Clinical Remarks

ON

MODIFIED LINEAR EXTRACTION.*

BY

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VII.—AFTER-TREATMENT.

THANKS to the genial progress of the healing, in the great majority of cases the after-treatment may, as a rule, be as simple as possible. The patients, while still on the couch, have the ordinary compressive bandage applied, and are thereupon conducted to their rooms. It is again one of the advantages of the method, that we may safely proceed in this wise. Flap-extraction I had invariably thought it necessary to perform from the patient's bedside, a practice anything but convenient, especially where the locality is rather complicated.

As, owing probably to the distension of the lids and the lesion of the conjunctiva, a rather smart pain is apt to be felt after the operation, it is sometimes in private practice, where we operate in the patient's own room, perhaps as well to apply cold compresses for ten or fifteen minutes prior to the application of the bandage.

In reference to the dressings, which, I insist, are the essential point in the after-treatment, the following may still be noted.

1. The first dressing must be pretty tight, to secure as intimate a contact of the wound-edges as possible and counteract any tendency for bleeding. This is of particular importance in case of collapse of the cornea, when the first dressing should be somewhat slackened after a few hours, whereas, ordinarily, we leave it uninterfered with until the evening visit—i.e., about six hours after the operation.

2. The second dressing, which usually remains from the seventh to the sixteenth hour, I make a little less tight than the first, though always uniformly closing and steadying. In this period, more freedom must be left to the transudations. The third dressing, however, must again be tighter, and the more so if symptoms of swelling present themselves. From the sixteenth to the thirtieth hour, is the time when the lymphatic spaces of both the cornea and conjunctiva become most turgid; and I believe that any excess of this turgescence, with all its morbid sequelæ, is best combated by compression. At this period, I am also in the habit of adding a fourth ascending tour of the bandage.

3. My original recommendation to apply the second ascending tour tightly, and the third and less ascending one rather more loosely, had reference to flap-extraction downwards. In our operation, these two tours must at least be equally tight; so that the indirect pressure conveyed through the lids to the eyeball may not by prevalence fall on the lower portions of the latter, and therewith counteract the aimed at contact of the wound-edges. In every other respect, the position and prominence of the eyeball must be taken into proper account. The fourth tour, if resorted to, must, of course, be looser than the

second and third, since it is merely intended to hinder the paddings from slipping upwards.

4. Where there is a copious flow of tears within the first hours after the operation, the dressing must be renewed somewhat more frequently; whilst I do not know of any circumstances under which it would be advisable entirely to dispense with the latter during this first period. As a rule, such an increased flow of tears, usually coupled with a periodically augmenting sensation of pressure, is not a symptom of grave import. It abates with the night's rest, or else under the influence of an injection of morphia; and the next morning the condition is perfectly normal. Altogether the maxim, that the symptoms of the first twelve hours are of small significance, whereas those of the second and third equal period of time deserve the greatest attention, holds good also in this operation.

5. Although the main object of the compressive dressing is accomplished within the first thirty-six or forty-eight hours, I consider it still advisable, especially with unruly patients, to keep applying it regularly for four or five days. The surgeon, as well as the nurse, are thereby relieved from the anxious surveillance of the patient. Only in case of excessive irritability of the conjunctiva, or where spastic entropion threatens to develop itself underneath, or a feeling of heat or headache is occasioned by the dressing, this ought to be removed at an earlier period. In no case, however, should it at once be definitively dispensed with. When the eye has become habituated to a certain amount of pressure, the suspension of the latter is apt to induce increased turgescence of the lymphatic- and blood-vessels; and this, though at a more advanced period attended with less danger, may yet retard and somewhat irregularise the recovery. Therefore, the dressing should first be left off for a few hours only; on the next following day for double that time; further on for the whole day; and, lastly, during the night also. The observation of healthy, and more particularly of diseased, eyes, has sufficiently proved that, during sleep, the vessels become more turgid; a fact on which the advice has been based, to examine the residual phenomena of hyperæmic conditions—*e.g.*, after ophthalmia soon after the waking of the patient. It is advisable, therefore, where the propensity for injection and swelling is not quite extinct, to resume the dressing still for a few nights.

Although, after linear extraction, perfect rest of the patients is less necessary than after flap-extraction, they should still not wantonly be permitted to leave the bed during the first two days. Hospital patients should be kept in bed double or even thrice that time, though from no other motive than that whilst in bed they require much less careful watching. On the other hand, should the general health require it, or the sojourn in bed occasion that peculiar anguish which it is known to beget in some cases, there ought to be no hesitation in allowing the patient, even during the first days, though under increased surveillance, to be up for a while.

In regard to diet, there is little cause for restraint. Chewing should be avoided for the first three days; for the rest, we are guided by the wants of the patient.

For the first six or eight days, the light should be strictly kept out; to be gradually re-admitted, if the progress be regular, during the second week.

At any period, the eye may be cautiously opened, if but artificial light be employed, especially a candle held at some distance. It is, however, nowise necessary—except it be done for the sake of study—during the first days to examine the eye at each visit. Provided the lids are perfectly free from

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swelling, and the dressings thoroughly dry, we may be absolutely certain that everything is in order. Within the first thirty-six hours, while the healing tendencies are yet unsettled, I think it even unavoidable, where the outer aspect is normal, to expose the wound and submit it to accurate examination. During this time, the lids should either be kept closed, or at most the lower lid gently drawn down to allow of a passing glance at the cornea and pupil. Should the illumination be found insufficient, convex glasses will afford the surgeon the necessary assistance. If, however, there be any irregularity in the after course, it will certainly be the best plan, at short intervals, thoroughly to inquire into the state of affairs, in order correctly to appreciate the effect of the dressings and the treatment generally. The vision should not be tested before the third day; as every necessary information may be obtained by the objective examination of the eye.

Atropine is, as a rule, during the first forty-eight hours, abstained from, as in the closed eye it seems apt to induce conjunctival irritation. This, however, like everything capable to provoke secretory excitation, we have carefully to avoid during the very first period. The morbid processes which we meet with at this period arise, almost without exception, from irritation of the wound-channel, and any affection of the iris is merely consecutive. Since, moreover, by the large iridectomy, muscular relaxation is sufficiently provided for, I do not believe that the early instillation of atropine has any particular advantage. The use of it should, therefore, be restricted to those cases in which cortical fragments were left behind, or where circumscribed irritation occurs at the confines of the artificial and the natural pupil. From the third day, however, the mydriatic should be applied once or twice daily, in order to immobilise the inner ocular muscles and thereby to counteract any irritation which at this stage may be propagated from the wound-channel. If, under the continued use of atropine, conjunctival irritation supervene, the drug must be abstained from; or, should its employment still appear to be called for, be applied alternately with a weak solution of acetate of lead.

From ten to twelve days was the average time the patients operated upon were kept confined to the house.

Regarding irregularities of the after-course and their treatment, I may still note the following, mainly in confirmation of my former statements. If the pain from the operation does not within six hours subside sufficiently to allow the patient to sleep, I order a subcutaneous injection of morphia at the temple; and, if the secretion of tears is abundant, a rather frequent change of the dressing, with an occasional interposition of cold compresses for five or ten minutes. Any prolonged employment of the latter, I persist in regarding as detrimental to the progress of the healing. For plethoric individuals only, and especially such as are accustomed to be bled from the arm, I order, in case of enduring pain, a venesection, to be followed by an injection of morphia. This, after the loss of blood, secures the desired rest with additional certainty. In other cases where the injection alone proves unavailing, the patient not being of infirm health, I prescribe a powder of calomel and rhubarb, from ten to fifteen grains of each, and, if within eight hours the bowels have not been moved, a tablespoonful of castor oil is given. But all these remedies are without influence if they are not administered before the symptoms of an irregular after-course, especially copious secretion and swelling of the lids, are become conspicuous. This stage once passed—i.e., when the untoward proliferation about the wound-edges and their vicinity has

set in—our only endeavour can be to limit the infiltration, and conduct the now declared morbid processes (iritis, phakitis, cyclitis) to a favourable issue.

[I do not share in the belief that this object also can be attained by local bleeding. Whilst venesection is merely useless where suppuration has taken place, leeches in the neighbourhood of the eye do positive harm. Owing to the influx which they provoke, the swelling of the lymphatic vessels of the eye increases, and the remission, else the harbinger of the relief aimed at, comes too late—i.e., after the primary effect has worked its mischief. At a more advanced period, leeches may sometimes be applied with advantage; but they do not suit where the tendency of the healing is still unsettled, and every influx may become the occasional cause of suppuration.]

At this period, the only resource I know of (unless the suppuration assume at once a diffuse character) is the consistent employment of the tight dressing, in alternation, at varying intervals, with warm aromatic fomentations. This dressing is according to the degree of discharge, instead of every twelve hours as is the ordinary rule, to be changed every sixth or fourth, or even second hour. The general health must be properly attended to; e.g., plethoric individuals receive a derivative treatment, such as cooling aperients, while infirm patients should have roborants, as wine, quina, etc.

The really dangerous time is between the twelfth and thirty-sixth hours. After this period, grave irregularities occur but very exceptionally. This limitation is another signal advantage of our operation. After flap-extraction, the danger is, indeed, likewise greatest at the same epoch; but the risk of suppuration continues decidedly enough up to the twelfth hour, and even on the three following days we are not entirely safe.

The infiltrations proceeding from the wound-channel present themselves under a very varying aspect. The so-called diffuse suppuration is here fortunately but very seldom met with. In evidence of this the fact may be adduced, that I had performed one hundred and four operations before I observed the occurrence of purulent panophthalmitis. Seeing the auspicious character of the incision, and provided the operation is properly performed, such an event appears to arise from a thoroughly unfavourable disposition of the eye combined with a wretched state of the general health. The symptoms are identical with those observed after flap-extraction. After twelve or eighteen, rarely thirty, hours of a most indolent course, the upper lid begins to swell, and a copious, thin, dirty-looking discharge, of a yellowish-grey colour, presents itself.

[This secretion is not so much the product of the lachrymal gland as of the conjunctiva, and combines with the epithelial detritus and the elements of pus to form a pretty homogeneous magma. Even at this time the pain may be exceedingly slight, a fact sufficiently accounted for by the low state of sensibility of those patients who are particularly obnoxious to such an affection. On the eye being opened about the time, when first the morbid secretion manifests itself, a portion of it sallies forth, which had been retained between the lids. The cornea, the wound, and the pupil, on superficial inspection, do not yet present any material irregularity; but the whole anterior aspect of the eye is of an ill-boding, yellow cast, which is due to the lymphatic spaces of the conjunctiva, as well as of the cornea, being filled to excess. It is the uniform swelling of the former, and the sheet of fluid spread over its surface, which impart to the eye that ominously dull expression. The

discoloration of the cornea is due to the presence of yellowish matter in the tubes. Although, under focal illumination, the latter are found to be replenished with pus, there appears first to be but a thin sheet of it, causing the vertically impinging light to reveal only a faint dulness. Under these circumstances, the anterior chamber may be found to have recovered its normal depth, as is mostly the case; or there may still be a fistulous opening. This diversity has perhaps partly to be accounted for by differences in the ocular pressure, and partly by the progress of the healing in the individual cases. A timely and relatively abundant infiltration about the lips of the corneo-scleral wound and in the subconjunctival portion of the wound-channel, favours the early restoration of the chamber. — —]

In this form of suppuration, neither remedies nor operative interference are of any avail. The compressive dressings must be exchanged for camomile fomentations, or, if the tension increase, for poultices.

Limited suppuration is of somewhat more frequent occurrence. Here, again, swelling of the lid and increased secretion between the twelfth and eighteenth hours are the first symptoms; yet the upper lid does not become so bulky nor the discharge so thin and profuse.

[In the cornea, we first notice a lymphatic injection of the plasmatic tubes, and thereupon a cloudy infiltration of pus. This, however, remains limited to the neighbourhood of the wound, and does not assume the shape of a fully formed circular abscess. The conjunctival flap becomes likewise swelled, and of a yellowish hue. Somewhat later, when the infiltration in the cornea begins to concentrate itself, we mostly find the conjunctiva raised by one or more yellow knobs, produced by pus at its inner surface (i.e., in the subconjunctival region of the wound-channel). Although, under these circumstances, the cornea mostly becomes perfectly clear again, the superinduced iritis and iridophakitis render the case a very serious one. It depends in the main on differences of degree, whether we shall have the formation of organised membranes on the posterior surface of the iris and in the pupil, and perhaps further the propagation of the process to the deeper tunics, or the more fortunate termination in absorption, mostly attended with the appearance of small hypopia. Lastly, the fact must not be lost sight of, that, a reaction of the superinduced processes, if they run a very rapid course, the corneal affection, though primarily inclined to remain limited, may be caused to assume the characters of diffuse suppuration with all the consequences of the latter.]

It is just under these circumstances, where everything depends on the limitation of the area of purulence, and the consequent mitigation of the secondary processes, that the before recommended treatment by the compressive bandage, to be renewed at short intervals and alternated with warm aromatic fomentations, becomes of the utmost importance. Best, if threatened by severe pain, is to be secured by injection of morphia. Further on, diligent instillation of atropine, leeches (if necessary), and the energetic use of mercurial ointment, must be had recourse to.

Minor degrees of irritation are occasionally still later, say up to the end of the first week, seen to affect the wound-channel, especially if the iris had not been accurately excised, or if a relatively strong ocular pressure necessitated the formation of a rather broad cicatrix, or if cortical remnants irritate the inner aperture of the wound, or, lastly, if the necessary cautions were too early dispensed with. These tardy and moderate irritations, however, are no

longer productive of considerable swelling, and are less apt to lead to purulent infiltration. The symptoms are, in general, some tenderness of the eyeball, sensitiveness to light, injection of the subconjunctival vessels, with some (true) serous chemosis, slight swelling of the conjunctival flap, and greyish injection of the corneal tubes, chiefly close to the wound. If not subdued, the irritation may lead to proliferation of the capsular cells, or to iritis, and thereby impair the result of the operation. If the irritation arose from incarceration of iris, small prolapses of the latter are sometimes seen to develop themselves near the corners of the wound. It is of importance carefully to watch these occurrences from the beginning. Continuation of those measures on which we else insist only for the first two or three days, especially the bandage, atropine, and, if the eye be tender to pressure, provided the first three or four days are past, an application of leeches, are usually sufficient to restore the equilibrium.

The iridal prolapses referred to, if not altogether trifling, must be snipped off by means of a small knife and scissors. If the aqueous humour remain generally turbid, paracentesis may be called for. Only in a single case of this kind, where, at the same time, the eye appeared suspiciously tense, I was compelled, so late as the third week after the operation, to make an iridectomy downwards, whereby I attained the desired object. The patient, a female, had by her circumstances been obliged to leave the hospital too soon, and immediately after committed great indiscretion.

In case the vitreous space has been encroached upon, the sides of the wound-channel do no longer comprise conjunctiva, subconjunctival and episcleral tissue, cornea and sclera, and, lastly, capsule and intracapsular cells only, but also the walls of the ruptured vitreous substance. Hence the infiltrations of the latter, whether they remain rudimentary or lead to purulence, obtain a share in the traumatic irritation. They, no less than proliferation occurring at any depth of the wound-channel (i.e., in any one of the enumerated constituents), are liable to infect their vicinity—viz., the bulk of the vitreous body and the inner membranes, or also the whole of the wound-channel—and thus to evoke diffuse irritation. This, apart from the direct danger of intraocular hæmorrhage, dispersion of the cortex, etc., is the reason why rupture of the vitreous humour impairs the chance of a good recovery.

As, in my view, the whole of the serious accidents which come under observation originate with irritation of the wound-channel, it follows that I consider primary inflammation of the iris to be very rare. Only in two (out of three hundred) cases, once on the second, and once on the third day, whilst there was nothing irregular about the healing, no mucous secretion, but merely a frequent flow of tears observable, I saw the aqueous humour become diffusely turbid, and a hyperæmic discoloration and swelling of the iris, as also exudation on its anterior surface and into the pupil, develop themselves. That this does not occur more frequently, is perhaps accounted for by the large iridectomy, and by the greater facility afforded by this method than by any other of clearing the pupil from cortical remains. Such genuine inflammation, however, is far less ominous than the propagated iritis flowing from purulent affection of the wound-channel; since in the former, especially under proper treatment—atropine, mercurial ointment, injection of morphia, leeches—the exuded material is much less inclined to become organised.

In the great majority of cases, the anterior chamber is rapidly restored. Already, at the first evening visit, we find it of normal depth. To judge from the

perfect dryness of the dressings, the very first transudations appear to be retained, so that we might speak of an immediate restoration. In a certain proportion of the cases, however, which I estimate at from 15 to 20 per cent., the chamber remains for several days—at most, however, up to the fifth day—entirely abolished. This, if unconnected with any other irregularity, is of no moment whatever, as we know from our experience in flap-extraction, where I have seen the same phenomenon persist for thirteen days. I believe a relatively high ocular pressure to be the cause. Under its influence, the secretion of aqueous is less abundant than usual; whilst the oozing off of the humour may have to be regarded as wholesome. Since I have adopted the practice of carefully testing the tension of the eye immediately after the operation, I have learned tolerably well to prognosticate the prolonged suspension of the chamber. Of longest duration (five days) I found it in two eyes which had been somewhere else subjected to iridectomy for chronic glaucoma, and in which, on that occasion, cataract had been produced. Even after the cataract operation, these eyes presented still a considerable degree of hardness. But the phenomenon in question may also be met with where the ocular pressure, though higher than usual, does not exceed the certainly wide physiological limit. The sole cautions which require to be observed while the fistula lasts are the prolonged employment of the bandage and rest.

Slight bleedings into the anterior chamber we likewise meet with in a goodly proportion of the cases. These effusions appear to proceed partly from the edges of the artificial pupil, and partly from the canal of Schlemm. They seldom attain any considerable height, subsist a few days, may also recur at intervals, and do not call for anything either but the continuance of the dressings. In a single case I had to resort to paracentesis, because the blood showed no inclination to become absorbed, occupied half of the chamber, and assumed a very dark colour. An affection of the vitreous humour had been recognised before the cataract operation. The tapping had the desired effect.

A certain degree of (true) serous chemosis is not unfrequently met with on the second, third, and fourth days. It mostly occasions a slight sensation of pressure, which, like the chemosis itself, disappears entirely after a few slight strokes of the scissors. The symptom is of no importance, if unattended with mucous discharge, or swelling of the lids, or any sign of infiltration. That we meet with it rather more frequently here than after flap-extraction, may, I think, be accounted for by the wound-channel extending into the subconjunctival space; into which, thus, the aqueous humour freshly secreted after the operation finds its way. Yet this chemosis is not to be confounded with that which is kept up by a permanent communication of the subconjunctival space with the chamber, such as, *e. g.*, arises from cystoid cicatrization after the operation for glaucoma. The communication in our operation is but transitory; but, in combination with the lesion of the conjunctiva and the subconjunctival tissue, it may be capable to beget this subconjunctival oedema from irritation,—for such is the nature of the chemosis with which we are here concerned.

[The diagnostic differences between the oedema from irritation and the chemosis by filtration, as we may call it, are the following. 1. The latter, although, of course, likewise obeying the law of gravity, yet is always in part accumulated about the wound, and sometimes really sacculated there, if adequate subconjunctival adhesions have taken place. 2. The small conjunctival vessels appear, on account of their

extension, rather pale; whilst, in the oedema from irritation, they are red owing to their active participation. 3. In the chemosis by filtration, the eye is, *ceteris paribus*, softer; accurate observation may prove the size of the chamber to vary, and, *eg.*, to lessen on pressure being made upon the eye. 4. With the filtration-chemosis, the wound-edges are at least frequently united by a frail cystoid substance. 5. After incision, this chemosis re-forms; whilst, in the oedema from irritation, this is not seen, except the cause of the irritation persist in operating.]

Cystoid cicatrization, which had not come under my notice when I published the first paper on this method, I have since had the opportunity of observing in two cases. The first was one of the two glaucomatous eyes affected with traumatic cataract, which I have mentioned before. Chemosis from filtration supervened, but the eye did well. The second eye was not a glaucomatous one, it is true; but I find the following note referring to it in my journal. "The hardness of the eyeball caused the removal (by pressure) of the cortical substance to be tedious, and some delay in the restoration of the anterior chamber has to be looked for." Indeed, the iris remained in contact with the cornea up to the fourth day, and a cystoid cicatrix of tolerable size developed itself. Withal, the result was S=J. Both cases corroborate the argument that the lesion of the sclero-corneal junction does not imply a liability to cystoid cicatrization, except in the presence of a high degree of ocular pressure.

Very few were the cases in which we were fain to forego the complete evacuation of the cortical substance,—leaving a minute haze on the inner surface of the capsule out of consideration. The reasons were either uncommon toughness of the cortex in immature and over-ripe cataracts; more than usual hardness of the eye, which greatly hinders the success of pressure; or incapacity of the patient to look down. Whenever cortex was left behind, the healing was protracted; and the after-course proved eminently apt to be irregular, chiefly from irritation of the inner aperture of the wound-channel, and consequent proliferation of the capsular cells. In one case, that of a female octogenarian, I was obliged to expedite the over-tedious absorption of the relinquished surface matter by discision.

As regards the item of secondary cataract, we have to distinguish those newly formed thin, hyaline membranes filling the gaps in the capsule, and evidently due to an increased activity of the intracapsular cells (though mostly unattended with obvious signs of inflammation), from the deposits of connective tissue, the products of irritation, propagated from the wound-channel to the capsule and iris. The former are here more rarely met with than after any other method of operation—a circumstance which has been accounted for by the mechanism of the proceeding, and by the less severe bruising of the capsular epithelium. All they require is simple division of the capsule *per corneam*. This operation has always to be deferred a considerable time (four months), lest, from the proliferating tendency of the capsular epithelium, the apertures might become filled up again. The connective-tissue species necessitate an iridectomy downwards, as the case may be followed either by discision or laceration with the hook. The iridectomy also should be deferred at least eight weeks after the cataract-operation, unless the presence of synechia posterior, together with retro-iridal exudation and increased tension, demand an earlier interference. The ulterior operation on the capsule should under no circumstances be entered upon, except there be a sufficiency of pupillary space; to provide which, another iridectomy must, if neces-

sary, be performed. Any neglect of these cautions involves the danger of considerable proliferation of the capsular cells annihilating the result, or of the supervention of exudative iritis and cystitis, accompanied with an increase of intraocular pressure (traumatic glaucoma).

[To be concluded.]

ON POSITIVE NOSOLOGY.*

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In apology for volunteering in such a forlorn hope as classification, the acknowledged need is pleaded; the example of all authors of works on medicine; and the desire that the result of twenty years' teaching might now be subjected to general criticism.

Cullen's nosology was rather a symptomatology, and has been honourably superseded. Reynolds aims at a therapeutics, for "medicine does not belong to the hierarchy of the sciences: it is the application of all." Aitken proposed an etiology or hygiology, though "the time has not yet come for a classification on a basis so comprehensive." The more humble aim to abide by the facts of morbid anatomy and morbid physiology, without any theory, appears to be at once practicable. The phenomena presented by the "sick", or, as it is imitatively expressed in the Greek Testament, by "all that are in a bad way," belong to all the sciences. Let them, then, be arranged in order, from the simplest to the most complex, and we have a positive pathological nosology.

The present attempt is limited to the first of three divisions—General, Special, and Specific. Special diseases will include all mechanical and physical phenomena, which are surgical; and as for the rest, they are but illustrations of general diseases. Specific diseases are presumptively synonymous with morbid poisons.

It is proposed, therefore, to name, arrange, and define General Diseases.

The body is built up from certain proximate principles, through cell-growth, into various tissues and organs: this is *Genesis*. These tissues and organs are being continually taken down, and appear in various forms in the excretions: this is *Metamorphosis*. But, whilst they exist, there are associated (correlated) with them many various, and some most exalted, properties or functions: this is *Dynamis*.

Things may go wrong at any stage and in any way; and, when they do, the wrongs may be placed, accordingly, in one or other of three classes: Diseases of *Genesis*, or *Growth*; Diseases of *Metamorphosis*, or *Decay*; and Diseases of *Dynamis*, or *Maturity*.

CLASS I. *Diseases of Genesis*. There are three well-marked subclasses: Diseases of *Genesis Proper*, of *Cytogenesis*, and of *Epigenesis*.

1. *Diseases of Genesis Proper* include all which may be known by excess or defect of the proximate principles. These may be arranged in six corresponding orders, bearing the common termination indicative of a push one way or another: thus—1. Albuminosis; 2. Fibrinosis; 3. Liposis; 4. Glucosis; 5. Halosis; and 6. Hydrosis.

Order i. *Albuminosis*, it might be pleaded at length, may well be adopted as the pathological term for the old and equally accurate symptomological

term *Scrofula*. The cheesy matter found in glands, connective tissue, and internal organs, cannot well be confounded with the translucent changes of tissue in albuminoid degeneration. Bacony liver has been found by Dr. Lionel Beale to be albuminous; and waxy and lardaceous livers have been pronounced the same by Drs. Gairdner and Wilks. Why, then, should we depart from Portal's albuminous obstruction and Budd's *scrofula*? *Scrofula* may thus be retained as one of the most precise terms, instead of being rejected as figurative and vague. *Scrofula* is albuminosis; and albuminosis is a disease of growth, characterised by an excess of curd-like cheesy matter.

Order ii. *Fibrinosis*, or more strictly *Hyperinosis*, might be made to give equal definition to *Inflammation*—a word as much in public as ever, notwithstanding Andral and Magendie's sentence of banishment. Indeed, as a symptom, inflammation—a fire—is the most perfect possible term. Aitken does not mention fibrine in his twenty-six lines of so-called definition; but in the text he affirms that fibrine and mucin are the only true inflammatory exudations. Now mucin contains cells, and is therefore more complex; so let the pathology of inflammation be restricted to fibrillation—a state of fibre. Fibrine, as distinguished from Zimmermann's molecular fibrine of metamorphosis, is doubtless genetic, and just one step higher than coagulation. Professor Graham, telling us how fluid colloids most readily pass into a pectous or curdled modification, adds that "the colloid is a dynamical condition of matter, and possesses *energia*, which may be the source of vitality." Ought we not the more to admire the absence of theory in the positivist Job, who three thousand years ago exclaimed, "Hast Thou not poured me out as milk, and curdled me like cheese? Thou hast clothed me with skin and flesh" (the perfected mucin and fibrine), "and hast fenced me with bones and sinews."

Inflammation, or hyperinosis, is this development in a bad way; and the fruit by which it is known is fibrillated albumen.

Order iii. *Liposis* may be in excess, as in obesity—hyperliposis; or in defect, as in emaciation—hypoliposis. Fatty degeneration, characterised by oleo-albuminous granules, cannot be confounded with excess or deficiency of adipose tissue. Fatty liver ought not to be confounded with degeneration; neither need oil-casts and cells, with albuminuria, to occasion difficulty.

Order iv. *Glucosis* has been most clearly and practically separated into genetic and metamorphic by Dr. Bence Jones; for his division of diabetes into vegetable and animal expresses exactly the same idea.

Order v. *Halosis* is illustrated by rickets and scurvy, which very probably are diseases of genesis, characterised by a deficiency of the salts of lime and potash respectively.

Order vi. *Hydrosis*, or Dropsy, may in some cases be viewed as an error in aqueous nutrition. In active sthenic cases, for example, the water comes from the blood. In fevers, the water may be metamorphic, and come from the tissues.

2. *Diseases of Cytogenesis* include three orders—Hæmotosis, Leucocytosis, and Pyosis. They may be enumerated continuously, as Orders vii, viii, and ix.

Order vii. *Hæmotosis* in excess is Polyhæmia; and, when deficient, it is more correctly named Oligæmia than Anæmia. Hæmorrhage is an *aberratio loci*.

Order viii. *Leucocytosis* is intravascular. Is it not a disease of growth, just one stage in advance of

* Read before the Manchester Medical Society, Feb. 6th, 1867.