character, or those again which are placed in the vicinity of, or immediately connected with, large blood-vessels, the knife is preferable. These remarks apply also with greater force if the disease is primary.

In open or ulcerated cancers, or cancroid growths generally, especially if situated on the skin, the lips, the tongue, or the uterus, where the patient appears sinking from the local symptoms of the disease, such as frequent hæmorrhages, profuse and fetid discharges, where also a great extent of surface is destroyed, caustics are generally preferable; and numerous cases of success might be quoted from my own practice, and from the authorities I have referred to in the course of this address, where caustics have brought about the cicatrization of cancerous ulcers, when all interference with the knife was utterly out of the question. I allude more especially to some of the details made by M. Maisonneuve at pages 57 and 58 of his Clinical Lectures on Cancerous Affections. Again, there are situations

where the knife cannot be used, where caustics find their application; in cancroid of the lips, the tongue, the fauces, and the uterus. I say, where the knife cannot be used — for, although it is common to use the knife in such cases and such situations, the mutilations (in the lower lip and tongue especially) are so frightful, the risk of return of disease in the cicatrix so great, and the probability of cure so remote and uncertain, though more especially in the tongue, that the remedy becomes here infinitely worse than the disease. In a Clinical Lecture, published in the course of last year in the "Association Journal," I had occasion to remark that caustics were inapplicable in the treatment of cancroid or cancer of the tongue. I have since learned that many caustics of the strongest character may be applied, with ordinary caution, to diseases being far back in the mouth, for I have treated several cases of cancer of the tongue with escharotics, without the least accident or evil consequences.

Caustics are again eminently useful in secondary cancerous formations. How frequently does it happen that when relapses or returns of disease take place after operations with the knife, that such relapses take place in the immediate vicinity of the part first removed, nay, most commonly in the cicatrix or track of the wound itself. Such secondary formations are generally closely watched, the patient is keenly alive to the probability and danger of such returns, and the first re-appearance of disease is at once detected;

very unlike the primary affection which, in many instances, steals on insidiously for a considerable period of time before the patient discovers its existence. It is to these secondary formations that caustic treatments are especially applicable.

In the first place, the patient is averse, in a great majority of instances, to further interference with the knife, and would frequently rather resign life than submit to more mutilation. In such conditions caustics are valuable agents, the secondary formation, at first small and circumscribed, can generally be completely destroyed by the application of one of the remedies I have mentioned; and very frequently after this second application, no other relapse may occur during long periods of time. I can call to mind two cases in which such results have taken place, and I can remember others which have terminated fatally, where, I believe, if I had been as fully aware of the advantages of caustic applications as I now am, life might have been saved, or, at least, indefinitely prolonged.

Further, all operative measures for the removal of cancers contemplate not only the destruction of the local disease, but, as far as may be, the protection of the patient against its return. In reference to this point, M. Velpeau remarks—"I have frequently employed caustics in the treatment of cancer, and I have frequently thought, I must confess, that they have more certainly prevented secondary cancerous affections in the neighbouring lymphatic glands than extirpation with the knife."—p. 659. "I have twice

seen," continues M. Velpeau, "voluminous and indurated glands in the axilla diminish in a remarkable degree, during the period I was destroying a cancer of the breast by caustics, and I have observed the same effect in the sub-maxillary glands, whilst cancers, or cancroid diseases of the lower lip, were treated in a similar manner. The action of caustics is chemical and destructive, and doubtless their action extends to some distance into the surrounding tissues beyond the exact line where their destructive agency is defined on the skin. This is extremely important. The celebrated Dutch histologist, Van der Kolk, remarks, "that through an interchange of materials between the cancer cells, and the fluid pervading the cellular tissue surrounding a cancerous tumour, the intercellular fluid, previously healthy, acquires the property of forming new cancer nuclei and cancer cells. On account of the minuteness of these nuclei and cells, their presence cannot be detected with the naked eye, so that the surrounding parts may appear to be perfectly healthy, notwithstanding that they contain the germs of the advancing formation of cancer. It is, therefore," continues this writer, "of importance in removing cancer by operation, not only to take away at the same time a large quantity of the adjacent sound part, but also to examine the innermost sectional edges with a powerful lens, in order to ascertain whether any trace of cancer or process of formation can be discovered in them."—"British and Foreign Medico-

Chirurgical Review. April, 1855."* This theory, doubtless, explains the reason of the frequent returns of cancerous tumours in the same situation, "sur place," but, again, the practical rules it suggests in reference to the operation of excision are all but impossible, in many instances, to be carried out. These opinions, again, seem to give force to the supposed curative effects of prolonged suppurations after operations for the removal of cancer, and these suppurations are much greater and longer continued after caustic than cutting operations. M. Delafond, on the same principle, in the celebrated discussion on cancer at the French Imperial Academy of Medicine, recommended that, after operations for cancer, the wound should be suffered to suppurate for a certain period of time, in order that any fresh formation of nuclei or cancer cells might be eliminated by this channel. Escharotics, again, chemically destroy the cancer cell, operations with the knife have no such effect, and if only one cell is left it may become the nucleus of a fresh growth. I think it may be argued, from what has been just said, that even after the excision of cancerous tumours, the attempt to heal wounds quickly by the first intention is not a satisfactory practice, and that healing by granulation, during which process prolonged suppuration must take place, is much more likely to guard the patient

---

* "De l'Extension des Cellules du Cancer aux Environs des Tumeurs Cancéreuses, &c., Archives Générales de Médecine. January 1856." A Translation of the original paper from "Henle's Journal."

against a return of the disease. M. Lebert, a great authority on cancer, speaks of what he terms a compound operation in the removal of cancerous and cancroid diseases, and this practice is evidently again a recognition of the principle I have just indicated, which shows that it is difficult and even impossible to remove the disease by excision ; and therefore he says, speaking of cancer of the skin, in which he not only sanctions, but recommends the employment of caustics—"The combination of excision and cauterisation frequently brings about results, which we obtain with difficulty by either method employed separately." What this means is clearly, that after the bulk of the disease has been removed by excision, the surface thus exposed is to be treated by escharotics, with a view of destroying the cancerous nuclei or cells, which may be infiltrated through, or in process of formation in the neighbouring or immediately surrounding tissues.

Having thus spoken generally of the application of caustics to cancroid or cancerous diseases, I may perhaps be permitted to direct your attention for a short time to some individual forms of disease in which caustic applications are especially indicated. I allude now more particularly to what is termed cancroid, or epithelial cancer of the lips, face, tongue, and some parts of the skin. In cancroid diseases of the lip, two modes of treatment only can possibly be adopted—excision and cauterisation. On this point, the partisans of excision recommend the knife to be carried well to the outside of the disease, so that the

whole of it may be removed. The cut edges are generally directed then to be brought well together by means of hare-lip pins, and the wound united by the first intention. After such operations relapses are most common. The relapse is the rule, the escape from it the exception; and this, doubtless, arises from the local circumstances that I have so often had occasion to allude to. Dr. Walshe says, p. 258, "It is a matter of common belief that the lip is one of the situations in which the excision of cancer may be undertaken with the strongest hopes of success; but," continues he, "there can be no question but that the prevalent notion on this point is an exaggerated one," and goes on curiously enough to say, "that those cases which have been quoted as cases of success, were syphilitic sores, which have been cut away as cancers." Dr. W. quotes the experience of Dupuytren and Velpeau on these points as very gloomy; he believes the return almost invariably takes place in three or four months. In many cases the disease is hastened in its progress by the use of the knife. "According to our doctrine of these diseases," says M. Lebert, "the relapses are to be operated upon quickly and largely;" and he goes on to say, "We have seen a cure effected after two or three operations." Most probably after the whole of the lip has been mutilated and cut away. In all operations on the lower lip, two things at once strike us: the deformity necessarily produced by the operation, and the almost positive certainty of relapse. We may, then, reasonably inquire: Are there no means

of curing or arresting the progress of disease without resorting to a remedy which is mutilating and uncertain in its effects? There is every reason to believe that caustics here find one of their most useful and legitimate applications. It is hardly to be supposed, when nearly the whole of the lower lip is one mass of induration, the upper surface of which is a ragged, cancerous ulcer, that much benefit is to be hoped from any kind of treatment; but from the knife, certainly not. Such forms of cancer, or cancroid of the lip, are clearly open to treatment by the use of caustics. I must say, that I have thus treated and cured several, if not many of such cases. What does M. Lebert say on this point? He makes use of some remarkable words: "We would wish, however," says he, "that caustics should still be tried in the earlier stages of cancer of the lip; for," continues he, "it cannot be concealed that after the best performed operations with the knife, the disease will sooner or later return in the cicatrix, or in its immediate neighbourhood." M. Lebert, in such states, gives the preference to the arsenical caustic of M. Manec, in fact, generally, M. Lebert, where he employs causstic at all, uses or recommends this remedy. M. Manec's form consists of one part of arsenious acid to seven or eight of cinnabar, and four of burnt sponge, made into a paste with a few drops of water. "Sceptical as I was," says M. Lebert, "generally as to the curative effects of caustics in cancroid, still I must bear witness to the great success which has been obtained by M. Manec

in the treatment of this disease by his arsenical paste." He also states that he never saw any poisonous effects follow the prudent use of this remedy. That alarming and fatal effects, however, have occasionally, but not often, followed the use of caustic arsenical pastes, is certain, and the only way to avoid such accidents is the application of the remedy in small quantities, and to a limited extent of surface. To cancerous diseases of the lip, however, caustic pastes are hardly applicable for any continued period of time, since it is hardly possible to prevent a portion of the paste thus employed from getting mixed with the saliva, and possibly swallowed. In such cases I have generally employed fluid caustics, applied daily by means of a camel-hair brush. In this way may be easily and safely used Llandolfi's caustic in a fluid state, or the chloride of zinc, dissolved in the chloride of bromine, or antimony, or in nitric acid.

The next local manifestation of cancer which I shall speak of is in the tongue. This is not the place, and it would be foreign to the object of this paper, to enter into any disquisition as to the difficulty of diagnosis in diseases of the tongue. I cannot here consider the question of differential diagnosis between cancerous, iodic, mercurial, syphilitic, or other diseases of the tongue. I have elsewhere considered this point. I assume, in what I have to say with regard to the effects of treatment, that the disease with which we have to do is purely of a cancerous nature. In fact, what I have to say with regard to this disease is rather of a negative than a positive

character, it goes rather to show the inefficacy of what has been done, than to point out the positive efficacy of what may be done; nevertheless, I think that the class of remedies under consideration offer some chance of palliation, if not of positive cure. "It has been the habit," says Dr. Walshe, "to consider the knife as positively indicated in cases of cancer of the tongue;" but he shows the fallacy of such a notion by a reference to the statements of Mr. Travers, Dr. Warren, and Mr. Cæsar Hawkins, the latter of whom says he never saw a single operation that was not followed shortly by a return of the disease. If cancer of the tongue is to be removed at all, it must be done on its very first appearance; and here the difficulty of diagnosis is so great that it is very probable a disease may be operated on which is not cancerous; in the advanced stages, the almost absolute certainty of a return of the disease in an aggravated form, and the horrible mutilation produced, should banish this operation, except in very exceptional cases, from the practice of surgery.* We know nothing positively of the effect of the application of caustics in cancerous diseases of the tongue; but, reasoning from analogy, and knowing the powerful effect some of these remedies have in modifying the surface of cancerous ulcers in other situations, there is ground for experi-

* Left to itself, cancer of the tongue, according to M. Lebert, p. 433, terminates fatally in twelve or sixteen months. If the operation be performed, and the part apparently completely removed, relapses occur at periods varying from three to six months, according to the same authority. He graphically speaks of the operation as an illusion, which does not long deceive the patient.—P. 433.

ment, and hope that some good may be done by these remedies, whilst at any rate we do not aggravate the sufferings and hasten the dissolution of the patient by their application. Where caustics are employed in such situations, the mouth should be kept well open, and the tongue drawn forward with a pair of forceps. In such cases I have used with safety the fluid caustics, that of Llandolfi in a fluid state, or a solution of chloride of zinc, in the chlorides of bromine or antimony, or in nitric acid. I need hardly say, the remedies should be applied in small quantities, and with great care.

Perhaps, however, in no form of cancroid disease have caustic remedies been more successful than in the corroding cancroid ulcer of the face or nose. Here, again, from obvious reasons, removal with the knife is difficult, if not, in many cases, actually impossible. M. Manec, of the Salpétrière Hospital, Paris, treats these diseases with the arsenical paste, which I have already mentioned, and with a great amount of success. Even M. Lebert, not, in general, a great lover or advocate of caustics, speaks highly and confidently of the result of M. Manec's operations with arsenical pastes. He especially alludes to the cases of three females (pp. 661, 664), who were cured, and solidly cured, to make use of his own expression, by this method; and what is still more remarkable, all these cases were sent to M. Manec by distinguished surgeons as incurable. Well may this writer say, in reference to such cases, "We see how difficult a matter it is to give a correct judgment in such cases,

and how necessary it is to free ourselves from all preconceived notions in the treatment of disease." It is exceedingly probable that the small extent of surface to which the arsenical paste of M. Manec must be applied in cancroid of the face, prevents any risk or fear from absorption, as I find no accident mentioned by M. Lebert as occurring in the cases which he had watched in M. Manec's practice, treated by the arsenical pastes. Nevertheless, these accidents have occurred to other surgeons, who have adopted and followed M. Manec's practice. ("Maisonneuve," p. 60.) M. Maisonneuve mentions several cases (p. 61), where the employ of Frère Côme's paste produced vomiting, precordial anxiety, and other symptoms, which were doubtless due to the absorption of arsenic, and which were removed by the topical application of the hydrated sesquioxide of iron. In other cases, local mischief followed the use of these pastes; an inflammatory swelling of the cheeks, eyelids, and lips, succeeded a very circumscribed application of F. Côme's paste to a cancroid ulcer of the nose.* These accidents would doubtless banish the use of arsenical pastes from the treatment of cancer, or, at any rate, render their employ a matter of extreme caution; but they are incontestably most valuable and certain remedies in the cure of cancroid diseases, and sometimes succeed after the failure of all other remedies. The case of Pope Gregory X. is quoted by M. Lebert, who was treated by M. Allertz, of

---

* Frère Côme's paste is much stronger than M. Manec's.

Aix-la-Chapelle, and who succeeded in curing the Pope of a cancer of the face by means of Frère Côme's paste, which had resisted all anterior treatments; and so permanent was the cure, that at his death, eight years after the cicatrisation of the ulcer, there had been no relapse, and the cure appeared to be quite perfect. Many cases of cure of cancerous or cancroid growths and ulcers by the local application of arsenic, after the failure of other escharotics, are on record; and this may probably be explained by the statement made by M. Manec, that the action of arsenic on cancerous tissue is not simply escharotic. This surgeon believes from his observation of the action of arsenic on cancer, that it has a peculiar destructive affinity for morbid growths of this character. "It is a remarkable fact," says he, "that this powerful remedy, which destroys thick morbid growths of compact structure, when applied in the same proportions to superficial corroding ulcers, only destroys the morbid growth; however thin it may be, its action does not extend to the healthy tissues." M. Manec directs that the arsenical paste, when employed in the treatment of cancer, should not be applied to a surface of greater extent than the size of a two-franc piece (about the size of the English florin) at each application; the quantity of arsenic absorbed from such a surface never produces unpleasant symptoms. M. Lebert says he never saw "serious symptoms follow the prudent application of Manec's arsenical paste." It produces, however, marked local effects, with which the generality of surgeons are

little acquainted. A few hours after its first application, a moderately severe pain is felt, and the neighbouring tissues swell and become inflamed; an erysipelatous blush surrounds the part: if the application is made on the face, the whole visage may assume a puffy appearance. These symptoms may remain for three or four days, and then gradually subside. The pain produced by the remedy may last longer, but this, I have shown, may be mitigated by the application from time to time of bladders containing ice and salt. The action of arsenic is not like that of other caustics, merely local; it pervades the whole system. Its presence, when applied in the form of paste to destroy a cancroid growth, may be detected in the urine in about twelve hours after its first application, and may continue to be detected during a period of eight or ten days; and it is not till it has totally disappeared from the urine prudent to reapply the paste, supposing a second application should become necessary. Thus any cumulative injurious effect of the remedy is entirely prevented. There are several formulæ extant for the preparation of arsenical pastes; I may especially mention those bearing the names of Frère Côme and Dupuytren. The latter, consisting of 2 parts of arsenious acid, and 200 parts of calomel, is generally too feeble as a destructive agent.* In fact, the form of Manec is the

---

* Dupuytren varied these proportions. The late Mr. Sam. Cooper said, 4 parts of arsenious acid, and 96 of calomel. The latter employed it with complete success. — "Surgical Dictionary." Article, Arsenic.

safest and the best, and the only one that ought to be employed, and may be used, with the precautions to which I have alluded, with advantage and safety. In speaking of the effects of arsenic, M. Velpeau makes use of these remarkable expressions: "Two of the properties attributed to it," says he, "render its use preferable to that of all other remedies, supposing that such attributes are found correct. 1st. If it could be demonstrated, as asserted by M. Manec, that its destructive action is concentrated on the abnormal or morbid tissues only, it must be the most precious of all caustics. And 2nd. If, when mixed with the blood, by absorption, as proved by its presence in the urine, it still preserved this elective action for the destruction of morbid cancerous tissues, would it not, by thus decomposing or destroying the ultimate molecules of the disease, thus place the patient out of the fear of future relapses?" Here in fact is the whole point on which the treatment of cancer hangs; it is not the extermination or destruction of the malady locally, which is so much the question, as the prevention of its reappearance. If this is ever to be done, it must and will be done by the action of chemical remedies on cancerous growths, and the subsequent mixture, by absorption, of these remedies with the blood; much has been proved in this respect, in reference to arsenic, for M. Lebert tells us that he carefully watched some of Manec's cases for several years, with this view, but no relapse took place. I must quote another passage from M. Velpeau, and one from Sir A.

Cooper in support of this opinion. The former says, "It is not impossible that the potential caustics may determine in the surrounding tissues an important modification, and it is equally not impossible that they may consequently better prevent the extension or return of the cancerous principle than excision. Again, as they do not so much as cutting operations place the life of the patient in danger, I am far from rejecting their employ."—p. 676.

In speaking of the almost always unsuccessful termination of operations for the removal of medullary or fungoid disease of the testis, Sir A. Cooper said, "It behoves medical men to direct their minds to the trial of the numerous agents which chemistry and botany have of late so abundantly discovered and simplified" (p. 196); "and again, if the operation be performed for this disease, the surgeon should never trust solely to the removal of the complaint with the knife, but he must endeavour to alter the constitution which has not only led to the complaint, but will surely regenerate it, if it remain unchanged."—p. 199.

I have now, Mr. President, occupied the attention of this meeting as long as custom allows for the duration of this annual address: and I hope I may not have wearied my auditors by dry, but certainly important details. I have opened a subject, in some measure, new to English surgical practice. When we consider the vast number of cases of cancerous and cancroid diseases which annually destroy life;

when we reflect, for a moment, on the absolute failure of the present surgical means and appliances of giving even relief, in a great number of these cases, I do not think you will accuse me of wasting your time in drawing your attention to what has been done by potential countries in the attempts to cure or suspend the ravages of cancerous and cancroid growths. Amongst the many caustics to which I have alluded, some are of more approved use than others, and perhaps those on which most reliance is to be placed are the chloride of zinc and arsenical pastes; these preparations, though not actually new, are, to a certain extent, modern in their present mode of application; the chloride of zinc, as used by M. Canquoin, and the arsenical paste, as modified by M. Manec. Perhaps one or other of these will do all that remedies of this class can accomplish, and they are easily managed and applied. I have carefully, in this address, alluded to all the sources of information which have been personally consulted by myself, and I have done this, that others, wishing to follow out any of the plans I have mentioned, may draw at large from the original works I have alluded to. I must declare that I esteem very highly the class of remedies I have been considering, and I think many lives may be saved, and will be saved by their judicious employ. I have used these remedies in many cases with a gratifying and encouraging amount of success. They can be used where the knife cannot, and in relapsed cancer they are especially serviceable.

Should my attempts to point out what has been done in this branch of surgical inquiry be the means of diminishing human suffering, or of saving or prolonging one single life, the time devoted to the composition of this address will not have been idly spent, and I confidently hope that yours in listening to it will not have been altogether thrown away.

THE END.