Original Communications.

SCROFULOUS DISEASES OF THE EXTERNAL LYMPHATIC GLANDS:

THEIR NATURE, VARIETY, AND TREATMENT.

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III.—TUBERCULOUS DISEASE OF THE EXTERNAL LYMPHATIC GLANDS.

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IV. In referring to the destructive changes which are liable to ensue in tubercular conditions of the lymphatic ganglia, it was stated that ulcerations, or the natural mode of allowing communication between the external tissues and an affected gland, may take place in two distinct ways: either at several points on the surface; or by the formation of a large ulcerative opening at that part where the covering textures have become thinnest. It was likewise observed that both processes are attended with consequences which it is most desirable to avoid; and that it is all important to adopt such local means as are best calculated to promote healing, and obtain the least possible amount of disfigurement.

As it is only on a clear insight into the exact condition presented by individual examples of tubercular ulceration, that judicious local assistance can be afforded, it is impossible too urgently to insist on the necessity of correctly understanding the simplicity or complications which render the mischief more or less amenable to one or other of the following modes of surgical treatment.

Fomentations and Poultices. When a tubercular gland has suppurated, and the purulent matter has been discharged by ulceration of the covering integument, it commonly happens, owing to various causes, that the destructive process is accompanied with pain and tenderness, which can only be relieved by the application of such means as we are now considering. It is impossible for the unhealthy margins of these ulcerations definitely to contract and heal, before the entire gland, or so much of it as is involved in disease, is destroyed.

The sluggish action which usually renders tubercular disease of the lymphatic glands such a tedious affection, at once suggests the propriety of applying poultices of various descriptions, to encourage the ulcerated parts to assume a healthy suppurative condition, whereby the processes of granulation and repair may the more readily be accomplished. Poultices made of linseed, bread, carrot, or chopped seaweed, I have frequently seen used by my father with very great success, which may be employed, according to the irritable, painful, or tardy nature of the sore. By the alternate resort to fomentations and poultices, recent suppurative and ulcerative action is often, not merely amended, but completely controlled, especially when antiscrofulous remedies are internally administered. When the discharge accompanying the unhealthy condition of these ulcerations is thin and sanious, and the parts are devoid of any great amount of tenderness, it will be advantageous to apply some stimulating application, and then, by means of a poultice, to encourage such processes as alone can lead to satisfactory results.

But, while recommending the use of poultices, I cannot too forcibly insist on the inconvenience which I have over and over again seen follow an indiscriminate resort to such applications. Flabby and unhealthy conditions are not only maintained, but absolutely increased

by this constant process of soddening, while the pale and ill-formed granulations which spring up, are rendered still more unfit for permanent and efficient repair. It is by no means unusual, on questioning a young patient suffering from tuberculous ulcerations, on the neck, for instance, to find that poultices have been applied to them for years without producing the expected amount of good. As a rule, therefore, I think, it may be stated, that poultices are of most value when the ulcerations are recent, painful, and remain intractable, on account of some active destruction which is still taking place in the gland over which they are seated; and after stimulating and corroding applications have been employed, for the purpose of changing or destroying the peculiar character of the sores.

Lotions. Mr. Russell has observed that, "in the treatment of scrofulous ulcers under the ordinary circumstances of the complaint, the simplest and mildest dressings answer best." (*Op. cit.*, p. 105.) Accordingly, this distinguished surgeon was in the habit of recommending the frequent ablation of tuberculous ulcerations with sea and cold spring water, and, it appears, with considerable advantage.

When the ulcerations are not complicated by sinuses running into a cavity containing a partly destroyed gland, or extending to indefinite distances under the skin, the application of certain astringent and other washes, is often useful. A decoction of oak bark, or walnut leaves, a solution of alum, sulphate of zinc, and many other substances, will be found of benefit, especially when they are kept in close contact with the granulating surface.

But of all liquid applications, a solution of iodine, in the form of the simple tincture diluted with water to the necessary strength, or aqueous solutions of one or other of the salts of iodine will be found of most avail. The contact of iodine seems to exercise a special, and, oftentimes, immediate effect on the diseased margins; and, although, from various causes, its application will not always be followed with anticipated results, still it justly ranks among the most potent agents which are at the disposal of the surgeon.

Natural baths, impregnated with iodine and bromine, have long been valued by continental surgeons, as a most valuable adjunct in the treatment of tuberculous ulcerations. MM. Lugol and Baudelocque both strongly recommend the treatment of all such cases by artificially prepared baths, containing one or other of these powerful agents, and have each described a method by which one holding iodine in solution may, under ordinary circumstances, be readily and inexpensively supplied. The following formulæ are calculated from French measures by Dr. Ranking, who wisely adds that the bath used should be either of wood or marble, as iodine forms soluble compounds with zinc, tin, or lead.

M. Baudelocque's formula is as follows:—Water, 60 gallons; iodine, 2 drachms; iodide of potassium, 4 drachms. Lugol's formula is stronger, consisting of 3 drachms of iodine, and 6 of iodide of potassium to an ordinary bath. The quantities for children should be about one-third those for adults. (*Op. cit.*, p. 249.)

I have frequently succeeded in obtaining healing and cicatrization of tuberculous ulcerations and fistulous tracks, by the application of a lotion composed of from five to thirty drops of the simple tincture of iodine to an ounce of water. Iodine, topically applied, seems to possess a special influence over lesions of this character; but it cannot be denied that its good effects are generally more marked when, at the same time, it is administered internally.

Besides the application already mentioned, that known as *black wash*, composed of varying proportions of calomel and lime water, is, oftentimes, the best that can be used. It is astonishing to see how rapidly mercury

in this form will sometimes arrest the sanious discharge from the pale and irritable margins of the ulcer, and afford fresh vigour to the secreting surfaces. I have known some of the most refractory scrofulous sores heal rapidly and permanently under this treatment, and I could quote cases to prove its value when other applications had been vainly tried.

c. Unguents. In the simplest forms of ulcerations following tubercular destruction of the lymphatic glands, my own experience leads me to speak but disparagingly of the value of ointments, although I am aware that many excellent surgeons regard them as of the very highest utility. I have been led to this opinion from numerous disappointments which have followed their use. While, however, I disapprove of their general employment in such instances as above-mentioned, still I admit their advantages on occasions when sinuses and fistule need stimulating, and when irritability and pain urgently demand the local and continual contact of narcotics. In a word, they may really prove of utility when a recourse to lotions and various solutions is inadmissible. When ointments are employed on account of the chronic and complicated character of the ulcerative surfaces, those composed of the various forms of iodine and its salts will be found among the most useful. I can specially recommend an ointment composed of iodide of ammonium in the form already indicated.

The *Unguentum Elemi*, the *Unguentum Plumbi Iodidi*, or the *Unguentum Hydrargyri Iodidi*, will be found valuable when indolence and inactivity render the mischief tedious and difficult of healing. Portions of one or other of these ointments may be kept in contact with the ulcerated surface, by being spread on slips of lint, or rubbed into cotton wool.

But in whatever stage of the affection, and in whatever way such applications are used, I must confess that I entertain for them no great predilection, when other means can be substituted. Without being by any means extraordinarily efficient, they have the disadvantage of proving to the patient both disagreeable and inconvenient applications.

d. Caustics. On looking through a long list of cases illustrating ulceration following suppuration of tuberculous lymphatic glands, the greater portion of which I have tabulated, and already, statistically and otherwise, referred to, I find that, in very many instances, the long duration of the diseased action had rendered the implication of the skin and areolar tissue more serious than might, at first, have been expected. When such was the case, it was found that the ulcerated integument presented thickened, indurated, and torpid margins, and was undermined to a various extent by tortuous channels, lined by a thick, pulpy, semi-gelatinous membrane, from the surface of which exuded a more or less sanious secretion; and that not only was there a complaint of constant annoyance and pain, increased on the accession of fresh inflammatory symptoms, but that the entire sore remained refractory to all local means hitherto enumerated and described. If, however, success attended the closest and best concerted topical treatment, it was only temporary; for the repair which resulted was rapidly destroyed by the formation of abscess in one of the enclosed fistulous channels, the contents of which found a ready exit through the new and non-consolidated tissue.

In addition, not unfrequently, the patency of a fistulous canal was found to depend on a portion of gland which, although involved in disease, was not in a condition to undergo complete disintegration.

The mere destruction of the unhealthy, hardened, and languid edges of such ulcers, as recommended and practised by some surgeons, is not, therefore, generally sufficient; and it becomes of the greatest importance that a correct appreciation of their true pathological condition and complications should on all occasions be ob-

tained, ere such powerful remedies as caustics are called into requisition.

From these observations, it may be gathered that the use of caustics becomes expedient under three conditions:—Firstly. When the ulcerated surface is slight and only involves the skin, and, perchance, its connective tissue; Secondly. When the areolar tissue is more extensively affected, and the skin is undermined, the edges, at the breach of continuity, presenting the morbid appearances which have already been described; Thirdly. When fistulous channels extend from the implicated integument to deeper structures, and to entire or portions of diseased glands, and when, notwithstanding partial reparation and amendment, relapses ensue, causing further mischief, and rendering permanent cure still more difficult of attainment. To meet all these various conditions, caustics must be used in the light of destructive agents.

Firstly. When the ulceration is recent, slight, and comparatively superficial, it will generally be sufficient to employ caustic in such a way that the mere surface and margins of the ulcer are destroyed. The only caustics which I have recourse to for this form of ulceration, are the *nitrate of silver* and *potassa fusa*. Of the two, I prefer the former, as its application is not attended with the same amount of pain, its action being less severe. It may be used either in the solid stick, or in the form of a very strong solution applied by means of a camel's hair brush.

Ulcerations of this description are usually met with on the neck, and produce a very considerable amount of inconvenience and discomfort. The peculiar kind of scabbing which takes place, forming hard, dry, brownish-yellow incrustations over the surface, tends materially to increase the disfigurement which they cause. To remove this dried secretion, it will be necessary to employ a poultice before applying the caustic in the way I have recommended.

The details of the following case will serve to show in what way I am in the habit of topically treating such forms of ulceration as are now under consideration.

A young gentleman, aged 16, was brought to me from France, in April 1860, on account of an ulcer of the size of a five-shilling piece, situated close to the right clavicle. For some years he had suffered from various forms of scrofulous disease, but had gradually improved in health, and the only ailment from which he suffered at the time I was consulted was this intractable ulcer. All disease of the glands had subsided. Every form of treatment had been employed without effect. Iodine had been enthusiastically pushed, but to no purpose. Every now and then, the ulcer was *lightly* touched with a caustic; but for six years it remained open, and discharged an unhealthy matter. A distinguished Parisian surgeon at last advised that it should be left alone, as in all probability its cure would be followed by a still more formidable scrofulous affection.

On his first visit to me, finding that the ulcer was in all respects one of the simplest form, I rubbed on its surface a stick of nitrate of silver. A desired eschar was produced. On the fourth day, this artificial scab separated, when the raw surface appeared less in extent, and was not nearly so tender. Healing was advancing from the circumference. This treatment was adopted on four more occasions; and, after the lapse of a month, I had the satisfaction of seeing the rebellious surface completely healed, and, after many months, I failed to discover any approaching symptoms of a worse form of disease. On the contrary, the patient rapidly improved in health and spirits, which had suffered great dejection from the long continuance of the ulcer. I have selected this case, as it admirably shows the way in which a caustic application should be used in all cases of this description.

If some of these ulcers, which are highly irritable and sensitive, be carefully examined, it will be found, as Mr. Hilton has practically shown, that these two morbid conditions are greatly, if not entirely, dependent on the exposure of minute nerves; and that, until such have been destroyed or removed, healing will not ensue.* I have always observed that scrofulous ulcers exhibiting great irritability and causing considerable pain are the most difficult to cure; and, even in unhealthy patients, it has often resulted that amendment of the constitutional powers has failed by itself to procure cicatrisation. From the highly sensitive condition which these ulcers sometimes present, it might be supposed that the application of the lunar caustic was a very painful operation. Such, however, is not the case; and I could advance many instances to prove the correctness of this statement.

Secondly. The use of caustics is called for when the diseased condition is of a more complicated character, and rendered so by the cellular tissue being undermined, and the margins of the ulcer appearing raised, flabby, redundant, of a peculiar purplish-blue colour, and exuding an unhealthy sanious fluid. The object in such cases is to destroy all the morbid parts, and, by means of mechanical treatment to be presently described, to render the healing as complete as possible. For the destruction and subsequent healing of ulcerations presenting this condition, M. Lugol was in the habit of applying a caustic solution containing iodine in the following proportions:—

℞ Iodinii 3j; potassii iodidi 3j; aquæ 3iss. M. Fiat lotio.

Although I am not disposed to gainsay the advantage of such an application, still, judging from my own experience, I feel bound forcibly to recommend the use of the potassa fusa. It is astonishing to see the rapidity with which the most perverse scrofulous ulcerations heal after they have been somewhat heroically treated by this caustic. Some time since, being determined to investigate, more fully than I had hitherto done, the advantage of this form of treatment, a certain number of the very worst forms of scrofulous ulcerations were selected by my brother and colleague, Dr. W. P. Price, and carefully treated by him. The patients were inmates of the Children's Hospital at Margate, during November and December 1859. Without quoting the particulars of each individual case, I may briefly remark that, in the six instances selected, the disease was situated on the neck and beneath the angle of the lower jaw. In all, healing took place; and in the majority of the cases, comparatively slight scars remained. The application of the caustic in every instance was attended with some degree of pain; but in one in particular, a boy (J. D.), aged seven years, it was much more severe. In one or two of the cases, the ulcerations were likewise situated in other parts of the body, and to some of these the chloride of zinc was applied; but the potassa fusa appeared to be the more satisfactory application.

The greatest possible care must be taken when using this potent remedy; for it very rapidly dissolves, and, by coming accidentally into contact with healthy integument, is apt to cause mischief. Before applying it, I am in the habit of coating with oil or glycerine the normal skin immediately surrounding the ulcer, by which means any unintentional use of the caustic is not attended with serious consequences.

After the potassa fusa has been employed, nothing gives so much relief as smearing the surface with oil, and applying a tolerably warm linseed-poultice.

* Mr. Hilton, in his late course of Lectures at the Royal College of Surgeons, on the subject of "Rest in connexion with the Treatment of Disease," showed how, by means of exploring the surface of an irritable ulcer with a sharp point, the exposed nerves might be readily detected.

Some surgeons have recommended the occasional application of sulphate of copper to the flabby and irritable margins of the ulcers, with subsequent pressure by means of a pad and bandage. Although pressure is, without doubt, a valuable adjunct in the treatment of some forms of ulceration, still, I believe, nothing short of actual destruction of the diseased parts, especially when of long standing, will lead to a favourable issue.

In adverting to the treatment required for the removal of scrofulous scars and cicatrices, it will be seen how a judicious interference by means of caustics, in this stage of the affection, sometimes leads to the most satisfactory results, so far as obtaining healing with little subsequent deformity.

Thirdly. The application of caustics is advisable, when the ulcerations arising from tubercular disease of the lymphatic ganglia are associated with still further mischief, and extensive and obstinate fistulæ result. In such cases, after the surgeon has thoroughly convinced himself of the exact condition presented by the complicated mischief, a careful use of the potassa fusa will be accompanied with decided benefit. If it be applied to the fistulous tracts, when they are lined with a thick semi-gelatinous membrane, and not associated with existing disease of a gland, the sanious and unhealthy secretion will be changed for one of a more truly purulent character, and be followed by contraction of the canals. If, in addition, the margins of the ulcerated surface be treated as lately advocated, the very best results will follow. In this way I have often succeeded in closing the most extensive and obstinate sores, and I prefer it to any other method.

But, notwithstanding this treatment, it will frequently happen, especially when the ulcerations are situated on the neck, that complete healing will not take place unless recourse be had to mechanical means. A momentary consideration affords the explanation. The skin covering the neck is closely associated with a thin plane of muscular fibres (the platysma myoides muscle), which, lying between the two layers of the superficial cervical fascia, extends from the lower portion of the face and jaw to the upper part of the chest. The action of the muscle, and its effects on the skin covering it, are obvious. In some persons its functions are more marked than in others. I possess very considerable control over the muscle situated on the left side of my neck, and can, at will, corrugate its fibres, and give it an apparent spasmodic action; but over its fellow I possess no voluntary control.

When, therefore, the skin and cellular tissue of the neck are included in scrofulous ulcerations of the character now under consideration, it will be found, unless the action of this particular muscle be paralysed, that constant motion, although of a partly involuntary kind, will prevent healing and cicatrisation. This undue influence may be counteracted by artificially staying the action of the muscle by means of paddings of cotton-wool, charpie, etc., skilfully adapted, and maintained in position by means of strips of sticking-plaster and a bandage. I have long been conversant with the advantages of this plan, but have only lately heard it publicly advocated. (Mr. Hilton's *Lectures on Rest*, etc., 1860.)

No matter what caustic is used, it must be the endeavour of the surgeon to procure the best possible results; and such cannot be obtained without due regard to the various practical hints which have been detailed.

In the management of this complicated form of ulceration, I have avoided all mention of the knife, because I believe that its application is generally inexpedient, and that the same end may be more surely attained by less severe measures.

Although I have insisted on the importance of local interference in the treatment of scrofulous ulcerations, still, lest I should be thought to have done so too

urgently, I will again repeat that I cannot sufficiently recommend a hand-in-hand resort to constitutional and topical means, for it is only by a judicious application of both that really satisfactory results can be obtained.

[To be concluded.]

MEDICAL PSYCHOLOGY.

By ROBERT DUNN, F.R.C.S., etc.

[Concluded from p. 275.]

Phenomena of the Intellectual Consciousness. To perceive and to think are distinct mental acts; for perception, as we have seen, speaks to us from *without*, but intellection from *within*, so that the mental processes are here reversed. And while, on the one hand, all our immediate or intuitive knowledge has its origin in perceptive experience; so, on the other hand, all our representative knowledge is the creation or product of the mind's own intellection and introspection, of imitation, imagination, ratiocination, and reflection: for these, with memory and volition, are the distinguishing phenomena of the intellectual consciousness. It is through them that man is raised so immeasurably high in the scale of being above the brute creation, and that the human mind attains to its culminating phase of development in the highest reason, and the freest will. Rising above sensation, and above perception, man soars to the region of representative knowledge, grasping through his intellectual faculties and reflecting powers abstract ideas, and necessary and universal truths, and finding articulate utterance and expression for them through the noble faculty of speech, in language.

There are, as we have seen, instinctive intellectual intuitions, primitive beliefs, and primitive judgments; but, in the development of the intellectual consciousness, the imitative and imaginative faculties are the first to come into play, and to begin the work of abstraction. Man is from his cradle an imitative animal; and in the infancy of the race, in remote antiquity, he first sought to embody, through the imaginative faculty, his perceptive intuitions, his inward or mental images, and representative ideas, in the outward realities of nature, as their signs or symbols, and afterwards set himself to work, by means of his hands and with the chisel and the pencil, to mould, form and fashion images of those objects of nature, in which he had embodied his mental images and generalised ideas, and also to make pictorial representations of them. Such of old, were the winged bulls of the Assyrians, and such the hieroglyphics of the Egyptians; and thus, through the imaginative and imitative faculties, were sculpture and painting, however rude in their beginnings, his first step in the process of abstraction. For, until signs are employed, our mental images are not held clearly apart; they merge like dissolving views into one another. Our life in fact, without them, would be more like a dream than a waking reality, portions of a thousand different ideas perpetually combining with and melting into one another. But, when once symbolised or embodied in signs, our generalised ideas are no longer, but cease to be, mere subjective representations; for, being thrown into fixed and significant types, which perform, though imperfectly, the office of abstract ideas, they exist in the mind altogether apart from the region of immediate or inward experience, as independent intellectual realities; and, as such, become distinct and intelligible objects of contemplation and thought, which can be placed at pleasure either within or without the consciousness of the moment. But still man could not be said to have achieved his first step in the freedom of human thought, until, instead of objectifying his inward images in existing outward realities, he had, by his creative mental energy, produced, invented, and constructed his own sign, phonetic or visi-

ble, for the embodiment of the intellectual idea, "the sign for the thing signified." And this he has done in language, creating a new external world, and transferring into it the phenomena of his inner life. For "in language the sign, whether spoken or written, is objective. It appeals to the fears; it comes to us from the outward world, and is constructed from the elements of nature around us. At the same time it has no natural meaning, and contains no thoughts, apart from the mind which created or uses it. Its whole force consists in its being the embodiment of an idea; in brief, it is idea objectified." (Morell's *Psychology*.)

Now, constituted as man is, and endowed with the faculty of speech, his exclusive prerogative, it is as natural, when vividly affected, that he should give expression and find utterance, in articulate sounds, for his feelings, emotions, ideas, and thoughts, as that he should voluntarily use his locomotive powers in progression. It is true, that the scream of alarm, the shriek of horror, and the laugh of surprise, like the scowl of hatred, are natural signs, and not conventional ones, like articulate words. But having an instinctive apprehension of the gestures, cries, and other signs of natural language, he gradually ascended from these to the acquisition of articulate speech, by giving, step after step, conventional names to objects and actions, emotions and passions, generalisations and abstractions. Among all the races of man, the instinctive impulse is irresistible to give utterance in articulate sounds to the feelings, emotions, and thoughts; and not only to fix upon articulate sounds, or names, as representatives of his intuitive cognitions or conceptions of things, but also to find expressions for the different qualities and states of things. And thus to the natural language of inarticulate sounds, gestures, and actions, he first added the conventional language of signs, and afterwards, in the fulness of time, alphabetical writing and the invention of printing consummated the intellectual benefits derived from the noble prerogative of speech.

Language thus implies a train of thinking; it is the circulating medium of our thoughts, the minister of thought and its interpreter. But without ideation, without mental images and representative ideas, there could be no thought, and without thought language would cease. Still thought there may be, indeed thought there is, in the case of the unfortunate and uninstructed deaf mute, independent of and without language. Nay, without speech, man, by virtue of his perceptive and intellectual faculties, can observe objects, and mentally arrange, associate, and form them into groups. He can judge of their properties and qualities, compare them and even deduce inferences; but how weak and incomplete are these processes of thought when language is wanting! without the agency of words, how limited and contracted would be those of generalisation and abstraction! As an intellectual instrument, language is intermediate between perception and thought. We reproduce in speech the mutual relations of objects, the relations of our thoughts to objects, and the order and relations of our thoughts to themselves. Nevertheless words are purely conventional, they have no natural meaning of their own, and contain no thoughts apart from the mind which created and uses them. Written notional words are the symbols or representatives of objectified ideas, and all notional words belong to the region of representative ideas, after these ideas have attained their most general character; and although words cannot excite the feelings like a gesture, or warm the imagination like a picture, they are the indispensable machinery in the process of generalisation and abstraction. And "in this way it is that they serve to construct the more general outline of knowledge. Hence the wonderful power which words possess on the whole process of thought; hence the capacity they attain, after the teachings of experience have paved the way, for ex-