Report of one hundred and thirty-six cases of cataract extraction : with remarks / by David Webster.

(18.)

With the Compliments of
the Author.

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CATARACT EXTRACTION,

WITH REMARKS.

BY DAVID WEBSTER, M.D.,
OF NEW YORK.

[*Reprinted from the American Ophthalmological Society Transactions*, 1891.]

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REPORT OF ONE HUNDRED AND THIRTY-SIX CASES OF CATARACT EXTRACTION, WITH REMARKS.

By DAVID WEBSTER, M.D.,

OF NEW YORK.

I reported thirty-five cases of cataract extraction to this Society at its Nineteenth Annual Meeting, and again, in July, 1886, I reported an additional fifty cases. Since that time I have operated upon one hundred and thirty-six eyes, with uncomplicated cataract, in private and in hospital practice. Twenty of these eyes were operated upon by the method then most common, von Graefe's Method Modified; the remaining one hundred and sixteen by the Simple Method.

In performing the simple extraction, I have commonly used a speculum and fixation forceps. In most cases, the speculum was not removed until the operation was finished; in some cases it was removed as soon as the cut was made, and in a few cases no speculum was used at all, the lids being held open by an assistant. At present my feeling is in favor of removing the speculum on finishing the section. It seems to me that by so doing, we may sometimes avoid the loss of vitreous that comes from sudden spasmodic squeezing of the eye with the speculum in it. I make my cut upward, with the Graefe's knife, large enough to include a little less than half of the circumference of the cornea, all the way in the limbus or semi-transparent cornea, and completing it so as to make a slight conjunctival flap, if possible. In some cases, I have had to turn the edge of my knife forward so as to avoid wounding the iris, and so brought the apex of the cut out in the clear cornea. I dislike such a complication, as it is very likely to be followed by grooving of the wound and delayed healing, with a good deal of irritation of the eye. But it seems preferable to mutilation of the iris.

In lacerating the capsule, I have tried to avoid injuring the

iris. I have endeavored to make the opening in the capsule at the lower border of the pupil, thinking that in this way a secondary operation might sometimes be avoided.

I have usually expelled the lens by pressure on the lower border of the cornea with a tortoise-shell spoon, though sometimes I have used only pressure with my thumb upon the lower eyelid. I have in no case attempted to syringe out the remaining cortical matter. What I have failed to remove by manipulation has remained in the eye, and I am not sure that it has, in any case, given rise to bad results. It simply delays the restoration of good vision. In cases in which the iris remained in the wound after the removal of the lens was accomplished, I have endeavored to replace it by gently rubbing the upper lid of the closed eye. Where that would not restore it to its normal position, I have pushed it back with a rubber spatula. I have endeavored, in all cases, to leave the pupil clear, central, and circular.

All, or nearly all, the operations were done under cocaine, and of this a sterilized 4% solution was dropped into the eye three or four times. I like to have the cocaine dropped into the eye long enough beforehand, so that the pupil may be slightly dilated when the operation is commenced. Fifteen or twenty minutes will be sufficient.

Immediately before operating, I have washed the eyelids, inside and out, with Panas's fluid, using it very freely. All the instruments used are carefully cleansed in boiling water before and after the operation. The hands of the operator and of his assistants are washed with soap and water, and the finger nails scrupulously cleansed.

Before dressing the eye, immediately after the extraction, I first instill a drop of solution of eserine 1 gr. ad ℥i. I then apply a little white vaseline to the edges of the lids to keep them from sticking together. I then apply a prepared wad of absorbent cotton over both eyes, and over that a roller bandage of the thinnest flannel. Over the flannel bandage, I apply a parallelogram of black silk lined with cotton, and with a tape at each corner, so as to make a four-tailed bandage, tied so that the knots will be at the side of the head. I let my patient sit

up from the first if he desires to. Unless the patient complains of pain in the eye, or that the bandage is too tight, or in other respects uncomfortable, I do not remove it until about forty hours after the operation. If the eye is doing well, and the wound has healed, after washing both eyes, I apply clean cotton compresses, and again tie on the black silk dressing, leaving off the roller bandage. If the anterior chamber is still empty, I reapply the whole dressing as at first. In favorable cases, both eyes are kept tied up for from five to ten days. Then the cotton is left off and the lower strings of the black silk dressing cut off, so that it becomes simply a shade hanging down over the eyes. I think it important that both eyes should be kept tied up until the wound has become thoroughly healed, for if one is left uncovered, it will roll about, and the wounded eye will roll about with it, and the healing will thus be delayed.

On about the fifteenth day, or as soon as the eyes seem strong enough, the shade is removed and medium smoke coquille glasses substituted. I like to defer fitting the patient with glasses until all redness has passed off from the eye.

VISUAL RESULTS.

Of my twenty cases of extraction by von Graefe's method, the resulting vision was as follows :

In one eye, vision was 20/20; in two eyes, 20/40; in one eye, 20/ 50; in one eye, 20/70; in one eye, 20/100; in nine eyes, 20/200; in one eye, 15/200; in one eye, 10/200; in one eye, counting fingers; in one eye, perception of light; in one eye, 0.

According to the commonly accepted standard, this would give: *Successes* 15 = 75 per cent.; partial successes, 3 = 15 per cent.; failures, 2 = 10 per cent. Upon twelve of these eyes no secondary operation was performed. Five of them had one Keratonyxis each. Two of them had two needlings each. One of them had two needlings, and an Agnew's hook operation.

The patient whose final vision was ability to count fingers, had vision = 20/50 following a Keratonyxis done thirty days after the extraction. A second needling was done about three and a half months later, and was followed by increased tension.

Under the use of eserine the vision came up to 18/200. Three weeks later a membrane was removed from the pupillary area by means of a sharp hook. The immediate result seems not to have been noted, but my recollection is, that the sight of that eye was good until nine months later, when an attack of acute glaucoma was developed during recovery from an extraction of the cataract from the other eye, and vision was reduced to counting fingers.

The case resulting in perception of light only, lost the eye by plastic iritis, or irido-cyclitis, resulting in closure of the pupil and anterior atrophy.

The patient whose vision was *nil* was an unruly man who tore off his bandages as often as they were replaced, and who finally died of meningitis, the result of panophthalmitis, 18 days after the operation.

Of my 116 cases of simple extraction, the resulting vision was as follows:

In eleven eyes, vision was 20/15; in fifteen eyes, vision was 20/20; in twenty-three eyes, vision was 20/30; in twenty-four eyes, vision was 20/40; in thirteen eyes, vision was 20/50; in eleven eyes, vision was 20/70; in four eyes, vision was 20/100; in five eyes, vision was 20/200; in one eye, vision was 18/200; in one eye, vision was 15/200; in two eyes, vision was 10/200; in one eye, vision was 5/200; in one eye, vision was, "sees objects"; in one eye, vision was, "perception of light"; in one eye, vision was 0; in two eyes, vision was not noted.

There were, then, 106 eyes that had vision of 20/200 and better, or successes 91%; 6 eyes that had vision from 18/200 to seeing objects, or partial successes, 5%; and 4 eyes that had vision "perception of light," or 0, or 3% failures.

The case noted as resulting in "perception of light," was one in which suppurative iritis set in, beginning at the wound, which was cauterized without arresting the disease. Closure of the pupil and a soft eyeball resulted so that any further operation seemed out of the question.

The case in which vision is noted as *nil* had one eye operated upon previously with excellent result. The eye that was lost did well up to the fifth day, when the wound was entirely

healed, the pupil central, circular and black, and the eye looking so well that the dressing was left off and only the black shade applied. The next day there was a good deal of redness of the eye with secretion, and on the following day well-marked purulent ophthalmia had set in, which resulted in total loss of vision.

In one of the cases in which the vision was not noted, we find a history of violent insanity setting in on the day after the operation, and the patient had to be sent away from the hospital on the third day. For aught that I know she may have recovered with a good eye, but on the whole I thought it best to class her case with the failures. In the other case, there was prolapse of the iris. This was excised, and the hospital history says she steadily improved, and she went home on the 16th day, and there are no further notes of her case; so I put her also with the failures.*

Prolapse of iris occurred and had to be excised in five cases out of the one hundred and sixteen, or in 4%.

The actual cautery was applied in two cases, in one of prolapsed iris where excision proved to be insufficient, and in one case where suppuration of the wound occurred.

Needling of secondary membranes in the pupil was performed in fifty cases, or in 43% of all the cases.

Agnew's hook operation was resorted to in three cases in which needling had failed.

Paracentesis was done in one case in which increased tension had developed itself. The eye recovered with good vision.

As to accidents during the operation, in two cases the iris fell before the knife and was wounded in cutting out.

In six cases there was loss of vitreous. In two of these cases the lens became dislocated, and on making pressure in the usual way the vitreous presented at the wound instead of the lens. The wire spoon was then introduced and the lens withdrawn with loss of vitreous. In one case the patient squeezed his eye and expelled the lens in its capsule, with vitreous, *per saltum.*

In the other three cases, the vitreous followed the lens

* Nov. 19, 1891. This patient has had an iridectomy done since, and has recovered sufficient vision to place her among the partial successes.

while it was being pressed out in the usual way, the patient losing control and contracting his orbicularis spasmodically.

I usually instill a drop of a one per cent. solution of atropine on the third or fourth day after the extraction, experience having shown that even in cases where there is no apparent iritis, sufficient bruising of the iris may have occurred to produce adhesions to the capsule.

As to the management of prolapse of the iris occurring during recovery from the simple extraction, my experience strongly biases me in favor of *early excision.* I have watched the prolapse in several cases and have seen it increase day after day, the eye at the same time becoming more and more irritable until the prolapsed iris was excised, and in such cases, I have regretted that I had not cut it off when it first appeared. I once replaced it with the spatula, but it had reappeared as large as ever, when the eye was next opened, and had to be excised in the end.

It is safer to give ether for excision of prolapsed iris, as cocaine generally proves insufficient to make the operation painless, and the patient is apt to move the eye suddenly as soon as the iris is seized by the forceps, and before the scissors can be used. When cut off with the scissors without traction with the iris forceps, some iris is commonly left in the wound, and the eye heals with synechia anterior.