Our present means of successfully treating or alleviating cancer and tumours of the breast, tongue, lip, face, skin, etc. : to which is added a short, practical, and systematic description of the principal varieties of this disease / by Alexander Marsden.

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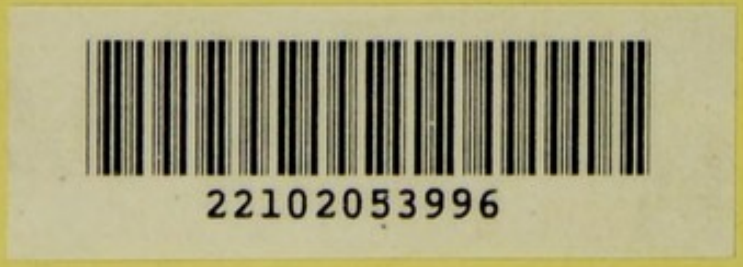
CANCER & TUMOURS.

BY

ALEXANDER MARSDEN



OUR PRESENT MEANS OF

SUCCESSFULLY TREATING OR ALLEVIATING

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OF THE

BREAST, TONGUE, LIP, FACE, SKIN, Etc.

TO WHICH IS ADDED

A SHORT, PRACTICAL, AND SYSTEMATIC DESCRIPTION OF THE PRINCIPAL VARIETIES OF THIS DISEASE.

BY

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So many new medicines and methods of treatment are from time to time introduced and extolled as curing Cancer and Tumours, that sufferers are often either so bewildered by enthusiasts or deceived by charlatans that they know not what to do. The following pages, it is hoped, may to some extent relieve them in their dilemma, and be the means of saving many from terrible disappointment or weeks of useless torture.

45, Seymour Street,
Portman Square, W.

March, 1889.

THE

TREATMENT OF CANCER AND TUMOURS.

THE treatment of Cancer, formerly considered hopeless, has during the last few years undergone a great variety of changes, and in the earlier stage may now not unfrequently be as successfully attacked as almost any other disease. By the term "earlier stage" I do not mean while the tumour is necessarily small, for we may be equally successful with tumours of very large size, but that the disease is still in a condition amenable to active treatment, and has not become constitutional.

My experience, now extending over a considerable number of years, leads me to the general conclusion that Cancer is, primarily, local. The opinions, however, of eminent pathologists and surgeons who have made a study of this terrible disease, differ greatly on this point, but the weight of evidence, I think, inclines to my view, and is further confirmed by my observations at the Cancer Hospital and in private practice. For example, cancer of the lips, breast, tongue, and skin, is, in the greater number of recorded cases, caused by some local irritation; consequently, I do not classify such cases under the description "hereditary," yet there are exceptions, and a predisposing cause must, I believe, exist.

Bryant in his "Practical Surgery" (1884), vol. i., p. 180,

states that Sir J. Paget found the number of cases arising from hereditary influence averaged one in three ; Sibley, one in nine ; and that his (Bryant's) was one in ten (in 222 cases) ; my own experience is also one in nine ; Cancer Hospital, one in ten. These averages show that the disease is not more hereditary than any other to which we are liable.

The wisest and best course to pursue in a large number of cancer cases, and also of other tumours, is to leave them alone ; in cancer it is most desirable to induce and encourage the disease to become atrophic, a term applied to tumours wasting from want of nourishment, for when in this state even cancerous tumours may, and often do, remain for years inactive and dormant, giving rise to little or no suffering, and but a trifling amount of inconvenience ; on the other hand, by injudicious interference, great activity may be set up, and the growth and development of the disease accelerated. Great injury is often done by the use of strong and stimulating pastes, ointments, and liniments, such as iodine, acids, &c., and few persons escape such treatment during the earlier course of the disease.

It is necessary that any one suffering from cancer should clearly know that the absolute and complete removal of the disease is the only way by which a healthy condition of the part affected can be restored ; non-malignant tumours may yield to other means, but cancer, I believe, never. Therefore, the question to be answered is, which is the most certain and least painful method of effecting this ? Many different plans have been recommended for this purpose. Among others may be mentioned, caustic of arsenic, the acids, chloride of zinc, gold, bromine, manganese, antimony, sanguinaria Canadensis, potash, the Vienna caustic, &c., excision by the knife, the galvanic ecraseur, the wire or chain ecraseur, ligature electrolosis, the actual and thermal cautery, the Michel process, and the Mattaie treatment. The following preparations have also at some time or other been believed

in as internal remedies:—Cod-liver oil, mercury in various forms, iodine, iodide of potassium, bark, soda, potash, sarsaparilla, opium, morphia, nitrate of silver, belladonna, camphor, guacho, Chian turpentine, &c.

The Missisoqoi Water was at one time most highly extolled as possessing a wonderfully curative power in this disease. After a long and careful trial of it I can only say that in my opinion it is absolutely useless for this purpose. The same must be said of hydrastes, guaco, chilidonium, sanguinaria, alveloz, Sutherlandia, and melianthus major.

I will now pass under review the various plans of treatment available to the surgeon, and also those that are worthless, and will then briefly sketch out the different forms of the disease to which each is more particularly adapted.

THE VARIOUS MODES OF TREATING THE DISEASE.

I. By Absorption (locally applied); Injections into the Tumour, &c.

II. By Medicines calculated to act on the disease taken internally (absorbents, &c.).

III. By Local Application, viz., pressure, ice, &c.; pastes, ointments, plasters, liniments, &c.

IV. By Non-active Treatment and Careful Watching.

THE VARIOUS MODES OF REMOVING THE DISEASE.

(1.) By the Application of Caustics and Escharotics, in the form of pastes, ointments, Michel's process, &c.

(2.) By the Electrolytic Treatment.

(3.) By the Actual Cautery, the Thermal Cautery, the Galvanic Ecraseur.

(4.) By Ligature of Wire, Silk, Catgut, or Indiarubber, the Ecraseur.

(5.) By Excision.

Each one of these plans I have repeatedly tried myself, and also seen them used by many other surgeons. The views, therefore, which I take are founded on actual and most extensive experience; during the last twenty-five years upwards of fifteen thousand cases having been under my own care or observation.

THE VARIOUS MODES OF TREATING THE DISEASE.

I. By Absorption (locally applied). Many have strongly recommended this plan, and could it only be accomplished it would undoubtedly be most satisfactory. Such, however, is not the case in cancer. Acetic acid and other chemicals have been injected into the disease, but the result has been to do more harm than good. Certain forms of non-malignant tumour will yield to local application and constitutional remedies, but not so in cancer.

II. By Medicines, calculated to act on the disease, taken internally (absorbent, &c.). But little, I regret to say, can be done in this way. From time to time various drugs, minerals, and chemicals have been recommended, and turned out a nine days' wonder; but the cases in which any of them have proved of real benefit are few and of doubtful character. The alkalies, such as soda, potash, and the iodide and bromide of potassium, are those in which I place most faith, and in certain conditions the administration of these alone, or combined with tonics, &c., is attended with benefit; indeed, I may go so far as to say that I have frequently seen such to be the case.

Some eight years ago special attention was directed to Chian turpentine as a drug possessing the power of curing, or at least powerfully arresting, the growth of cancer. This drug has been known for centuries, but until recently little used. It is obtained from the Pistacia terebinthinus, a native of the southern part of Europe and the northern part of Africa, which yields a resinous liquid exudation known as Chian turpentine. This turpentine receives its name on account of being collected on the island of Chio or Scio, where the tree thrives and attains a height of 30 to 35 feet. By incision each tree yields about ten ounces of turpentine, which thickens on exposure to the air.

Most wholesale druggists had had a small stock by them for some years, and it was cheap enough; but since Professor Clay recommended its use in cancer the price rapidly rose, and innumerable impure specimens were sold. I had a large number of samples submitted to me, some undoubtedly the genuine article. I used it very extensively, and saw many cases so treated by others, and in nearly all forms of cancerous disease. It makes a fairly agreeable emulsion, and is readily formed into pills. It did not disagree with the stomach, except in a few cases out of a large number; only one or two patients objected to it, and some after taking it a

few days remarked that they felt less pain, but this relief did not continue; and the same statement is commonly enough made after almost any change of treatment. Others thought the disease less; I hoped so myself. Such, however, was not the fact, and I was compelled most reluctantly to admit that in no case was it of any service. I am now quite convinced that Chian turpentine has no power of arresting cancer, but for those who may wish to try it in cases that have proved not amenable to any other treatment, I give the following tests for ascertaining the purity of the drug recommended by Professor Clay in his own words, taken from the *Lancet* of May 15, 1880:—

"Knowing the difficulty of procuring the Chian turpentine genuine, I relied in the first instance upon the characters given in Watts's 'Chemistry,' vol. v., page 920, as tests of its purity. The drug I used was many years old, and agreed with the following description given by Watts: 'Yellowish-green, has an odour of fennel and elemi, and an aromatic taste like that of mastic. It dissolves completely in ether, and partially in alcohol, leaving a glutinous residue.' Subsequently I procured Flückiger's and Hanbury's Pharmacographia, from which I give their excellent description of the drug: 'Chian turpentine as found in commerce and believed to be genuine, is a soft solid, becoming brittle by exposure to the air; viewed in mass it appears opaque, and of a dull brown hue. If pressed while warm between two slips of glass it is seen to be transparent, of a yellowish-brown, and much contaminated by various impurities in a state of fine division. It has an agreeable, mild, terebinthinous odour, and very little taste. The whitish powder with which old Chian turpentine becomes covered shows no trace of crystalline structure when examined under the microscope.'

"The specimens I used corresponded in every particular with these two descriptions, but it may be useful to describe more in detail some of the properties above mentioned.

"The pure drug is of such a solid nature that a portion taken between the fingers may be rolled into the form of a pill without adhering to the fingers; thus it is very different from the large number of spurious specimens which have been supplied to the public, and which for the most part have been of a syrupy consistence. The odour of the genuine drug is peculiar. If a portion be softened between the fingers the fragrant odour can be readily perceived, and it is not by any means similar to that of turpentine oil, whilst the spurious kinds smell strongly of the latter substance. The taste of the pure article is characteristic in not being unpleasant. Indeed, it is almost tasteless; I have kept a piece in my mouth for two hours and scarcely knew that it was there. The taste of most of the spurious kinds is very bitter, and so unpleasant that I now rarely adopt the above-mentioned mode of testing the drug. The brittle yet elastic nature of the pure drug is very striking. If a piece is warmed and rolled out, and is allowed to cool, and is then dropped on the floor, it generally breaks into a number of fragments. If a mass is placed in a shallow vessel it usually flattens and spreads over the vessel, the surface being smooth. When the pure drug is placed between two pieces of warmed glass its appearance corresponds exactly with that given in the Pharmacographia. It is best to take a piece of glass, warm it very slightly with a piece of lighted paper, clean it, and then place the drug to be examined upon it; then cover the drug with another piece of glass, and allow both to cool; then by holding the double glass up to the light the characters are readily distinguished. If the drug is spurious, consisting perhaps of strained crude turpentine or Venice turpentine, and so placed between warm glass, it will present the appearance almost of water. If Chian turpentine is adulterated with Canada balsam, on a gentle heat being applied to the glass on which it is applied the Chian turpentine remains in the centre and the balsam flows over the

glass, the reason being that the former requires a little stronger heat to liquefy it. If black resin is mixed with Venice turpentine, to make the specimens resemble the impurities of the real article, the compound is of a syrupy consistence only, and on heating the mass sufficiently between two glasses the resin is melted, so that the apparent impurities which it presented disappear, while these remain permanent in the genuine drug. Canada balsam when heated becomes transparent, and perhaps more so if the heating is repeated, and the smell is of a well-marked sickly odour. If the spurious kind consist largely of resin, and a piece is put on a spatula and a lighted taper applied to it, the characteristic resinous odour is at once obtained.

"The taste, odour, and appearance, then, are the chief characteristics of the drug. If it has a bitter taste it is not pure; if it has not much taste, as a mixture of resin and Canada balsam, on burning the mass a peculiar odour will reveal its impurity. If the mass does not dissolve in alcohol, but leaves a glutinous residue, then, all other things being equal, it is pure. If it is of a greyish-white, or black colour even, mixed with impurities, and of a syrupy consistence, it will have a strong smell of turpentine, and is not pure. I enclose you some specimens of the pure and of the impure drug for your inspection."

The Mattaie treatment has, I believe, no power of either arresting or curing cancer.

III. By Local Applications. These are most useful in the treatment of this disease if judiciously employed, but nothing can be more dangerous and hurtful than the application of strong liniments such as iodine, &c., to cancerous tumours. They invariably do harm, yet I am sorry to say are very commonly resorted to and recommended by medical men. The plan of treatment by pressure cannot be too strongly condemned. To an inexperienced person at first it may seem to be doing good, but in truth it is only forcing the

disease out of sight and deeper into the subjacent tissues and greatly aggravating its intensity. The application of cold as a palliative remedy and to allay pain is often beneficial, but the constant use of ice with the view of actually freezing the cancer away is decidedly bad treatment. Very small tumours may be got rid of in this way, but there are much better plans.

IV. By careful watching and non-active treatment. In many forms of cancerous disease and non-malignant tumours also, such a course as this is most judicious. (See observation, page 6).

MODES OF REMOVING THE DISEASE.

1. The application of Caustics in the form of pastes, ointments, &c.—There are a great number of these that will most effectually remove cancerous and other tumours. The process is slow, often very painful, and is only applicable to cases of small extent. The particular caustic that I have used for the last eighteen or twenty years is the arsenical mucilage. With this tumours and epithelial growths on the lips and other parts (if not of greater size than an inch or an inch and a half in diameter) may be destroyed in a few days, with but little pain and the most satisfactory results. There are also the Vienna caustic ; sulphuric, nitric, and various acids, applied alone or made into a paste with asbestos or other things.

The Michel process is a paste of sulphuric acid and asbestos. Pattison's paste, chloride of zinc mixed with flour —an excellent caustic in suitable small cases. Fell's paste, in which the chloride of zinc is the active ingredient, the sanguinaria Canadensis being of no importance. Landolfi's

paste, chloride of antimony, bromine, gold, and zinc. The Vienna caustic, caustic, potash, and lime. Dupuytren's arsenic and sub-chloride of mercury. Dr. Bougard's paste is made according to the following directions :—

	Grammes.
Wheat flour	60
Starch	60
Arsenic	1
Cinnabar	5
Sal ammoniac	5
Corrosive sublimate	0·50
Solution of chloride of zinc at 52°	245

The first six substances are separately ground and reduced to fine powder ; they are then mixed in a mortar of glass or china, and the solution of chloride of zinc is slowly poured in, while the contents are kept rapidly moved with the pestle so that no lumps shall be formed. The soft homogeneous mass which is formed is poured into an earthen pot with a cover, in which it may be kept for several months without deterioration. Vienna caustic is used to break the skin. The paste is applied daily, or in the case of an old or delicate person, every other day. Poultices are used between the applications, and before fresh paste is used the skin is incised all round at a distance of an inch or less from the sound skin, and the dead tissue is raised and removed.

Each and all of these will destroy small tumours, but if used to those of a larger size cause the most horrible sufferings that can be conceived, lasting for many weeks or even months. The advocates of these caustics have greatly exaggerated their value, and I repeat that they must only be used in very small cases, for if applied to larger growths they will not eradicate the disease, but seriously impair the health of the patient.

It is on these caustics and caustic pastes that the charlatan

relies, and pretends to be able to remove the most formidable tumours. Nothing of the kind can be done; and in really bad cases their use generally destroys the patient, but never cures the disease. I am sorry to say some of these men will actually burn out a healthy breast and show the slough that they have themselves made for the cancer pretended to have been removed. When I say healthy, I mean subject only to some slight temporary ailment, such as induration of the milk ducts,—simple hypertrophy or irritable breast. Yet it is these victims that make the charlatan's fortune, for believing they have been cured of cancer they naturally spread the fame or rather notoriety of these men, and thus the very cases that should disgrace them and expose their wickedness, are the false lights with which they decoy others to destruction.

2. The Electrolytic Treatment (Electrolysis).—This plan of destroying cancerous and other tumours has been, and is still, strongly recommended. All I need say, however, of this system is that it has so many drawbacks, and is so inferior to other plans, that it should never be adopted. The results are very unsatisfactory.

3. By the Actual Cautery, the Thermal Cautery, the Galvanic Ecraseur.—The use of the cautery, either the actual or the thermal, is a most effectual way of destroying cancerous and other tumours. Ether or chloroform must be administered or cocaine used at the time of the application. It is particularly valuable in some forms of cancerous ulceration and lupus, and actually causes little or no pain; indeed, when the disease is painful it is a great source of relief. An old medical man, afflicted with cancerous sores of large size, situated on the chest, back, neck, abdomen, &c., past all hope of cure when I first saw him, I treated in this way, and kept him alive and comparatively out of pain for many years. He first contracted the disease in Mexico, where he had practised for a long

time, and had been suffering from it about twelve years when he sought my advice. At this time the sores were excruciatingly painful, and projected from the surface, so that his clothes pressed on them, in spite of various contrivances to which he had resorted. I was soon able to get them all quite flat, and by the occasional use of the cautery kept them so. He was so pleased with the relief afforded that each fresh application was made at his own request; of course other treatment was adopted during the intervals, and he was able to wear his clothes in comfort. The galvanic ecraseur is a most valuable instrument for removing pendulous tumours and for operating on the tongue. I have used it very largely, and with the most satisfactory results. Cancer of the tongue, once the most terrible situation of this disease, is no longer so. In cases not too far advanced permanent cure may sometimes be effected. I know one lady, in whom the disease had involved almost the entire tongue, and who was apparently at the point of death from starvation, pain, and exhaustion, on whom, as a last hope, I operated some eighteen years ago. So bad was the case that I feared she would die under the operation, and I only consented to do it at the urgent entreaty of herself and husband. I am gratified in receiving from him a letter on each anniversary stating that she continues well; indeed, she has enjoyed better health since the operation than for some time previously.

4. By Ligature of Wire, Silk, Catgut, Indiarubber, the Ecraseur.—Each of these methods may properly be resorted to in certain cases with satisfactory results, particularly when patients have a decided objection to the removal of their disease by excision.

5. By Excision.—There is no operation which is performed by surgeons that has been more greatly improved upon than that for the removal of cancerous and other tumours, whether situated in the breast, lips, tongue, or on any other part of

the body. When I first directed my attention to the study of this disease,—now thirty years ago,—there was a great deal of uncertainty as to the best method of its treatment, and the various plans adopted for its removal were unscientific and rude in comparison to those now employed, and moreover gave rise to a considerable amount of pain; but during the last ten or fifteen years all this has been changed, and what was formerly a very serious, painful, and unsatisfactory proceeding is now one of the safest and most perfect of our surgical triumphs. The greatest strides have been made as recently as the last few years, and new instruments and appliances have been devised, in many cases superseding the knife; but in all, the operations may be regarded as almost painless (in most quite so), except when escharotics are injudiciously applied.

Some important Points in Relation to the Removal of Cancerous Tumour of the Breast and other parts, Antiseptics, Spray, etc.

When Professor Lister, some years since, introduced his system of antiseptics and spray, the method was pretty generally adopted by most operating surgeons. There can be little doubt that cases so operated on generally heal more rapidly and with greater certainty than in those not so treated, and when carefully done the formation of pus is rare; but I have often had and also seen quite as rapid healing when pure water has been the only antiseptic employed; this result, however, is not so certain. In malignant cases, a doubt arises as to whether this rapid healing is an advantage, and long experience leads me to the conclusion that in many instances it is not. In such cases, which are common enough, we

get great credit for our work, and the patient is delighted; but, on the other hand, I believe a certain amount of suppuration and a small discharge from the wound for some time is very desirable, and tends greatly to retard or prevent the return of the disease. When, therefore, healing takes place by the first intention, which I think it is of advantage to promote, if it can be done without putting much strain on the skin, the drainage tube becomes all important, and, in my opinion, should rarely be removed under a week, and may sometimes be retained much longer with advantage. One or two dozen strands of prepared horsehair may be used for this purpose, and run the entire length of the wound, projecting two or three inches at each end. The india-rubber drainage tube is not so effective, as it only passes through the wound in one place, and in case of oozing or small after-hæmorrhage it prevents pressure being easily applied; the horsehair, on the contrary, permits of this, and, by spreading out, more effectually drains all parts of the wound. Either, should be freely moved whenever we dress the sore, and I frequently find it desirable to syringe with pure water, or a weak solution of carbolic acid, or with S.V.R. and water, of various strengths, according to circumstances. When it is wished to heal rapidly by the first intention, it is, of course, of paramount importance that the edges of the wound should be in exact apposition, and no part of the edge inverted or everted. For operations on the breast horsehair sutures are preferable to all others. In a young or middle-aged patient the interrupted suture should be used, and in many cases a thin line can only be seen a few months after. In elderly persons the continuous suture answers very well indeed. In small cases the sutures may be removed in three or four days, but in larger ones they may be left ten or more. A great many plans have been devised, and papers written on the best means, of bringing the edges of wounds together. Where this cannot be done

without more or less tension on the skin, by reason of the amount removed, many of these plans will accomplish this object; nevertheless, in my opinion, should rarely be adopted, especially in breast cases. Whenever the skin will not meet easily over the wound without stretching, at once give up the attempt, and simply bring the edges as near as they will easily come. There are two grave reasons for this mode of procedure, which are too often overlooked: the first being that nothing tends more to promote a return of the disease than a tight and unyielding cicatrix; the second, that the free motion of the arm is seriously interfered with, as also is respiration. It is not an uncommon circumstance to see a surgeon taking the greatest pains and trouble to stretch an insufficient amount of skin over the wound; he could not be worse employed. A very large gap may be left when necessary, and is by far the best treatment. One important exception to this rule is found in the lips, particularly the lower; there we are often compelled to remove a large amount, and on bringing the divided edges together to find the lip very much strained over the teeth, in fact, too short. This often cannot be avoided, but, fortunately, with time the lip will almost entirely recover its natural length, and I know of many such cases proving permanent cures. Before bringing the edges of a wound together, it is customary and proper to well cleanse the surface, and for this purpose hot, cold, or tepid water are used, as also solutions of various kinds. Among others may be mentioned, chloride of zinc, gr. xx. to water ℥i; carbolic acid, one in twenty of water, or weaker; thymol, 1 in 1,000; corrosive sublimate, 1 in 1,000; sulphurous acid, 1 in 20, &c.

I prefer hot water, and believe the best results follow its use. When sutures are used the line of union should be covered with green prepared protective, over which may be placed carbolised gauze or wood wool, held in place by two or more gauze bandages. Many surgeons remove these

dressings the next day, but if no discharge of blood or serum takes place, this need not be done for many days. In cases where the edges cannot be brought together the whole wound should be covered in by strips of plaister from ¾ to 1½ inches wide, overlapping each other a little; by this means we can draw the wound into the smallest compass. No rule can be laid down as to how frequently these plaisters should be changed; sometimes I do so daily, at others every second, third, or even fourth day, but in all cases the wound should never be allowed to get foul, and the most scrupulous cleanliness should be observed. Cleanliness, water, and pure air are still the best antiseptics; but we are at times called on to perform operations in houses where some or all of these cannot be obtained; it is then that Lister's process should always be used, and becomes invaluable.

It is now the common practice to remove the whole mamma, even when operating on small tumours only, and also to clear out the axilla. With each of these plans I differ. In some cases, and they are not few, it is as safe, indeed safer, to remove the tumour only, and to leave the axilla alone. These observations apply to the neighbouring glands in other parts. The following is a case in point. Some years since I performed a very serious special operation on a gentleman, the glands in the groin being a mass of disease, and their removal would have been a dangerous operation. I amputated the primary disease only, and he is alive and well now. Of course there are a large number of cases in which it is desirable to clear out the axilla, but it should not be made an invariable rule, for interference here, and in the groin, frequently leads to serious consequences affecting the arm or leg. It would be impossible to lay down any rules as to when one course should be adopted in preference to the other; experience in these matters can alone guide us. The operations on the tongue for

cancer are, as a rule, in proper cases, most satisfactory; viz., those in which the disease is not too far advanced, or too far back, and in which there are no other complications, such as implication of the neighbouring glands, fauces, or floor of the mouth. When this is the case operation is almost always unsuccessful, and the disease rapidly returns; as a palliative measure it may sometimes be done with advantage, but not often; ordinarily, the patient will live longer and suffer less without operation. Scirrhus or epithelioma confined to the anterior two-thirds of the tongue (without complications) are removed successfully, even when the whole anterior part of the tongue is one mass of disease; the cure is also very rapid and may be permanent. One of the worst cases of this character I ever did (fifteen years ago) is alive and well now. A great number of ingenious methods of removing the whole tongue, root, hyoid bone, and even more, have been recommended and adopted, but when the disease extends beyond that portion of the tongue which can be seen on looking into the mouth the results are generally most unsatisfactory. The patient may rapidly recover, but the disease returns worse than ever. In small cases a pair of well-curved scissors will answer the purpose admirably, but if it is found necessary to remove a large portion of the tongue I still prefer the galvanic écraseur to all other instruments. Passed through the floor of the mouth the whole of the tongue can be removed that lies in the mouth, and more is not often taken away with advantage. The operation is performed without loss of blood, and I have not (as some surgeons have) found secondary hæmorrhage, as a rule, follow. When cancer of the tongue is hard, and as large as a hazel nut, it is much safer to remove all the organ anterior to a line drawn half an inch or more behind the disease, right across the tongue, than to content ourselves with taking away the diseased part only, and a return is much less likely. Patients can speak

fairly well after the loss of the whole tongue, whereas they are frequently quite unable to do so with the diseased organ in the mouth.

In this pamphlet it is not my intention to discuss at any length the more heroic operations, such as abdominal section, removal of the uterus, &c. Such operations are, no doubt, at times, justifiable, and even to be recommended, but this is only rarely the case, and a palliative treatment is usually to be preferred. If it is pretty clear that by operating we can (even at considerable risk) relieve a patient from acute suffering, or prolong life with comfort—the patient being desirous and knowing what we intend doing—we ought not to shrink from performing such operations, but they should not be lightly undertaken, and every known precaution should be adopted to ensure a successful result; otherwise we are likely to be doing more harm than good.

Hitherto, extirpation of the uterus has not proved so successful as to warrant our recommending the operation, except in extreme cases, for when the disease is confined to the os and cervix other plans are preferable, and patients may often be kept alive and fairly well for years; and when the disease has invaded the whole organ it is almost certain there will be adhesions and complications rendering the operation difficult and dangerous, without much hope of benefit. In these formidable operations, such as advanced tongue, breast, and uterine cases, &c., a favourable report is often made of the operation a short time after it is performed; such reports are most misleading, and could we see the sufferer, say six months later, the probability is, that the patient's condition would be worse than before the operation, if not already released by death.

The fact is, far too many operations are now performed, and the very unfavourable results often obtained are bringing about a great want of faith in operations for cancer, not only

in the mind of the public but also in that of local practitioners. Unfortunately we rarely get as much credit for saving a leg, arm, or other part, as we do for an operation, although the former is a much more creditable achievement than the latter, even if successful.

A surgeon cannot be too conscientious when inclined to operate, and before doing so we should always ask ourselves the question: Would I be operated on were I in the condition of this patient? and if we cannot answer in the affirmative, do not attempt it. Were this very simple rule always followed, fewer operations would be performed, but with much better results.

Tumours of the breast (cancerous or otherwise) of very large size may be removed, whether ulcerated or not, with perfect safety and success, particularly so if they are not firmly attached; but when the disease ramifies over a large surface, lying close to the subjacent tissues, operation is not advisable, except to remove prominent or very troublesome portions, as a palliative measure. In this way great good may be effected, and life greatly prolonged. In cases where operation is clearly indicated, we need not be deterred by age. I have removed many breast tumours from persons above seventy, and in one instance I successfully extirpated a very large cancerous mass from a lady eighty years of age.

Taking the ordinary run of cancer operations they may be said to be perfectly safe. In my own practice I have not lost a single case during the thirty years I have practised. In two, death took place within a month; in the first from pneumonia induced by a sudden but prolonged and very severe fall in the temperature to many degrees below freezing, and in the second to a man simply drinking himself to death, after I had given up charge of the case, but I cannot regard either of these as due to operation. I have performed

probably 1,200 such operations, and among them were many very large breast cases, bad tongue cases, those of the special organs, face, lip, a malignant tumour from the arm 15 lb. weight, &c., and some of the worst were done on old people. I have known the mortality to amount to 20 per cent. from operating indiscriminately on unsuitable cases. Butlin, in his "Operative Surgery of Malignant Disease (1887)," takes 605 cases operated on by five different surgeons: of these ninety-six died from causes which might be referred to the operation more or less directly. Two or three having died of bronchitis, which, like my own case, was not directly produced by the operation, but which might never have occurred, or, at least, not in a fatal form, had it not been for the operation. Taking all the fatal cases it is nearly one in six, or 15·85 per cent. He also gives, from Mr. Watson Cheyne's "Antiseptic Surgery," Lister's death-rate, as follows:—Between 1871 and 1877, in thirty-seven excisions of the breast antiseptically performed there were two deaths, one from septicæmia occurring after the removal of a very large portion of skin and the whole contents of the axilla. The other patient died of erysipelas. Between 1877 and 1880, in sixteen excisions of the breast and axilla, there were two deaths; both operations were very extensive, and both patients died from shock within thirty-six hours. The general average death-rate in *well*-selected breast cases seems to be about 3 to 5 per cent. I think it should not average more than one in 400 or 500; and if it does so, it is, I believe, from causes that should be within our control. When the disease is deeply seated and extensive,—of the tongue and mouth, of the triangles of the neck, or in tedious and extensive removals of disease from over the thorax and axilla, extirpation of the uterus for malignant disease, and abdominal sections generally,—we must expect a rather high death-rate, particularly so if every

known precaution is not taken both at the time and after. Colotomy is now very successfully performed, and in some cases of cancer of the rectum is a great relief. Near the superior spinous process of the ilium is the spot recommended by many experienced in these cases, as it is far more convenient to the patient than in the left lumbar region, the place advocated by others.

CANCER AND ITS VARIETIES.

THE following is a brief sketch of the principal forms of this disease. We may divide, sub-divide, and name to any extent, but for all practical purposes the table below will be found sufficient. I divide Cancer into five Orders, and some of these present several varieties. Thus:—

ORDER I. Scirrhus.

Varieties.—1. Ligneous Scirrhus, globular.
2. „ „ radiated or branched.
3. „ „ *en masse.*
4. „ „ cuirass-formed.
5. „ „ atrophic.
6. Lardaceous „
7. „ „ cavernous.

ORDER II. Medullary.

Varieties.—1. Fungoid.
2. Lardaceous.

ORDER III.—Epithelial.

Varieties.—1. Hard Epithelial.
2. Soft
3. Surface „
4. Deep „
5. Warty „
6. Pedunculated „

ORDER IV. Melanotic.

ORDER V. Cystic or Colloid.

Varieties.—1. Cystic or colloid, in combination with scirrhus or medullary cancer.

2. Cystic or colloid, in combination with adenoids, &c. (not cancerous).

3. Cysts, or colloid matter alone (not cancerous.)

Besides these there is a disease, although strictly speaking not cancerous, viz., lupus (rodent ulcer), almost as malignant and destructive. Tumours are also met with which cannot be classed under any particular head, many not being malignant, others running from one variety to another, or exhibiting the characteristics of even two or more at the same time.

Cancer attacks females in preference to males, in the ratio of about five to one,—scirrhus being the most frequent enemy of the former, epithelial of the latter; each sex is also more liable to the disease in one region than another.

I shall now proceed to inquire into the peculiarities and distinctive features each order presents, the first being

Scirrhus or Hard Cancer, the varieties of which are as follows :—

Varieties.—1. Ligneous Scirrhus, globular.
2. „ „ radiated or branched.
3. „ „ *en masse.*
4. „ „ cuirass-formed.
5. „ „ atrophic.
6. Lardaceous „
7. „ „ cavernous.

These are the seven decided varieties presented, and we shall find each possessing something innately its own, yet all having appearances in common.

ORDER I.—SCIRRHUS.

1. *Ligneous Scirrhus, Globular*, is the type of this order.—The term was first given it by M. Velpeau, the distinguished French surgeon, who considered it to possess the hard and resisting feel of wood. It is only by making such comparisons that an idea of this kind can be conveyed from one person to another; but we must be careful not to mistake the special point of comparison, since two things that resemble each other in one or more properties may differ widely in every other respect, and in this instance it is the general feel of wood—its hardness and texture—that is taken to illustrate the properties of scirrhus, and not any of its other qualities, with which it cannot be compared. For this reason I do not think M. Velpeau has selected the best substance to describe this variety of cancer, as there are other things that resemble it more nearly than wood. Thus, wood cannot, without great labour, be cut with a knife, except with the grain, and in this case it is split rather than cut. "Ligneous scirrhus" can be easily cut in any direction, and will not split; it feels like solid india-rubber, and in appearance, when cut, resembles a stringy turnip more than anything else, but is elastic, and from the surfaces a thick cream-like juice (cancer juice) exudes. Of the seven varieties of scirrhus, it will be observed that five are of the ligneous or harder kind, two only being of a softer nature, forming the link between scirrhus and medullary cancer.

Ligneous scirrhus globular is generally first discovered by accident. Thus, in one case a lady, while dressing, finds she has a hard lump in her breast, perhaps only the size of a bean, or it may be as large as a walnut; in another, her attention is first arrested by a shooting pain. In each

instance, the disease may, and in all probability has, existed for some weeks or even months without giving pain, or in any way attracting notice; but no sooner has the discovery been made than the patient becomes alarmed, and believes she has a cancer; and should it be so, and of the globular kind, we may expect to find the following appearances.

The tumour, provided it is in the breast, will feel deeply seated, of a slightly elastic but hard nature, more or less globular in form, the surface not perfectly smooth, but giving the idea of a bundle of lactiferous tubes strongly knotted together, and although freely movable in the breast, and its size pretty accurately defined, yet apparently composed of the gland itself, rather than a distinct and separate formation. Up to this time the skin has undergone no particular change, but as the disease advances it will present very peculiar and characteristic appearances. The attention will first be arrested by its becoming more dense, and of a pale or even leaden hue; gradually it will be attracted or drawn as it were to the tumour, until it becomes adherent to some portion. The surface of the breast is now drawn to a central point, giving rise to deep puckerings radiating from it. Should the tumour be in the region of the nipple, the latter becomes retracted. The patient will experience lancinating pain shooting through the breast, severe and frequent. Such is globular scirrhus in its first stage. Now begins the second. The skin over the tumour is by this time firmly attached to it, the puckerings become deeper and harder, and the central portion usually presents a smooth appearance of a red colour, and is moist. It is here ulceration will commence, or else around the nipple a large deep ulcer will be formed, eating its way into the breast, its edges becoming thick and prominent, and overlapping the surrounding skin. The tumour increases in size, the ulceration spreads, a profuse discharge pours from the surface, the patient sinks from exhaustion or dies from hæmorrhage. This is the course of

unchecked scirrhus. During the progress of the disease the glands in the axilla most probably become indurated, and the arm on the affected side greatly swollen and œdematous.

I have here given the history of this form of scirrhus briefly, describing it as it is found in its most virulent shape, when it runs through its different stages in a fearful and rapid way. Frequently, however, the symptoms are less severe, and the entire development of the disease takes place more slowly. But even in its worst form, under judicious treatment, it may sometimes remain for years, in a stationary condition, or better still, it may occasionally retrograde.

2. *Ligneous Scirrhus, Radiated or Branched.*—This variety runs through its course in a manner very similar to that just described. The two kinds are closely allied, for both may at different periods be seen in the same tumour, or even exist at the same time in separate ones. On examining a tumour of this kind, instead of the circumscribed form, we shall have great difficulty in ascertaining the extent of the disease, for while in globular scirrhus its growth takes place in a uniform manner, the radiated throws out roots in various directions, altering the tissues through which they pass, and gradually converting them into cancerous structure. These roots or bands are easily felt by the hand, but can rarely be seen by the eye. It is this form of cancer from which the disease probably derived its name, from the resemblance seen by some in it to a crab with its claws extended. This variety differs from the preceding only in its want of uniformity; the one is round and circumscribed, the boundaries of the mass being accurately determined, while the other from a nucleus or centre throws out roots in various directions. These bands or cords, easily felt at their origin, will be found, if traced by the finger, to become less dense as they proceed from the common centre or nucleus, their terminations being lost in the surrounding tissue. The second

stage of both forms is the same. But it will be obvious, that to remove the round, well-defined mass of the former, will be an easy task in comparison with the difficulty of extirpating the root-like confusion of the latter.

3. *Ligneous Scirrhus en masse.*—Here the whole breast will enlarge at once. It is generally not noticed until some time after it has commenced, in most cases giving but little pain, and merely imparting a fulness to the gland, which does not in any way alarm the patient. Having acquired a certain size, it becomes more dense, and pain comes on ; it still continues to harden, while the pain increases, and the skin (which in all probability was affected from the first) begins to present peculiar appearances, becoming non-elastic, and showing depressions and prominences, which, as the disease advances, become more conspicuous. After a time ulceration commences, and proceeds much in the same manner as in the radiated and globular scirrhus. Operation by the knife is in this form inadmissible at any period.

4. *Ligneous Scirrhus, Cuirass-formed.*—At one time this was considered a very rare form of the disease, and in the first editions of my works I stated that it had seldom been seen in this country, but, unfortunately, further experience has shown that examples are of too frequent occurrence to be considered exceptional. It is, perhaps, the most dreadful form of cancer ; that in which the sufferings of the patient are greatest and the skill of the surgeon of the least avail. The following case may be taken as an excellent example :—

Christiana V. C——, age about sixty-five, a highly-accomplished and amiable lady, had, for a year and a half, suffered from a ligneous scirrhus (globular), which, not yielding satisfactorily to treatment, was removed by Dr. W. Marsden and myself, and in a short time the wound healed. All went on

well for some months afterwards, when, unfortunately, she was attacked with violent diarrhœa and vomiting; a neighbouring surgeon was sent for, but after a fortnight's treatment, the patient still remaining in a dangerous condition, I was again called in, and found that although the diarrhœa, &c., had left her, she was in a most prostrate condition, and had, in my opinion, been kept far too low. By tonics and a more generous diet she regained strength. Unfortunately her old enemy had taken advantage of her weak condition to renew its attack, and once more I found indications of cancer; these, although at first slight, were very ominous, for within six weeks eight or ten hard patches had made their appearance in and around the cicatrix. These patches, at first about one-sixth of an inch in diameter, slightly elevated above the surrounding surface, flat, and of a dull red colour, soon began to enlarge, and others to be added to their number; and as they increased in size and number, they coalesced and became harder, forming dense plates of one, two, or even more inches in diameter. At an early period they appeared only on the front of the chest, afterwards on the back, until the whole thorax was completely encased, as in a vice. The breathing, during all this time, gradually became more and more difficult, till, at the end of a few months, the patient died of exhaustion and suffocation. Such is the terrible course of cuirass-formed cancer.

Two cases are also related in Dr. W. Marsden's translation of M. Velpeau's work, one of which I give verbatim:—

"Amongst the unfortunates whom I have seen in this state, I shall mention an English lady dwelling in the Champs Élysées, and in whom the entire chest, from the flanks to the neck, from the umbilicus to the larynx, from the loins to the occiput, had undergone the ligneous transformation, and who was, besides, covered with scirrhous ulcers, with a crowd of cancerous crimpling (*bosselures*), as far as the armpits, and even on the shoulders. This poor woman, whose arms were

thrice their natural size, and hard as marble, had the respiration so small, so short, that she resembled a person in a state of strangulation, or one whose chest is violently caught in a vice, unable to move arms or head, experiencing at every instant the most atrocious pains; she presented, when I saw her with Dr. Skiers, her attending physician, the most afflicting spectacle which can be imagined, uttering piercing cries, demanding death, without having the power of inflicting it, and incessantly praying for some one to administer a dose of opium sufficient to procure an eternal sleep."

5. *Ligneous Scirrhus, Atrophic.* — In all the preceding varieties growth has been a main feature. We must now pass under our observation a form of cancer differing essentially from all others, viz., the "atrophic," in which the tissues are condensed, hardened, and shrivelled up. In the first indications of this disease, the nipple, which in a healthy condition boldly protrudes from the areola surrounding it, is found to be encompassed by a deep fossa of a dirty red colour, discharging an unhealthy ichorous secretion, and may, by an inexperienced person, be mistaken for an ordinary sore nipple, but by careful examination this error is easily avoided, for, on closely inspecting a case of this kind in its earlier phase, this fissure will be found formed, not by ordinary ulceration, but by the nipple being retracted or drawn into the mamma, and, of course, forming a deep pucker around it. At first nothing more will be noticed; but in the course of time the breast under the nipple will become hardened and contracted, the skin shrivelled, of a dirty colour, and of low vitality, and the nipple becomes almost buried in the mamma, with an ichorous discharge exuding all around it, as already mentioned. In this state the patient may remain for years, being able to perform many of the usual duties of life, suffering no very great pain, and the cancer undergoing but little change. This must be regarded as favourable, for,

on the other hand, ulceration may extend and soon involve the whole breast. As such, however, is not the usual course, atrophic scirrhus may be considered one of the slowest and least terrible forms of cancer, and in skilful hands life may generally be prolonged for years, with tolerable comfort to the patient. In all varieties of cancer, past hope of more successful treatment, the aim of the surgeon should always be to induce this "atrophic" condition.

6. *Lardaceous Scirrhus.*—This variety strongly resembles the ligneous scirrhus *en masse*, and is principally distinguishable from it by being less dense, in consistency being between it and the medullary or encephaloid. It occurs more frequently in stout persons and those with full breasts than in the spare; in those of the phlegmatic more than in the sanguine temperament. This, more than other forms of cancer, often exists for a long period before the patient is aware of its presence; and even when discovered to her she cannot easily be induced to believe it otherwise than normal. This is not at all to be wondered at, for frequently the disease may be present for many months without the least pain, and there are many women whose breasts, more particularly about the period of menstruation, assume a swollen condition, much resembling this disease at an early period. The tumour, which may or may not be distinct, is generally deeply seated. I believe it never has a tendency to the branched variety, and always strongly resembles that of scirrhus *en masse*, but is of a less dense feel. It may increase to a considerable size before it attacks the skin, but when it does so it is in much the same manner as in other forms of scirrhus.

7. *Lardaceous Scirrhus, Cavernous.*—This is a very peculiar and important form of cancer which I have never seen described. Many very striking examples have come under my notice, and when once seen it can never be forgotten, nor confounded with any other form of cancer. I have named it

as above: Cavernous Scirrhus. I believe it attacks persons only of considerable *embonpoint* and firmness of flesh, its specific feature consisting in the formation by a peculiar kind of ulceration of a deep cavern-like ulcer, with but little or no previous swelling or hardness. Its usual seat of attack is either mamma, generally on the inner side, or midway between them over the sternum. These cancers usually give but little pain for some time, and before ulceration has set in it is difficult to induce the patient to believe there is anything the matter with her, and it is then only after the most careful examinations that the true character of the disease can be surmised. At an early period, however, an impression will be conveyed to our touch, that at a certain depth the tissues are a little more dense and full than usual, but nothing like a distinct tumour will be found. This density and fulness will, after a very variable time, become a little more perceptible, and perhaps occupy a rather larger area. The tissues have, in fact, become impregnated with the germs of cancer in the most insidious manner, but suddenly a spot on the skin will become red or hard, and from this point ulceration will extend inwards with astounding rapidity; an ulcer of a cup-like shape is formed, which quickly and surely increases in size and depth, eating away and burrowing in the mass of the tissues in all directions, and forming a vast cavern-like ulcer. The walls of the cavity have a pretty healthy appearance, are hard, and constantly endeavouring to throw out healthy granulations; the surrounding structures seem perfectly healthy, but perhaps a little more dense than usual (as in the first appearance of the disease), and the edges of the wound, although hard, are well defined, and on a plane with the surrounding parts. A cursory examination of these caverns gives no idea of their real extent; for example, Mrs. R——, a patient of mine, a month or two before she died, appeared, at first sight, to be suffering from an ulcer of no very great size, situated on the inner side, and a little

below the left breast; but on lifting up this breast, which, though large, looked healthy, one of these enormous caverns was discovered, into which a man could have thrust both his fists, and extending nearly to the collar-bone. These ulcers, considering their extent, do not discharge very copiously, but a pearl-like liquid exudes from and adheres to their sides, and at an advanced period of the disease they often bleed freely.

ORDER II.—MEDULLARY CANCER.

Varieties.—1. Fungoid.
2. Lardaceous.

THIS order differs essentially from scirrhus, inasmuch as scirrhus is characterised by hardness, the medullary by softness; but in the breast, at an early period of the disease, they are not often distinguishable from each other, and it is only as the tumour advances that the distinctive features of each are seen: to other parts of the body this does not apply so much. Medullary cancer has been divided into two varieties.

The *Fungoid* form is characterised by being very soft and growing in a cauliflower-like mass, easily broken down, and having a great tendency to bleed freely from a number of small points. This form of disease may exist and remain dormant for years, but when in an active state proceeds more rapidly than any other kind of cancer. The *Lardaceous* form is not quite so soft, and does not break down so readily when touched with the finger, and shows in a less marked manner the vegetable-like appearance. With those exceptions, one history will suffice for both varieties.

In tracing this species of cancer from its first appearance in the breast to its full development, the following peculiarities will be observed:—A small tumour will be discovered, at first not distinguishable from scirrhus, as it in all respects resembles it, except perhaps that it may be a little softer and not attended with pain; but, as the disease advances, a most marked difference will be observed in the course of each. As the tumour increases in size, the skin, instead of being

puckered, hardened, and drawn to the tumour, as in scirrhus, will be protruded, by degrees assuming a conical or nodulated appearance; at the same time it will be thinned and glistening, more deeply tinged of a red or violet colour, and a number of minute vessels may be seen ramifying over its surface. This nodule (but there may exist more than one) has a hard base, which is in fact the original tumour; it will continue to increase in size if left unchecked, and will sooner or later burst and discharge, in some cases a considerable quantity of hæmatic pus, in others not much. As soon as this discharge has taken place, from the bottom of the cavity so formed a fungoid growth commences, and after a time appears externally, and now being freed from all restraint, the rapidity of its progress is wonderfully accelerated, and an enormous mass is the result, sometimes ulcerating, sometimes sloughing, sometimes bleeding, and with few exceptions always increasing. Recurrent cancer, after the removal of a scirrhus, will very frequently appear in this form, particularly so in the glands of the axilla, groin, and triangles of the neck.

ORDER III.—EPITHELIAL CANCER.

Varieties.—1. Hard Epithelial.
2. Soft „
3. Surface „
4. Deep „
5. Warty „
6. Pedunculated „

THIS order of cancer is very common, particularly in the male sex. Of 2,010 persons who have come under my observation so afflicted, 1,423 were males, 587 females. It is also most remarkable that, although a very large number of lip cases made up the former number, only a very few occurred among the latter. It is this form of cancer that is peculiarly amenable to the arsenical mucilage treatment.

Epithelial cancer attacks all parts of the body, but is most frequently seen on the lower lip, tongue, special organs, breast, arm, hand, &c. At its first appearance it rarely excites the alarm of the patient, and to an inexperienced person there is then nothing to be seen, or felt, of a serious nature. It may commence (in the lip, for instance), as a small fissure, something like the cracked lip seen in winter, or as a small hard spot situated on the surface, and accompanied by soreness of the mucous membrane; sometimes it will be a tumour deeply seated; sometimes it will project from the surface, in the form of a hard scab covering a sore; this latter is most usual in the lip. In the tongue, pain of a slight

nature, or a feeling of stiffness on one side of the organ, generally first attracts attention; and this is followed by hardness, redness, and pain of a lancinating character, but occasionally dull and continuous. Commencing in this way, the tongue becomes swollen and indurated to a great extent, occasionally so much so, that the whole of it is involved before any ulceration takes place. It is by no means uncommon, however, for ulceration to form the commencement of the disease, in which case it generally appears at the side, sometimes at the tip, rarely in the centre. The first appearance of epithelial cancer can almost always be traced to some exciting cause: of the tongue and lip, for instance, to the irritation caused by the tobacco-pipe or cigar, or to the contact of decayed, sharp-pointed, or dirty teeth, to blows, &c. Hence I am of opinion, that by attention to the teeth, and the avoidance of smoking, a person even having a tendency to epithelial cancer of the tongue or lip may, as a rule, delay the time of its first appearance, and perhaps escape it altogether.

I do not think it necessary to discuss the varieties of epithelial cancer separately. Perhaps, of all the forms it assumes, the warty is the most common. In many examples of this disease attacking the lip, and other vascular situations, before ulceration, the part feels swollen, moderately hard, smooth, and shining, but, as Sir James Paget observes, "more often it is coarsely granulated, or tuberculated, or lowly warty, deriving this character usually from the enlarged and closely clustered papillæ. The surface is generally moist with ichorous discharge, or covered with a scab, or with a soft material formed of detached epidermal scales. The firmness or hardness of the diseased part is various in degree in different instances; it is very seldom extreme; the part, however firm, is usually flexible and pliant, and feels moderately tense and resilient on pressure. Commonly, it is morbidly sensitive, and the seat of increased afflux of

blood. Its extent is, of course, various; but before ulceration the disease makes more progress in length and breadth than in depth; so that when, for example, it occupies the whole border of a lip it may not exceed the third of an inch in thickness."

Sometimes epithelial cancers are seen in the form of a disc, two or three-eighths of an inch thick, surrounded by healthy tissues, half the thickness projecting above the surrounding skin or mucous membrane, the other half below, and generally more or less warty. They may also grow in the form of a cone, and are occasionally pedunculated.

ORDER IV.—MELANOTIC CANCER.

SURGEONS and Pathologists differ much respecting the distinctive character of the black cancer; some regarding it as a distinct variety or order of carcinoma; others holding that it is merely the medullary or scirrhus, with the presence of a black pigment, deposited in and exuding from the tissues. Undoubtedly from the surface of an ulcerated medullary or scirrhus cancer, a thick black discharge often takes place, continuing to do so as long as the disease lasts. The following is an example:—

Mrs. H——, aged 65, had, about two years previously to consulting me, noticed a small hard tumour in the left breast, the size of a nut, accompanied by severe shooting pain. Dr. Bateman, who first saw it, pronounced it cancer, and recommended removal; to this she would not submit. The tumour increased in size and ulcerated. It was now that my father, the late Dr. Marsden, and myself, first saw her. It was a true scirrhus cancer of the lardaceous variety. A fungus growth appeared through the opening, and, overlapping the breast on all sides, soon covered the entire gland. The whole mamma appeared as if it had been turned inside out; the diseased mass was about four inches in diameter, and projected from the surrounding parts about two inches. During the last six years of her life it continued to discharge copiously a thick black matter, which no application would stop, although the carrot poultice and the chlorate of potash lotion checked it and cleansed the part for a time. I visited this lady for about six years, and was enabled to keep the cancer quite in abeyance, and to within a month of her death she was as well as

when I first saw her; and, with the exception of occasional bleeding and the constant black discharge, suffered no great inconvenience. She died from old age and disease of the lungs.

In this case the cancer was concentrated in the breast alone, and remained there for years. But cases occur in which, the breast being the original seat of disease, ulceration has taken place in the axilla; the former situation presenting the ordinary appearance of cancer, the latter discharging copiously a thick pigmentary matter; and in other parts of the body similar appearances may be observed. On the other hand, cancerous plates, varying in diameter from one line to the size of a five-shilling piece, for the most part occupying the skin, and also small rounded tumours occur, which, from the very commencement, are characterised by the presence in their structure of a black or blackish deposit, which peculiarity continues with them; and even should these plates or tumours be removed by caustic or the knife, and others return in their place, or at distant parts of the body, the same black appearance will almost invariably be observed. Under these circumstances, I think we cannot but admit the melanotic cancer as a distinct variety, in which the presence of carbonaceous-like matter is seen, from the commencement to the termination of the disease; but we must also acknowledge the frequent appearance of it, at any period after ulceration has begun, in other forms of cancer.

ORDER V.—CYSTIC OR COLLOID.

Varieties.—1. Cystic or colloid, in combination with scirrhus or medullary cancer.

2. Cystic or colloid, in combination with adenoids, &c. (not cancerous).

3. Colloid matter or cysts alone (not cancerous).

IN an examination of colloid tumours, it is necessary to divide them into three varieties, viz.:—1st. Those in which the colloid character is found united with the medullary cancer, or with the scirrhus, with which last, however, it is not very often seen. These indicate a form of cancer truly malignant, and much to be dreaded. 2nd. Those tumours harmless in themselves, adenoids, &c., in the centre or other parts of which the presence of colloid matter does not render them less harmless. 3rd. Those which from the commencement are composed of colloid matter alone, and which must be regarded as non-malignant.

1. *Cystic or Colloid, in combination with Scirrhus or Medullary Cancer.*—Its most common seat is the breast (but it may occur in any other part of the body), and once fully established, is most unmistakable, from its large size, the rapidity of its growth, and a peculiar elastic feel indicating fluid confined. A scirrhus or medullary cancer, having for some time progressed in the ordinary manner, suddenly commences to enlarge rapidly; the skin becomes highly vascular, shining, and tense. This change is caused by the presence in the tumour of one or many cysts, generally containing serum of a pale straw-colour, sometimes tinged with blood

and even pus, at others thick and jelly-like; it may be colourless, or of a green tinge, and is often quite opaque. The breast may continue enlarging without ulceration until it attains the weight of twenty pounds or more, becoming, as may well be conceived, a most dreadful burthen to the patient. Sooner or later, these cysts burst through the skin, and discharge in one, more frequently in many places, and an immense sloughing ulcer is the result.

2 & 3. These varieties are rarely curable without operation; they are generally very slow in their progress, and often remain for years without causing inconvenience, except from their size and situation. Their removal is mostly an easy business and an effectual cure.

SARCOMA.

Formerly this term, which really means only a fleshy tumour, was not much used. Now it is in every-day use, and is applied to several varieties of malignant disease. There are a number of tumours, not coming within the order of Scirrhus or Medullary, most of which, however, more nearly resemble the latter than the former, except, perhaps, some fibroids and osteo-sarcoma or malignant disease of bone, which are all characterised by an increase of tissue, hence the name, the different varieties being, in some instances, described by their microscopical appearances thus :—

Fibro-sarcoma.
Osteo-sarcoma.
Spindle-cell sarcoma.
Giant-cell or myeloid sarcoma.
Glio-sarcoma.
Myxo-sarcoma.
Lympho-sarcoma.
Round-cell sarcoma.
Alveolar sarcoma.

Butlin, in his valuable work, "Sarcoma and Carcinoma," p. 1, says: "By sarcoma, I understand a tumour of *connective tissue origin*, composed of elements which are, for the most part, cellular and embryonic. These elements are embedded in a matrix of intercellular substance of varying quality and quantity. The vessels run between the cells and the cells increase in number by division.

"A carcinoma is a tumour of *epithelial origin*, possessing generally an alveolar structure. The cells are seldom separated by a visible intercellular substance. The vessels run in the walls of the alveoli, not between the cells, and the cells increase in number by endogenous formation."

Moxon, in Bryant's "Practice of Surgeory" (1884), vol. i., p. 196, says: "The distinctive histological character of sarcoma is the possession of a stroma between the cells, an atmosphere of intermediate matter which surrounds each, and is between them all; the qualities of the intermediate or intercellular matter determine the kind of sarcoma, as in the class of connective tissues, whose development stages the several kinds of sarcoma closely resemble. . . . . The round-celled kinds generally arise from lymph-glands, or neuroglia, or mucous tissue, hence they are common in myxo- or glyo- or lympho-sarcoma. The spindle-celled kinds arise from connective fibrous, or bony tissue, and hence are common in fibro-sarcoma or osteo-sarcoma. . . . . Alveolar sarcoma, round-celled, resembles, superficially, cancer."

The treatment of sarcoma is much the same as that for scirrhus or medullary cancer, but frequently they do not admit of operation at any period, when, however, this can be done they are not so likely to recur.

LUPUS, OR RODENT ULCER.

Varieties.—1. Lupus exedens.
2. Lupus non exedens.

1. *Lupus exedens*, called also herpes exedens, rodent ulcer, and noli me tangere.—This is a disease almost as terrible as cancer, and equally malignant; its most frequent seat is the face, near or upon the alæ of the nose. Lupus is generally regarded as a skin disease, but this variety of it, although perhaps confined to the skin at first, afterwards attacks the deep-seated structures. The end of the nose, or some part of the face, first swells, with a bright red shining appearance; tuberculated points soon appear projecting from the surface, presenting even a more highly inflamed appearance than the previous swelling. The disease may remain in this condition for a long period, sometimes better, sometimes worse, the patient not being fully aware of the really awful nature of the complaint. But the surgeon well knows that sooner or later the disease will assume an activity terrible to contemplate. Active ulceration commences, and from this time, unless arrested by treatment, all the adjacent structures yield to its destroying influence.

2. *Lupus non exedens*, called also herpes. This variety is a severe form of skin disease; it particularly attacks scrofulous children and, in after-life, delicate persons. It commences by the appearance of one or more shining red tubercles; others soon follow; these coalesce and ulcerate, spreading over the surface of the face, one part healing while another is being attacked; and should the disease not be arrested, most dreadful deformity is caused by the cicatrices and puckerings produced by the constant ulceration and repair going on. It is a disease very difficult to cure.

NON-MALIGNANT TUMOURS, ETC., THAT MAY BE MISTAKEN FOR CANCER.

1. Keloids.
2. Fibroids.
3. Adenoids.
4. Osteoids.
5. Simple Hypertrophy.
6. Hæmatic Tumours.
7. Abscesses.
8. Fatty Tumours.

1. *Keloids.*—These tumours, although decidedly non-cancerous, are very tedious and difficult to cure. They partake more of the character of fibrous tumours, and seem to fill up the gap between them and true scirrhous cancer. They are usually found in old cicatrices, particularly those of burns, but may be seen in parts otherwise perfectly healthy and uninjured. As a primary disease, they first appear in the form of a small wart or hard plate, situated in the skin ; they give rise to no pain, and their mode of growth is very variable, sometimes remaining stationary for years, and sometimes growing rapidly. They do not, however, usually attain any great size, unless injudiciously interfered with. When their seat is an old cicatrix, it appears as though the tissue became gradually more and more indurated, forming a tumour projecting from the surface. These tumours have no tendency to become deep-seated. When cut through with the knife, they will be found almost dry, crisping under the

scalpel like scirrhus, but no cancerous or other juice exuding from them. These keloids return with the greatest obstinacy after removal, but always in the same situation; they do not appear in any way to affect the glandular system, or general health, and the adjacent tissues are in a perfectly normal condition. It will, therefore, be evident that they do not, except under peculiar circumstances, endanger life, and are principally objectionable on account of the deformity they cause.

2. *Fibroids.*—The most marked clinical distinction between a scirrhous cancer and a fibrous tumour,—the variety of cancer which the latter greatly resembles,—is found in the difference of the mode of connection with the healthy tissues that subsist between them. The *cancer* invariably attracts towards it the surrounding tissues, as if it absorbed them into its own substance, thereby producing an evident diminution of their normal amount, as well as a change in their character; for, together with the actual subtraction by conversion into scirrhus, the remainder of tissue in the part involved is visibly altered, being likewise in process of subtraction. This last is revealed by the adhesion of the most proximate elements to the tumour, and the consequent impossibility of moving the tumour without also moving this portion of tissue, and *vice versâ*, it being obvious that besides this movement *en masse*, the result of the adhesion, there is a diminution of freedom of movement, the result of the "substitution," as Lebert names it. The *fibroma*, on the contrary, does not absorb the normal tissues into its structure, and although connected with the neighbouring parts at one or more points, is not fused with them all round, as in the case of cancer. It follows, therefore, that there is no diminution of freedom of movement, nor do the tumour and surrounding tissues necessarily move *en masse*.

Fibrous tumours, and there are many varieties, but those of the breast have usually a regular contour, more or less approach-

ing the oval or round, and are smooth on the surface. They grow in almost all parts of the body, but are most frequent in the uterus and breast, and in the nasal and orbital cavities. They are subject to various modes of degeneration when not removed, sometimes softening by what is said to be a transition from fibrous to mucous constituents, and sometimes hardening by deposition of calcareous materials in their structure. The result, in either case, may be ulceration of the superficial or surrounding parts. When removed they do not usually return, although cases are not unfrequent of persons having more than one fibrous tumour of contemporary growth in different situations, and of successors to those that may have been formerly extirpated.

3. *Adenoids.*—So named by Velpeau. These are a class of tumours quite distinct and differing essentially from all cancers, as well as from simple hypertrophy of the breast, or enlargement, the result of inflammation. An adenoid will be recognised by the following peculiarities; viz., a tumour having a firm but elastic feel, the surface not perfectly smooth, but with roundish projections from various parts of it and being, as the name implies, gland-like. It will be found to move freely amongst the tissues in which it is buried, in no way drawing them along with it, and being, as it were, a perfectly isolated body. Should it attain any great size and approach the skin, this membrane will not become involved with it, as in cancer, but simply thins and gives way before it. Thus adenoids can readily be diagnosed from cancer, as these, when movable, always drag the surrounding parts with them; moreover, they do not in any way implicate the surrounding tissues, but merely increase in the midst of them. Their isolated character and free mobility will always distinguish them from simple hypertrophy of the breast, or induration of the lactiferous ducts.

4. *Osteoid Tumours.*—The extreme hardness of such

growths is the circumstance most likely to lead to their being mistaken for scirrhous cancer, but their situation, and the distinctness of the outline between them and the surrounding tissues, will usually serve to distinguish them. They occur principally in close connection with bone, as outshoots from or concretions deposited in them, and it is possible for the finger to detect their margin in a much more precise manner than with a cancer, which, although equally hard perhaps when grasped *en masse*, cannot be traced to its edges so accurately, in consequence of their blending insensibly into the neighbouring tissues. This, of course, does not apply to osteoid cancer, which appears to be a transformation of some of the other forms of cancer into a substance more or less resembling bone by the deposition of calcareous matter. It is a rare form of the disease, and usually occurs in the ends of the long bones, as in the femur and humerus.

Osteoid tumours are very rarely met with in the breast, and when they do occur it is usually in very old people, whose tissues are in progress of calcareous degeneration. In such cases, the tumour is rather a calcareous concretion than a true bony growth. I removed a few years since from the breast of a healthy female, aged forty-seven years, a bony tumour that in this respect is highly remarkable. It occupied the centre of the breast, was fully as large as a man's fist, and felt densely hard before removal. It had been growing for three or four years, but did not cause pain or inconvenience until it attained some size, when its great weight became a source of constant discomfort. The centre of the mass, on section, was dense and ivory-like, and less hard towards the outside, where there were attached at different points pieces of well-developed cartilage. It appeared to be a true bony formation, as the microscopic canals distributed throughout were quite manifest.

5. *Simple Hypertrophy* of the breast, partial, or of the entire

gland, occurs from various causes, and although there is no difficulty in distinguishing it from the adenoids, yet much may be experienced in deciding between it and the medullary or scirrhous cancer, particularly at an early stage. The following signs of distinction may be found useful :—Scirrhus is a dry, hard, and not very elastic tumour ; hypertrophy feels humid and elastic, although pretty firm ; sharp lancinating pains almost always accompany scirrhus, but are wanting in hypertrophy; as the former advances, the skin becomes hardened, or indurated bands appear ; in the latter this is not the case. Between medullary cancer and simple hypertrophy many singular analogies exist.

6. *Hæmatic Tumours* may be confounded with medullary or melanotic cancer, but are not likely to be so with scirrhus. They are known by the absence of much pain, by their being less soft than medullary cancer, less hard than scirrhus. The system generally is but little affected by their presence ; and in cases of old standing,—for they may remain for years, and attain the size of a child's head,—the neighbouring glandular structure remains perfect healthy. Surgeons of the highest standing have, however, been mistaken, and taken these tumours for true cancer. When removed, they do not return.

7. *Abscesses*, under certain circumstances, may strongly resemble colloid or medullary cancer, and *vice versâ ;* for these cancers may, at one or more points, so distinctly fluctuate under the finger as to be mistaken for abscess. It is, therefore, desirable, when great uncertainty exists, to make an exploratory puncture with a needle. I believe, however, that a surgeon who has had sufficient opportunities of observing the course and progress of medullary cancer will seldom be mistaken in his diagnosis. The previous history of the case must be considered, the cause which pro-

duced it be sought for, and the manner of its development traced ; these, with the condition of the patient's health and of the surrounding parts, will for the most part form a basis on which to found a correct opinion.

8. *Lipomata or Fatty Tumours.*—These are more likely to be mistaken for abscesses or cysts than for any variety of cancer. They are destitute of all the characters of the latter disease, except that occasionally, from proximity to nerves, or from other incidental causes, they may be the seat of considerable pain. They are rare in any situation, except as out-growths from the subcutaneous adipose tissues ; but may appear on any part of the surface of the body, although the shoulder or back, about the scapula, and the sides and hips, are their ordinary localities. They have no definite shape, and are uniformly soft, a character which distinguishes them from abscesses and cysts as much as the absence of fluctuation. They are perfectly harmless, and need to be removed only when they cause pain, or produce inconvenience from their size.

SUMMARY.

THAT in many cases of cancer, in a non-active condition, the best treatment is palliative only, and, in some instances, to leave them alone. In active cases, to endeavour to bring about the atrophic or wasting condition; and, this failing, or being impracticable, operation by one or other method.

That there are many conditions of cancer, particularly so of the breast, lip, tongue, skin, &c., when operation is likely to be of permanent benefit, even for ten, twenty, or more years. And that patients who have suffered a return may sometimes be saved by a secondary or tertiary operation.

That the removal of cancerous tumours from the breast, tongue, lip, face, skin (under or on), should be almost entirely free from danger; but that the removal of this disease from internal organs, the triangles of the neck, and certain other localities, is attended with considerable risk, and should not be lightly undertaken.

That early treatment is most important.

That operation should never be resorted to, except in cases presenting a fair chance of a favourable issue; the neglect of this rule has done much to discredit the operation.

That the use of caustics in suitable cases is proper and to be recommended; such as epithelioma of the lip, face, or anywhere on the surface of the skin; in a less degree, small tumours close under the surface, but of small size; and in no case should caustics be employed to tumours of the breast, axilla, or other parts larger than a small egg.

That a person afflicted with cancer need not necessarily give way to despair; as, although some forms rarely yield to treatment, and but too frequently return after operation,

there are other forms, and even conditions, of the more serious kinds, that are not prone to return, or that, by proper treatment, will often remain dormant for years, and, in some rare instances, disappear.

That cancer is not more hereditary than many other forms of disease, and less so than gout, rheumatism, consumption, &c.

ARSENICAL PASTE.

THE arsenical mucilage mode of treatment is applicable to all forms of cancer, except the cystic or colloid, provided they have not exceeded certain limits, viz., three square inches, and then not more than a third must be attacked at once. When a cancer has exceeded this limit, other means ought to be used to extirpate it.

The paste may be applied to cancers situated on any part of the body except inside the mouth or nose, parts, in fact, where the use of the curative agent would be dangerous. I do not recommend it when the disease is deeply seated, but for many forms of cancer on or near the surface, this mucilage is the least painful and most efficient application I know. During the last thirty years I have fully tried every known caustic, and now firmly believe that arsenical paste and chloride of zinc are the best.

The mode I adopt is as follows. A thick paste of arsenic is made according to the following formula :—

Arsenious acid, ʒ ij. | Mucilage of gum acacia, ʒ j.

To be well mixed together, and made into a thick paste.

The patient's health having been attended to, the whole of the cancerous surface is to be spread over with this paste, provided it is not more than a square inch, and it must be sufficiently thick not to run; a piece of dry lint is then pressed on to it, overlapping the paste half an inch all round; this must be left for a short period, say, ten minutes, by which time any superabundant paste will have been taken up by the extra lint, which is then to be carefully cut away with a sharp pair of scissors. In an hour, or, at most, two, the lint covering the paste will have become dry and hard, and it will adhere closely and firmly to the cancer. In the course of twenty-four hours the surrounding parts will commence to swell, become red, and, to a certain extent, inflamed, and the

patient will experience a drawing pain. In general, this is by no means severe, and does not last more than one or two days. At the expiration of from forty-eight hours to three days, according to circumstances, bread-and-water poultices are to be constantly applied and changed every two or three hours ; the pain, redness, and swelling will by this time have subsided, and a distinct line of demarcation be seen extending entirely around the cancerous mass ; the skin ulcerates, and a fissure is formed, separating the slough from the healthy tissues ; the fissure continues to deepen until the entire cancer comes away, leaving a healthy, cup-like depression, varying in size and depth according to the mass removed. Healthy granulation will now commence, and it will be well to continue the poultices for some time ; indeed, it often happens that no other application need be used. Of course, we must be guided by circumstances, for, granulation proceeding either too rapidly, or too slowly, or in an abnormal manner, must be treated according to the known rules of surgery. Great diversity will be found as to the time of the slough coming away ; in cases of small extent and not extending deeply into the tissues, the periods will vary from six to fifteen days, but, in those of greater size, from twelve to thirty. In some instances, only one application of the paste will be necessary, but it will, in general, be found advisable to apply it every second or third morning, till the desired effect is produced ; no rules can be laid down as to how often this must be done : the experience of the surgeon and the progress made must decide. When it is intended to re-apply the paste, the former piece of lint must be carefully soaked for some time with warm (not hot) water, and after it has come away, the mucilage be used as before, recollecting that until the last application that is intended has been made, poultices as a *rule* are not to be used, unless under special circumstances ; and that after a decided line of demarcation has been formed, no more paste

is to be applied. In general it will be found that after the slough has come away, the whole of the disease has been removed; but sometimes this will not be the case, and then the mucilage must again be had recourse to; in others it will be found desirable to remove a portion of the dead cancer before another application of the paste. This, however, is only necessary when the cancer becomes hard and callous, and will not allow it to penetrate. I have also used this remedy in some cases after operation by other means. For example, not very long ago, a gentleman applied to me; he was suffering from a pedunculated epithelial cancer, situated below and a little behind the right ear, quite of a mushroom shape. The broad flat part was four and a half inches in circumference, half an inch thick, and grew on a stem less than three quarters of an inch in diameter. It was removed in a moment with a noose of silver wire, but the root still remained; one application of the paste brought this perfectly away in eight days, and a fortnight after the patient was well. One of the most pleasing and wonderful phenomena connected with the mucilage is the extraordinary power of election it appears to possess; for if put on with only ordinary care, the cancer alone is attacked, the healthy structures remaining untouched, and the disease ultimately rolling out of a perfectly healthy wound.

This treatment I have used with equal success in cancer on the lip, face, head, arm, hand, abdomen, breast, foot, and skin. I have never seen any bad results from its use, except in one case, and in this the evil was temporary only, and occurred in one of our earlier cases, some years since. At the same time I must caution those who are inexperienced in its use, that it is a dangerous remedy in unskilful hands, and requires constant watching; neither can it be used, as I before stated, to cancerous surfaces of greater extent than three square inches, and then only a small portion must be attacked.

ULCERS.

THE treatment of ulcers is one of the most important branches of surgery, and there is no class of disease short of malignant that gives rise to more trouble, pain, and inconvenience, or that has been treated so empirically. The following is a list of the principal varieties :—

1. The Cancerous.
2. „ of skin.
3. The Cancroid, corroding, rodent, or noli me tangere.
4. The Epithelial.
5. The Fistulous or Sinus.
6. The Healthy or healing.
7. The Indolent.
8. The Weak.
9. The Inflamed.
10. The Irritable.
11. The Malignant.
12. The Sloughing.
13. The Phagedenic or gangrenous.
14. The Scrofulous.
15. The Varicose.
16. The Specific.

The first four are all more or less malignant, and in an early stage can generally be destroyed at once, either by operation, the cautery, or caustic. Whatever plan is adopted

it must be done effectually, as nothing is so injurious as to irritate with caustic without effectually destroying all the disease either at once or by repeated applications. I have been most successful in some of these cases with a weak lotion of sulphate of zinc as a local application, with, of course, the internal treatment indicated.

5. *The Fistulous or Sinus.*—A long and narrow canal or pipe, often passing into an old abscess, and frequently occurring near the anus (fistula in ano). There may be one or many of these canals. They are usually lined by a pale pseudo-mucous membrane, and in old cases are often dense and semi-cartilaginous. The treatment is pressure—operation—the seton or stimulating injections.

6. *The Healthy or Healing Ulcer*, one in which the granulations are healthy, viz., small, numerous, and pointed, secreting healthy pus. Such ulcers rapidly get well, and it is to this condition that we should endeavour to bring all other forms of ulcer.

7 & 8.—*The Indolent and the Weak.*—Ulcers characterised by large pale, flabby, and insensible granulations, sometimes smooth and glassy and pale in colour, the discharge thin. These ulcers have a tendency to spread rapidly and to slough.

Treatment.—To improve the general health by tonics, change of air, &c.; stimulating lotion to the ulcer. Martin's elastic bandages are often of great service in these ulcers, rapidly changing their aspect to one more healthy, and ultimately healing them. They also are very comfortable to the patient, and the cure of very large ulcers of the legs may often be effected, the patient going about his ordinary vocation,

instead of being confined to the house and obliged to keep the limb up, as was formerly the case.

9. & 10.—*The Inflamed and Irritable Ulcer.*—These are very tender and painful, and bleed on the slightest cause. Their general appearance is very red, and they discharge a thin fluid frequently mixed with blood.

Treatment.—Free bathing with cold water and cold water applications. Soothing lotions, such as poppy-heads, glycerine, glycerine and borax.

11. *The Malignant,*—viz., Cancerous, Lupus, &c.

12. *The Sloughing Ulcer.*—This condition is peculiarly liable to attack the indolent and weak ulcer, and is also often seen after wounds and burns.

13. *The Phagedenic or Gangrenous Ulcer.*—Severe ulceration with exudation, infiltration, and decomposition of the part. It is this form of disease, under the name of hospital gangrene, that sometimes decimates the patients in the wards, or troops in camp or barrack, and is caused by overcrowding, want of cleanliness, infection, and contagion. It is often accompanied by dysentery or typhus from the same cause. The treatment is to destroy the diseased surface, and wash away the secretions; to improve the general health, and the removal of the patient to a healthy locality and influence. Carbolic acid is of great use in this and most other forms of ulceration.

14. *The Scrofulous Ulcer.*—This occurs in persons of a scrofulous habit, and is generally caused by the ulceration of glandular and other chronic abscesses. They often destroy large tracts of skin and cellular tissue, giving rise to the formation of hard and dense bands, which render the limb or part affected almost useless, and sometimes cause death by exhaustion.

15. *The Varicose Ulcer.*—This is the ulcer so commonly seen on the legs, and is caused by the condition of the veins; it may assume many of the preceding conditions. The Martin bandage is of peculiar value in this form of disease.

16. *The Specific Ulcer.*—An ulcer assuming the character of many of the preceding but with the specific taint. Iodide of potassium and mercury are amongst the most potent remedies.

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