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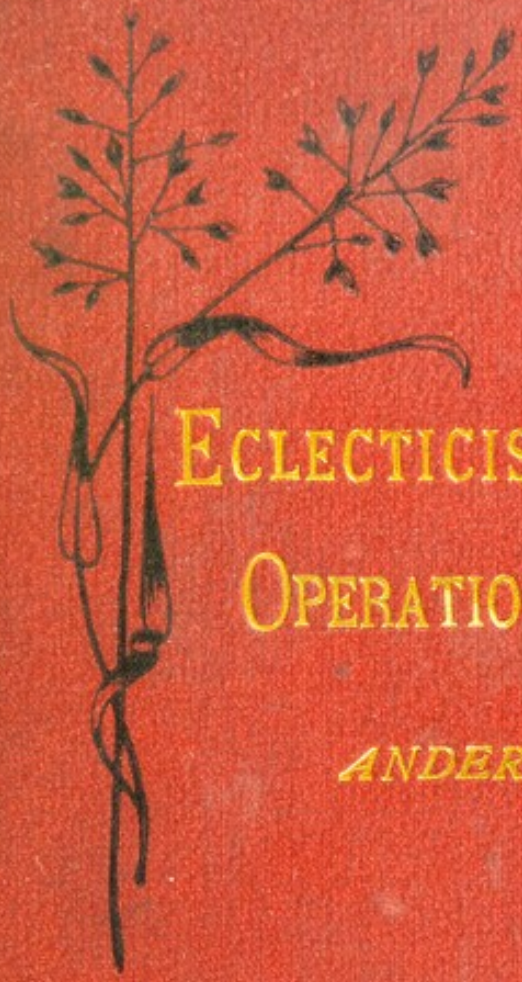

Eclecticism in Operations for Cataract

ANDERSON CRITCHETT

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A LECTURE

ON

Eclecticism in Operations for Cataract.

DELIVERED AT ST. MARY'S HOSPITAL.

BY

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A LECTURE

ON

ECLECTICISM IN OPERATIONS FOR CATARACT.

GENTLEMEN,—No patriarchal experience in ophthalmic surgery is needed to carry us back to the period when the time-honoured flap-extraction was the generally recognised operation for senile cataract. Using a Beer's knife, and unaided by either forceps or speculum, the operator strove to accomplish a large flap, involving almost half of the cornea; and he considered that it was discreditable to his manipulative skill should he accidentally sever any portion of iris, or emerge through the cornea prematurely. When all went well at the operation and during the process of healing, the result was very perfect, and both optically and cosmetically surpassed that which is usually obtained with modern modifications of the old proceeding. The patient retained a small round movable pupil; and the edges of the wound would sometimes heal with such exact apposition, that the king who failed to solve the problem of the apple and the

dumpling would have been amply justified in expressing bewilderment as to how the cataract could have made its exit.

In a large proportion of cases, however, the eye fell a victim to one or more of the numerous perils by which it was surrounded. When the stages of the operation were happily accomplished, the constitutional vigour of the patient was sometimes unequal to the task of healing so large an area of cut cornea, and suppuration ensued ; or a slight movement on the part of the patient might displace the flap ere union had occurred, and a prolapse of iris, often of considerable size, would force the edges of the wound still further apart, and cause the pupil to be drawn into, and occluded by, the section ; so that the best efforts of a skilful operator to repair the damage could give but a poor result in the matter of sight.

Amongst the great ophthalmic surgeons of the past, the late Mr. Tyrrell was pre-eminently skilful in the performance of the true flap-operation. He took justifiable pride in the completeness of the flap which his dexterity accomplished, and the first shock which the operator received was on the discovery that his results at Moorfields were unsatisfactory in comparison with those of a less skilful colleague, who usually, *malgré lui*, severed the portion of iris which unsteadiness and premature escape of aqueous humour brought in front of his knife, and who completed his operative fiasco by making a species of curvilinear instead of a flap-section. Looked at by the light of our modern experience, the solution of the mystery is simple. The involuntary iridectomy prevented iritic prolapse, and the edges of the curvilinear wound came readily and firmly together. Some years, however, elapsed before linear extraction was suggested by

Professor Schuft, who, following in the track of modern reformers, determined that the change introduced should be thorough and radical. In place of the extensive corneal incision, he gave us a narrow slit at the corneo-scleral junction, and the instrument employed was the triangular knife which is still in general use for the operation of iridectomy. A portion of iris was removed, and the anterior capsule was lacerated, but it was found necessary to introduce a spoon to ensure the removal of the cataract through the slit-like opening; and more than one eminent ophthalmic surgeon placed the hall-mark of his inventive capacity upon the form of spoon which he deemed best suited to the operation.

The merits of the new proceeding were much canvassed; and it was noticed that, while the previous risks of suppuration and extensive iritic prolapse were to a great extent avoided, fresh troubles had arisen to militate against the success of the new method.

It was found that the passage of the spoon under the lens frequently caused rupture of the hyaloid membrane and loss of vitreous humour, while in cases where the cataract was somewhat immature, numerous fragments of lens-substance remained behind to set up traumatic iritis, with cyclitis and its accompanying dangers. In the course of a few years, the new plan had fallen so much into disrepute on the Continent that our Teutonic brethren were, in many instances, returning in despair to their old love, the flap-operation, when a paper, read by my late father in 1864 at the congress at Heidelberg, on the favourable results obtained at Moorfields by Mr. Bowman and himself with linear extraction, attracted the attention of Von Gräfe, and caused him to bring to bear on the subject the light of that genius which illuminated,

and still illuminates, many regions of ophthalmic science which formerly were clouded and obscure.

He saw that the object to be gained was the power of making a curvilinear section of sufficient size to allow the ready exit of the cataract without the introduction of a spoon or vectis into the eye; and he cut the Gordian knot of difficulty with the narrow needle-knife which will always be associated with his name. The use of this instrument enabled the operator to make his incision in the situation, and of the size, which he deemed best; and, perhaps, the ready adaptability of the operation to suit various opinions, proved a chief factor in its almost universal acceptation.

In the method suggested and carried out by Von Gräfe, the incision was made entirely in the sclerotic, and iridectomy was always performed.

A comparatively brief trial of the new operation sufficed to prove that, with hitherto unknown advantages, came fresh and peculiar dangers. It was found that, if either the point or the blade of the knife encroached too closely on the ciliary region, sympathetic ophthalmia, with destructive cyclitis, might supervene in the other eye; and, secondly, in cases where the operation was successfully accomplished, and all gave promise of a happy issue, traumatic iritis made its appearance, usually about the tenth day, retarding the recovery, and not unfrequently resulting in a closed pupil. In addition to these subsequent troubles, whenever the incision was carried in the least degree too far into the sclerotic, there was increased liability to rupture of the hyaloid membrane, and loss of vitreous humour during the expulsion of the cataract. I was, therefore, not surprised to hear at the International Ophthalmic

Congress, held in Paris in 1867, that each one was performing Von Gräfe's operation with modifications, some of these latter being of a very sweeping and revolutionary character. The method that my father then employed, and which he subsequently abandoned, and, indeed, used as his text for enunciating the principle of "eclecticism" which I here advocate, was to make the puncture and counter-puncture in the sclerotic, and to emerge in the cornea. By so doing, he avoided the risk of loss of vitreous humour; but experience showed that he was braving a double peril, for while his puncture and counter-puncture might wreck him on the Scylla of cyclitis, his incision might overwhelm him in the Charybdis of suppuration. He, therefore, came to regard this plan as alike illogical and inexpedient, and, during the last twelve years of his life, dealt exclusively with either cornea or sclerotic, being guided by experience and judgment as to which of these two tissues should be selected in each individual case.

Following the broad lines of the above-mentioned principle, it was easy for one who kept an open and receptive mind to take advantage, or, at any rate, to make trial, of the various modifications and improvements which were from time to time brought forward, both on the Continent and at home.

I may briefly allude to a few of these, some of which have stood the test of time, whilst others have fallen into disuse. I would speak, first, of the operation devised by the late Professor Pagenstecher of Wiesbaden, for removing the lens in its capsule, and which I had the advantage of seeing performed by its originator. An unusually large incision, confined, as nearly as possible, to the corneo-scleral margin, was made with a Gräfe's knife, a liberal portion of

iris was removed, a capacious spoon was then introduced beneath the lens, and the latter was removed in its capsule.

The operation was frequently performed without an anæsthetic, and the incision was made downwards. When no catastrophe happened, the result was exceptionally brilliant, and the avoidance of subsequent needle-operation was a decided gain; but the passage of the necessarily cumbrous spoon below the lens too frequently led to a more or less copious escape of vitreous humour; and, although this misfortune by no means involves immediate or total loss of vision, the recovery is always more tedious, the optical result is imperfect, and the existence of such an eye for useful purposes is frequently of short duration. Were there insurance-offices for sight as well as for life, such an eye would be penalised with a large additional premium. The operation still musters adherents, and modifications have been introduced by Mr. Macnamara, and by Dr. Andrew of Shrewsbury. The former makes his incision at the outer side of the cornea, using a very broad keratome. He does not usually perform iridectomy, but introduces a spoon through the previously dilated pupil, and, depressing the proximate edge of the lens, turns the latter over into his spoon, and removes it in its capsule. Dr. Andrew follows a very similar plan; but, before using the spoon, he inserts a small wire hook to free the lens from its attachments.

The next operation which claims our attention is that of Dr. Lebrun of Brussels. In this method, the incision was made entirely in the cornea, the insertion of the needle-knife being opposite to the centre of the pupil, and the line of section lying nearly mid-

way between that point and the corneo-scleral margin. Iridectomy was not used ; but, after the emergence of the cataract, eserine was employed to induce myosis, and to prevent anterior synechia. The operation was almost invariably performed without an anæsthetic ; and the advantages of making an upper or a lower section were respectively advanced by rival advocates.

The attractions which this method offers are that it is very easy of performance ; that, as the section is corneal and the iris is untouched, comparatively little pain is inflicted on the patient ; vitreous humour is seldom lost ; and, when perfect union occurs by first intention, the preservation of nature's pupil gives an excellent optical result. The other side of the picture shows that the average of failure is larger than in cases where iridectomy is performed ; and the most frequent source of trouble lies in the tendency to the formation of extensive anterior synechia, the iris being in some instances prolapsed and clamped between the edges of the wound, leading not unfrequently to sympathetic ophthalmia in the other eye. In addition to this, the effort to heal so extensive a corneal section proves more than some feeble constitutions are able to compass ; and the terrors of the old flap-extraction are to some extent revived in the absolute absence of movement and effort which the patient must endure.

Another very ingenious, but too complicated, operation, which deserves mention, though it can never be brought into general use, and has, to a great extent, been abandoned by its parent, is one suggested by Dr. Bell Taylor of Nottingham. Desiring to avoid prolapse and synechiæ, and at the same time to preserve the integrity of the pupil, he removed

only a sufficient portion of the peripheral margin of the iris to permit the passage of the cataract. The result in successful cases was very perfect, the iritic aperture being entirely covered by the upper lid ; but so much time was occupied in procuring the egress of the lens through this narrow and delicate aperture, and so much technical skill was necessary in the performance of the operation, that it could never be universally adopted.

Time would fail me, and I should unnecessarily tax your patience, were I to allude to various other modifications of modern operations. Scarcely a month passes without the introduction of one or more of these ; and in the Ophthalmic Section of the meeting of the British Medical Association at Worcester last year, no fewer than three novel and ingenious operative suggestions were made for the removal of cataract. I, personally, am prepared to welcome these, and others which will inevitably follow, and to regard them as so many additional strings to our bow ; and, following out the principle of eclecticism, I should not object to their multiplication till the bow became converted into a harp, though long and mature experience can alone render us capable performers upon the somewhat complicated instrument which will be in our possession.

I had the exceptional advantage of sharing my father's operative work and watching its results for many years ; and from my practical experience there and in my own practice, I have acquired a conviction of the importance of carefully selecting a method of operation according to the condition of each particular case. I may quote, as an example which well bears out this theory, the case of a medical man where my father performed an operation for cataract on the

right eye. As the patient objected to the administration of an anæsthetic, the Brussels or corneal operation without iridectomy was selected. Every stage of the proceeding was passed through successfully, and the edges of the section were so absolutely in apposition that it was difficult to believe that any operation had been performed ; and as we left the house, I congratulated my father, and somewhat rashly ventured to prophesy a complete success. A few hours only sufficed to prove me entirely in the wrong, for suppuration rapidly ensued, and the eye was absolutely lost. The patient being naturally much disappointed at the issue, elected to place his hope of success in the other eye in the hands of another ophthalmic surgeon. My father, on hearing the name of the gentleman who had been selected, and knowing that he invariably performed the corneal section, wrote him a full account of his own operative disaster, and ventured to suggest that, as the first eye had been lost by suppuration, it would be well that in the second eye the section should be limited entirely to the sclerotic. He received a very courteous rejoinder from the distinguished ophthalmic surgeon to whom the letter was addressed, in which that gentleman thanked him for his suggestion, but declined to follow it, as he had unbounded faith in, and was in the invariable habit of performing, one form of operation only. The lamentable issue in the second eye was that it suppurated with, if possible, greater rapidity than its fellow.

Now, so rarely do we encounter in the same individual a tendency to suppurative inflammation and also to destructive cyclitis, that I have little hesitation in expressing the belief that, had my father's suggestion been carried out in its integrity, there would have

been every probability of a successful result. I have personally a strong objection to the performance of a double operation for cataract; but if, owing to exceptional circumstances, such a proceeding be forced upon us, we may expect almost to ensure success in one eye if we limit our incision to the cornea on the one side, and to the sclerotic on the other.

In choosing the initial operation which is to be performed upon any particular patient, you will be guided in your selection of a method by various considerations. If no anæsthetic is to be given, and there is no direct constitutional contra-indication, the corneal incision will be preferable, partly on account of its comparative insensibility to pain, and partly because by this method the vitreous humour is less likely to be lost through involuntary spasmodic movement on the part of the patient. If there be some special reason for preserving the integrity of the pupil, you may, in isolated instances, elect to run the hazard of a Brussels operation; but you will, in my opinion, largely increase your chances of success if you carry your incision nearer to the corneo-scleral margin, and supplement it with iridectomy. This latter form of operation, I have reason to believe, finds the most general acceptance amongst modern ophthalmic surgeons. I have little doubt, however, that the majority of them would be ready to adopt a different mode of proceeding, should special circumstances suggest that such a course would be preferable. I have recently operated on a clergyman, who, at his first interview, conveyed to me the somewhat alarming information that, if he accidentally cut or scratched himself, the wound invariably showed signs of sloughing, and took an inordinately long time to heal. I should have regarded it as little less than an act of reck-

lessness to pass my knife through his cornea ; and, in the operation which I performed upon him some weeks since, I limited my incision strictly to the sclerotic. His recovery has been unusually slow, but I am glad to say the final result has been most successful.

I point out to you the corneal operation as one to to be avoided also in patients of very advanced age or enfeebled constitution, especially when analysis of the urine has revealed degenerative renal changes.

Many of you will doubtless remember that the only two instances of suppuration of the cornea after cataract-extraction which occurred in this hospital last year, were in the cases of two paupers who were admitted from the workhouse. Should similar cases come under my care in the future, I should in the first instance draw somewhat largely upon the hospital funds in preparing the patients for the operation by a liberal administration of nourishing diet; and, in the second place, I should leave their corneal tissue uninvaded. In cases where a cataract is not yet matured, or where a sufficient store of time and patience can be placed at your disposal, I believe that you may add a very appreciable percentage to operative success by performing a preliminary iridectomy at least four months before the removal of the cataract. I certainly advise that this course should be adopted in the second eye, where failure, whether from suppuration or from other causes, has resulted in the first.

We must not forget that individuals are to be met with who pass safely through the shoals and quicksands of cataract-extraction, and are subsequently wrecked, when within sight of port, by a comparatively simple and usually harmless discission of the capsule. I have in my mind an instance of this in the person of one of my own patients, who made a

rapid recovery in each eye from the major operation, and was afterwards the subject of prolonged inflammation when the capsule was torn through.

Guided by this experience, in operating upon the second eye of such an individual, I should seriously contemplate the advisability of endeavouring to remove the lens in its capsule. Whilst dealing with the question of capsules, I must not omit to mention Dr. Knapp's very ingenious and valuable suggestion that, in cases where we suspect the cataract to be somewhat immature, or to have ripened with unusual rapidity, we shall lessen our chances of traumatic iritis from irritative lenticular fragments by incising the capsule at its margin only, so that the soft lens-matter which remains after the nucleus has made its exit may rest within the shelter of its natural protector, to be dealt with at a subsequent period.

Any ophthalmic surgeon will, from time to time, have such a prolonged run of successful cases with a particular form of operation, that he may begin to persuade himself that the goal to which we all desire to attain is to be reached through that method only. But the tide will inevitably and relentlessly turn, and the favoured method will be found wanting. "'Tis not in mortals to command success, but we'll do more, Sempronius, we'll deserve it;" and, in my humble opinion, that operator is likely to be most uniformly successful in restoring the priceless boon of sight, who keeps a firm hand upon the reins of his judgment, and uses his most matured knowledge in adopting the particular form of operation which operative and clinical experience has proved to be specially suitable for each individual case.

By following these principles, if failure should, in any unfortunate case, result in the loss of the first

eye, we may go far towards ensuring success in the second; for we have then an opportunity of avoiding the hidden rock upon which we ourselves, or others, have struck, and so may ultimately guide the vessel safely into harbour.

With this end in view, it is impossible to over-estimate the value of such meetings as our International Ophthalmic Congresses and those which are now regularly held at our newly fledged Ophthalmological Society, where the interchange of varied experience places us in the possession of ever-increasing facilities for bearing aid to suffering humanity.