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REMARKS ON THE OPERATION OF EXTRACTION OF CATARACT.

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The operation of extraction is well known to be one which is difficult of performance, on account of the dexterity required to follow the eye in the involuntary movements which the irritability of that organ, and the agitation of the patient, naturally excite; but there are many causes of embarrassment likely to arise during its progress, as well as subsequently, and there is no operation in which attention to minute points is of greater consequence or more conducive to success, yet there are but few (if any) books in which the minutiae are sufficiently dwelt upon.

The remarks I am about to offer are strictly practical, being the result of experience bought at the price of much anxiety, but I present them in the hope that they may relieve others of a portion of the anxiety at which they have been purchased. To a young operator, the irritability of the eye is one of the principal sources of embarrassment, for however strong the nerves of the patient, and firm his determination, the eye is spasmodically rolled about, and especially turned upwards, or upwards and inwards, or directly inwards, when the operation is about to be commenced.

In two cases which occurred to myself this proved a most serious difficulty, for in both the eye was drawn so powerfully inwards, that I had the greatest difficulty in completing the section. The patients were highly nervous females, and in each there was a slight strabismus. One lady was completely deaf, and I found it impossible to make her understand that I wished her to look towards the light, so that I had to pass the knife across, and complete the section under the most unfavourable circumstances, the eye having turned in the moment I introduced the point, consequently I could not control the organ, nor did I venture to withdraw the knife in the slightest degree; had I done so, the aqueous humour would have escaped, the iris fallen forward, and I should have been obliged to defer the operation till a future day. Ultimately, both the cases did perfectly well, although in the latter it was necessary to enlarge the section before the lens could be extracted.

The plan that I have found to answer best in obtaining steadiness of the eye, is to ask the patient some question, the answer to which requires a little consideration. During the effort of thought the eye becomes steady, and then is the time to introduce the knife,

In operating with Beer's knife, I have been frequently annoyed by the iris falling before its edge. This may happen from an escape of the aqueous humour, or from the anterior chamber being naturally small: the iris too may be pushed forward by spasm of the muscles of the globe, or again by the large size of the cataract.

Should the iris not be liberated under these circumstances, by friction upon the cornea with the finger, or by gently pressing it against the flat blade, three modes of proceeding are open to us:—First, to complete the section at the risk of slicing off a portion of the iris; secondly, to withdraw the instrument and complete the section with the curved cornea knife; thirdly, to defer the completion of the operation for the present. If there has been escape of the aqueous humour, and the iris becomes entangled with the blade before the cornea has been transfixed, I should certainly adopt the last mode as the most prudent. If an attempt be made to complete the section with the curved knife when but a small wound has been previously made, the iris must be more or less bruised. The pupil will contract from the irritation, which makes it difficult to lacerate the capsule with the curette, and subsequently to squeeze out the lens without using a degree of force which is likely to cause prolapse of the iris at the time, and subsequently either destructive inflammation of the globe, or iritis, leading to closure of the pupil, amaurosis, or other mischief.

I have seen a case in which the pupil contracted to a mere pin-hole aperture before the section was made large enough to permit the lens to pass through, and there was much difficulty in getting out that body. Inflammation set in thirty hours after the operation, and the eye was destroyed.

If but a small portion of the iris fall before the edge of the knife, no great harm will arise from its excision; that membrane will bear a clean cut with comparative impunity, but laceration or bruising is almost sure to bring on inflammation; besides which, the pupil being enlarged by the wound, the extraction of the lens is rendered more easy. I have seen the iris cut upon many occasions, but rarely with ill results unless it had been also bruised or lacerated. According to my experience, however, there is less risk of its being cut by the knife invented by Mr. Scott, the edge of which is convex; I prefer, however, a broader and somewhat stouter blade than that gentleman uses. I have employed it upon several occasions where I am sure that I could not have avoided the injury in question with Beer's knife, but in which the iris was not wounded. I have found it especially useful in cases where the eye was

deeply seated, the palpebral fissure small, and the anterior chamber diminished in size,—a rather embarrassing complication.

It is not an unfrequent occurrence in extraction to find the lens ejected, together with more or less vitreous humour, the moment the section is completed. This is caused by spasm of the muscles of the globe, and although the loss of a portion of the vitreous humour is not perhaps injurious, (and it is considered by some to be positively beneficial,) I think it as well to be avoided, which can be done in the following way:—When the knife has been carried fairly across the cornea, I pause for a moment before cutting out; the eye is then under perfect control, and by pausing, time is allowed for the spasm of the muscles to subside: when that is the case, the section may be completed with safety.

When the cataract is large and the anterior chamber diminished in size by the bulging forward of the iris, I am in the habit of performing the operation of drilling the lens with a fine needle, a few weeks before extracting, as recommended by my lamented friend, the late Mr. Tyrrell, whose dexterity as an operator on the eye I have never seen equalled. This drilling is very simple. A small opening is made in the centre of the capsule so as to admit the aqueous humour to act upon the lens, the soft circumference of the latter becomes absorbed, and in proportion as this takes place, the iris recedes, and the anterior chamber enlarges, so as to allow fair space for the passage of the knife across. Another advantage is, that the cataract being lessened, but little pressure is required to force it through the pupil. This is a matter of some importance, as a frequent cause of failure in extraction is chronic iritis, the result of the stretching and violence done to the iris in squeezing out the lens. In every step of the operation, indeed, and in the subsequent dressing, the utmost gentleness is desirable, for the more violence made use of, the more handling employed, the greater is the risk of failure from inflammation.

After a cataract has been extracted, and the upper lid allowed to fall, it is useful to rub upon the lid gently with the point of the finger, whereby the iris is stimulated to contract. After a short pause, we may gently elevate the lid, and if we find the flap of the cornea is in exact apposition, the pupil circular and clear, the eye should be closed, and the patient desired not to open it again until requested to do so by the surgeon. As a dressing, I prefer fine cambric or linen rag, cut so as to cover both eyes, but with a slit in the centre, to admit the nose. This is to be pinned to the cap, and secured by a calico bandage of sufficient length to go once and a half round the head, so that the ends shall be pinned over the ears. In dressing the eye, it is necessary to be careful that none of the lashes are turned in, nor the edges of the rag frayed out, for I have known much irritation produced by these getting into the eye.

As a general rule, much comfort is afforded by occasionally fomenting the eye after the operation, and I desire this to be done whenever it feels hot and uncomfortable. It is as well to explain to the patient that he must expect to feel soreness, and, perhaps, a gritty sensation for some time, but relief is frequently afforded by gently drawing down the skin of the cheek

so as just to separate the lids, a gush of tears follows, and the eye becomes easy.

As to the time for examining the eye after the operation, there is much difference of opinion: for my own part I think it better not to be too hasty, nor to run the risk of disturbing the process of cicatrization by opening it too soon. After the organ has been bound up in perfect darkness for many hours, the stimulus of even a moderate amount of light causes a degree of spasm and involuntary winking. Surely this is likely to disturb the parts if the process of union is not far advanced, and in feeble habits such process is frequently tardy. If therefore the patient does not complain of pain or much uneasiness, and if the lids retain their natural aspect, I think it better not to open the eye before the fourth day. The mere absence of pain is not a criterion to be depended on as indicating the existence or non-existence of mischief, but the appearance of the lids is a much more certain test. If they become puffed, or purplish, or red at the margins, there is something wrong, and the condition of the eye should be forthwith ascertained.

I should have observed, that if the operation has been performed during the early part of the day, it is better that the patient should not go to bed at once, but repose on a sofa for a few hours: for if put to bed at once, he is likely to sleep during the day, and may pass but an indifferent night in consequence; but he should not be left nor attempt to move without assistance. In the course of the last spring, I assisted in extracting a cataract from the eye of a lady. Nothing could be more satisfactory than the various stages of the operation, or the condition of the eye when bound up, but the patient having been left by her attendant about two hours afterwards, she moved off the sofa to get something—fainted, and fell to the ground. The consequence was prolapse of the iris, chronic iritis, and ultimately amaurosis.

It is of the first importance that at bed-time the hands of the patient should be secured in such a manner that they cannot be raised higher than the mouth, and it is not safe to omit this precaution for at least a week. In the interval between sleeping and waking we are very apt to rub our eyes, and also during sleep if there is uneasiness. I was much mortified last summer by the following case:—I extracted a cataract on the 18th of June from the right eye of Mrs. W.; on the 22d I opened the eye, and found the cornea bright and clear; and there had not been the shadow of an unfavourable symptom. The night of the 23rd was intensely hot and close, and on seeing my patient the following day she told me that she feared she had rubbed the eye, having felt it itch, and the bandages not having been applied to the wrists that night, she had forgotten the warning she had received. On examining the eye, I found the section had been burst open, the cornea was wrinkled up, and there was protrusion of the iris. In spite of everything that could be done, inflammation came on, and the eye was lost.

The treatment subsequent to the operation is of great importance, and I am satisfied that much mischief has arisen from the indiscriminate use of lowering and depleting measures. Elderly persons, of feeble constitution, and especially those who have been in the habit of living well, and daily taking their wine, or other stimuli, do not bear such treatment, but

their strength soon fails, and the section does not unite. In several instances I have found it necessary not only to allow meat and generous diet from the day after the operation, but to give wine and stimuli freely, the effect being merely that of keeping the vital powers up to the point necessary for the completion of the process of restoration. Instead of trusting to subsequent treatment to keep down inflammation, the wisest course, in my opinion, is to carefully prepare the patient for the operation by diet and regimen suited to each case. In one it may be advisable to keep the patient on a reduced diet, and to give a smart purgative or two; in another, a course of tonics may be necessary when the powers of life are low and the nervous system shattered. The latter plan I have found especially necessary in persons who have seen better days, and who have to struggle against poverty in their old age, having been accustomed in their youth to luxury and every comfort.

When the section does not unite kindly, the upper lid becomes swollen—at first but slightly and without discolouration, but after a day or two a dull purplish hue appears, most marked near the ciliary margin. If we open the eye, we shall find that pink, semi-transparent chemosis, so characteristic of debility; the section more or less gaping; perhaps some protrusion of the iris, and some haziness of the cornea. There may be little or no pain; but the patient is depressed, sighs frequently, and has a feeling as if she was going to die. The pulse is low, although perhaps frequent, and the skin cold. Under these circumstances we must not hesitate to give stimuli and support. A draught composed of the sesquicarbonate of ammonia, with compound tincture of lavender and camphor mixture, should be given immediately, and an opiate may be advantageously combined with it. The diet should be improved and meat allowed, and if the patient has been in the habit of taking wine, or spirits, or porter, a moderate quantity of that to which they are accustomed will do good. I have been surprised at times to find how much may be taken not only with impunity but with advantage. Quinine is also of much service where it agrees with the patient, but the more active stimuli are necessary in the first instance to check the mischief as soon as possible.

I have observed, that it is about the third day that the symptoms above described usually set in, but it occasionally happens that with the same symptoms, the patient complains of acute pain, in which case the treatment I have mentioned should be adopted.

Acute inflammation generally begins at an early period—within forty-eight hours, and is characterized by the intense pain, the purulent discharge, the bright, red, shining and swollen lids, the scarlet redness of the eye, and the symptoms of general febrile disturbance. In such cases active depletion must be at once practised, and every other means to subdue the inflammation excepting tartar emetic; that might cause vomiting, which would be most injurious.

In conclusion, I may remark, that if possible, we should operate when the weather is fine and mild and the wind not north east. The last May was most unfavourable, and I know of several cases which did badly in consequence.

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NOTES AND ILLUSTRATIONS OF THE DISQUISITION ON PUERPERAL FEVER.

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(Continued from page 371.)

Mr. Nunneley, of Leeds, so well known by his admirable treatise on erysipelas, has favoured me with an interesting summary of his views of the origin and forms of puerperal fever, which he allows me to incorporate among these notes. Mr. Nunneley says—"That erysipelas and puerperal fever occur together as epidemics, there is most abundant evidence to show; to many of which authorities I have referred, (in the above-named treatise,) nor can it be doubted that the same atmospheric condition conduces to the two disorders; and, further, there is also much testimony to the fact of one disease being directly induced by the other.

"As to how far the proposition you mention, (in a private note,) of the fever being always induced by causes extrinsic to the body, be correct or not, I am not altogether prepared to speak positively; but I should scarcely be inclined to admit it. That this fever is not necessarily confined to lying-in women, if we are to be guided by every other thing than the mere name, I feel confident. I have seen cases, I believe, where puerperal fever has arisen sporadically, in which no extrinsic cause could be traced; but there was always sufficient in the state of the patient to account for the disease. These cases are, however, more manageable, and exhibit a more phlegmonous character.

"I have noticed, on two occasions, in which I saw two or three cases of puerperal fever occurring near together, that in several women after delivery, in whom there was no manifestation of the fever, the after-pains were unusually severe and prolonged. This I attributed to atmospheric conditions; and supposed that the fever would have shown itself if the patients had been in a fit state for its development. In these cases, I have always immediately well cleared out the primæ viæ, and given opium with calomel and antimony, in which, combined of course with local applications, I have great faith, when early resorted to.

"Limiting the term specific to what is, I think, its proper sense, I should not call either erysipelas or puerperal fever a specific disorder, since they do not, in all cases, run an uniform course, nor affect the same tissue, nor produce the same effects, nor lessen the chances of a future attack. They can be cut short, which I do not think possible in a specific disorder.

"There are, I consider, two types of constitutional disease, as well as of local affection. In one both the nervous and sanguiferous systems exhibit not only excitement but increased power, and the local affection is limited; as there is more fibrine formed, so there is an effusion of plastic lymph—a vital material. In the other type, while there is great excitement there is great loss of power; not only is there no increase of fibrine, but the vital property of that which still circulates is lessened; little of it is poured out, and that little is not capable of organization; and the local affection is widely spread.

"I believe erysipelas and puerperal fever present every intermediate form between these two extremes.