

Cataract extraction (200 cases) / by David Little.

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Little, David, active 1873.
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Publication/Creation

London : printed by J. E. Adlard, 1873.

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CATARACT EXTRACTION

(200 CASES).

BY

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SURGEON TO THE MANCHESTER ROYAL EYE HOSPITAL.

(Reprinted from the '*British and Foreign Medico-Chirurgical Review*,' January,
1873.)

LONDON:

PRINTED BY J. E. ADLARD, BARTHOLOMEW CLOSE.

MDCCCLXXIII.

LABAROT EXTRACTION

(200 CARS)

Grand Hotel, N.Y.

Address: 100 Broadway, New York, N.Y.

Printed by the Author, and Published by the American Book Company, New York, N.Y.

100 CARS

Printed by the Author, and Published by the American Book Company, New York, N.Y.

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TABULAR REPORT AND REMARKS
ON
TWO HUNDRED CASES OF EXTRACTION OF
CATARACT
BY
GRAEFÉ'S MODIFIED LINEAR SECTION.

WHEN the late Prof. Von Graefe published his papers in 1865-66, on his now well-known method of extraction of cataract by a modified linear incision, the results he had then obtained were so favorable as to warrant him in recommending it for general adoption. Not only was his success greater as compared with that of his cases of flap extraction or scoop extraction, but his method possessed many other advantages. He pointed out, for instance, that it was comparatively safe in marastic subjects, in whom flap extraction would be exceedingly dangerous; that it was applicable to almost all kinds of cataract in the adult; that it permitted an examination of the eye at an early period after the operation, and was attended with less inconvenience both to patient and surgeon. Encouraged by these advantages, most ophthalmologists zealously adopted Graefe's plan, and so eminently satisfactory has it proved to be, that it is now almost universally practised both in this country and on the Continent.

In Graefe's operation, however, the liability to an escape of vitreous and to hæmorrhage into the anterior chamber, the necessity of performing iridectomy, and the somewhat frequent occurrence of iritis, led Liebreich to consider the subject more fully. Concluding that these disadvantages were due to the position of the wound, he sought to obviate them by a different form of incision, first described by him in the 'British Medical Journal' for 2nd December, 1871, as follows:—"With a Graefe's knife, puncture and contra-puncture are made in the sclerotic about one millimetre beyond the cornea, the whole remaining incision passing with a very slight curve through the cornea, so that the centre of it is about one millimetre and a half distant from the margin of the cornea, and the traction is made downwards without iridectomy." His results are superior to Graefe's as regards optical perfection, and equally successful as regards immunity from the worst inflammatory consequences. In performing

this operation myself, I have been much pleased with the rapidity and ease with which it can be accomplished, and the comparatively little pain it gives the patient; at the same time, the great tendency to prolapse of the iris and its ultimate adhesion to more or less of the corneal wound, besides the production, probably, of a greater amount of astigmatism than by any other operation, appear to me to be serious objections to it. My experience, however, as yet, is too limited to enable me to speak authoritatively on this point; I hope, however, that Dr. Liebreich will give a detailed account of the results of a number of cases operated upon after his method, as it deserves a fair trial at the hands of ophthalmic surgeons.¹

Considering that Graefe's operation is the one most extensively practised, a detailed report of 200 extractions according to his method will, no doubt, be an important addition to the statistics already published, and cannot fail to interest ophthalmologists.

The above number includes every case, complicated or otherwise, operated upon by me by the peripheric section since 1868. They are submitted to no selection, but are taken from my note-book consecutively.

The 200 operations occurred in 148 individuals, of whom 78 were males and 70 were females; their ages varied from thirty-two up to eighty-one years; 115 of the eyes belonged to patients who were sixty years of age and upwards, and it is interesting to observe here, what effect age has upon the result of extraction of these 115 eyes. Eighteen were attacked with iritis (nine of which ended in a closed pupil); two were lost from panophthalmitis, two from irido-choroiditis, and one from sloughing of the cornea.

In fifty-six of the extractions the patients are noted as being marastic, delicate, rheumatic, or as being in bad health.² Of these cases, ten were followed by iritis, five of which terminated in a closed pupil, and five were lost. Here also the state of health is some criterion as regards the prognosis.

In twelve instances both eyes were operated upon at one sitting.

Eye complications.—As regards the nature of the cataract, six eyes were noted as having posterior polar cataract, in thirteen instances the lens was retrogressive, and three were of a glutinous consistence. Three cases were complicated with myopia, one of them amounting to $\frac{1}{7}$ th, and all were successful. Four eyes presented posterior synechia and two iridodonesis, two were glaucomatous, one was accompanied with enlargement of the lachrymal sac, two had chronic conjunctivitis, and three were marked as having some posterior disease.

¹ Le Brun, of Brussels, I believe, practises a similar operation, but makes the incision upwards instead of downwards.

² One patient was suffering from diabetes of four years' duration; the extraction was completely successful.

Operation and accidents during operation.—In making the incision with a Graefe's knife I have endeavoured, with a few exceptions, to lay the centre of the section just within the cornea, and thereby diminish the risk of rupturing the hyaloid membrane. I have endeavoured also as much as possible to ascertain beforehand the size of the nucleus in each case, and limit the length of my incision accordingly. This examination, however, can only be satisfactorily made with a dilated pupil and by oblique illumination, and in hospital practice it cannot always be accomplished. The consequence has been that in eight instances I had to enlarge the incision with blunt-pointed scissors before the expulsion of the lens could safely take place.

Loss of vitreous occurred in twenty-two of the extractions (in nine cases before the exit of the lens); eight of these twenty-two cases were followed by iritis, making one third of the whole number.

Bowman's spoon was introduced into the eye to remove the cataract on twenty occasions (twice without any loss of vitreous). In 180, therefore, of the cases, the lens was expelled and the pupil cleared by pressure in the usual way.

Collapse of the cornea or eyeball occurred twenty times after the extraction; vitreous was lost in four cases; iritis took place four times and one case terminated in irido-choroiditis.

Healing process.—Amongst the inflammatory consequences of this method of extraction iritis is the most frequent. It happened twenty-seven times in these 200 operations, nine of which resulted in closed pupils, the remaining eighteen recovered useful vision. Ten of these ultimately read No. 1 Jaeger, three No. 2, two No. 4, one No. 14, one No. 16, and one No. 19. In three instances the pupil was so much contracted upwards that a secondary operation was afterwards performed. I have always been in the habit of instilling atropine into the eye from six to eight hours after the operation, and continuing its use two or three times daily for several days. Many surgeons believe that so early an application of atropine irritates and is sometimes apt to produce iritis. I certainly entertain a very different opinion. I have never yet seen any disturbance to the healing process by atropine, but I am convinced, on the contrary, that in a good many instances early dilatation of the pupil has warded off an attack of iritis. Seven out of the nine cases of closed pupil promise well to result in useful vision after some further operative interference; the iris in each case appears quite healthy, there is a good anterior chamber, the pupil is partly occluded by false membranes, and there is very good perception of light. The other two cases, although there is excellent perception of light, are not so favorable for any secondary operation in consequence of some exudations behind the iris, causing a bulging here and there on its anterior surface.

Of the 200 extractions there was a total loss of seven cases—two from sloughing of the cornea, two terminated in panophthalmitis, and three in irido-choroiditis. It will be observed on reference to the tables that the seven eyes lost are described as belonging to patients who were either in bad health or were sixty years of age and upwards. And with regard to the cases of iritis, we find that two-thirds of them occurred in people upwards of sixty years, and that the whole of the nine cases of closed pupils also occurred in those of advanced age and indifferent health. There can be no doubt that the loss of vitreous and introduction of instruments into the eye to remove the lens are most productive of iritis and other inflammatory trouble, arising not only from the bruising of the iris and posterior surface of the cornea, but also from the impossibility in most instances of clearing the pupil. The tables show that more than one third of the cases of iritis occurred where there was loss of vitreous.

Small hæmorrhages occurred in seven cases in the process of healing, between the second and ninth day after the operation, the cause of which I could not account for except in one case, where the patient accidentally struck his eye.

Chloroform was administered in four cases only. I prefer operating without it if possible, if only for this advantage—that one can more readily and effectually clear the pupil of cortical remnants when the patient is conscious to direct the eye as required.

Secondary operations.—In seventeen cases of the whole number the needle was used to clear the pupil of capsule at various periods after the extraction. The pupil was enlarged in seven instances, either by iridectomy or with a broad needle and a Tyrrell's hook.

The following is a short statement of the cases lost after operation :

CASE 30.—A male, æt. 48, whose right eye was operated upon by me successfully six weeks before. He has for some years been addicted to habits of intemperance; is very bloated looking and bronchitic. During the interval of the two operations he had been drinking heavily at home. No accident occurred during the operation on his left eye; the pupil was left perfectly clear. The incision, however, was rather longer than requisite. On the following morning sloughing had commenced in the wound, which rapidly spread to the cornea.

CASE 36.—A very stout woman, æt. 66 years, with chronic bronchitis, from whose left eye I removed a cataract about fifteen months before. Her eyeballs were very prominent. No accident attended the operation. The nucleus was a very large one, and the incision was unusually long in consequence. She had considerable aching pain the first night after the operation. Next

morning, when I saw her, there was swelling of the upper eyelid, great conjunctival chemosis, and a quantity of purulent matter in the pupil. Ultimately, suppuration of the globe supervened.

CASE 43.—A healthy, stout man, 65 years of age, with an ordinary nuclear cataract and soft cortex. The incision was a small one. On rupturing the capsule, the least pressure with the cystotome seemed to disturb or perhaps, partially displace the lens. Pressure was used to the eyeball in the usual way, and after the escape of a considerable quantity of cortex the nucleus suddenly disappeared into the vitreous, and I made no further attempts to remove it. The pupil, notwithstanding, remained apparently clear. The eye went on well for nearly three weeks, when the patient went home some distance into the country. He returned to me a month afterwards with well-marked irido-choroiditis : ultimately the eye atrophied.

CASE 62.—A soldier, in good health, æt. 69 years, with retro-grade cataract in both eyes. Right eye was successfully operated upon by me three months previously. In his left eye the cataract had contracted so much that he could count fingers ; the capsule was thickened and calcareous looking, and the nucleus was small and hard—T. — 1. No accident occurred during the operation, and the pupil was left quite clear, the capsule having been removed along with the lens. He had much pain during the night notwithstanding morphia injections. Suppuration of the ball was established next day. Eye ultimately atrophied.

CASE 108.—A thin marastic woman, 74 years of age, with chronic bronchitis and emphysema, accompanied by extensive cardiac disease. There was nothing to note as regards the operation. The eye went on well for five days, when suppurative iritis began, and in spite of stimulants, nourishment, and good nursing, irido-choroiditis supervened. The eye still preserves a good appearance, but is rather softer and smaller than before.

CASE 175.—A man of weak intellect, low vitality, 39 years of age, with Morgagnian cataract in both eyes. Both eyes were operated upon at one sitting. On rupturing capsule in left eye Morgagnian fluid escaped. The nucleus was likely to sink in the vitreous, and the spoon was at once introduced to remove it. Some liquid vitreous followed and collapse of the eyeball. Next day there was swelling of eyelids and chemosis without any pain. There was no acute inflammatory action going on in the eye, notwithstanding the great chemosis. Suppuration was beginning in the wound and extended to the pupil in a few days. The eye ultimately became soft and slightly atrophied, but still presented a fair appearance.

CASE 187.—A woman, 63 years of age, having indifferent health, and presenting very small corneæ with hard nuclear cataract in both eyes. Extraction in both eyes was performed at one sitting. In her right eye infiltration commenced in the wound next day and gradually involved the whole cornea. No cause could be assigned. The left eye recovered without a bad symptom.

Resulting Vision.

No. of Eyes.			
146	could read Jaeger's test types,	No. 1.	
14	" "	No. 2.	
11	" "	No. 4.	
3	" "	No. 6.	
2	" "	No. 8.	
1	" "	No. 10.	
1	" "	No. 14.	
4	" "	No. 16.	
1	" "	No. 19.	
1	could only count fingers.		
9	same as before operation.		
7	lost.		

200

If we consider those cases that can read from No. 1 to No. 14 as perfect results, those from No. 16 down to good perception of light as imperfect, and all those the sight of which is destroyed as failures, then we shall have the result of my 200 extractions as follows:—3·5 per cent. of loss; 7·5 per cent. imperfect; 89 per cent. perfect.

T A B L E S.

No. of case.	Sex.	State of health.	Nature of cataract.	Complication.	Age.	Date of operation.	Right or left eye.	Loss of vitreous.	State of pupil immediately aft. oper.	Iritis.	Irido-choroiditis.
1	M.	Pale and flabby	Ordinary hard nucleus	None	61	Jan. 1868	L.	None	Clear	...	...
2	M.	...	"	"	70	"	L.	Loss	Cortex	I it.	...
3	M.	...	"	"	70	May, 1868	R.	None	Clear	"	...
4	F.	Marastic and deaf	"	"	60	"	L.	...	...	...	...
5	F.	Good	"	"	54	April, 1868	R.	...	...	...	...
6	M.	"	"	"	50	"	L.	...	...	...	...
7	M.	Gouty	"	"	60	"	R.	...	...	...	...
8	M.	Good	"	"	56	May, 1868	L.	...	Cpsule.	...	...
9	M.	"	"	"	56	"	R.	...	"	...	...
10	M.	"	Polar cat.	Myop.	40	June, 1868	R.	...	Cortex	...	...
11	M.	"	"	"	40	July, 1868	L.	...	"	...	...
12	F.	"	Ordinary nucleus	None	50	June, 1868	R.	...	Clear	...	...
13	M.	Rheumatic	"	...	50	Aug. 1868	R.	Loss	"	...	...
14	M.	"	"	...	50	"	L	...	"	...	...
15	M.	Good	Polar	...	52	July, 1868	L	...	Blood	...	...
16	M.	"	"	...	52	Oct. 1868	R.	...	"	...	...
17	F.	"	Ordinary	...	64	June, 1868	R.	...	Clear	...	...
18	M.	"	"	...	45	July, 1868	R.	...	"	...	...
19	F.	"	"	...	61	"	R.	...	"	...	...
20	F.	"	"	...	61	"	L.	...	"	...	...
21	F.	"	"	...	55	Aug. 1868	L.	...	"	...	...
22	F.	"	"	...	55	Feb. 1869	R.	...	"	Irit.	...
23	F.	Delicate	"	...	58	Sept. 1868	L.	...	Blood	"	...
24	F.	Good	"	...	55	Oct. 1868	R.	...	Clear	...	...
25	F.	"	"	...	55	Dec. 1868	L.	...	"	...	...
26	M.	Delicate	"	...	60	"	R.	...	"	Irit.	...
27	M.	Good	Amber-coloured	...	64	Oct. 1868	L.	...	"	...	...
28	M.	"	"	...	64	Jan. 1869	R.	...	"	Irit.	...
29	M.	Bad	Ordinary	...	48	Oct. 1868	R.	...	"	...	...
30	M.	"	"	...	48	Dec. 1868	L.	...	"	...	...
31	F.	Moderate	"	...	55	Oct. 1868	L.	...	"	Irit.	...
32	M.	Marastic	"	...	65	Dec. 1869	L.	...	Blood	...	...
33	F.	"	Amber-coloured	...	55	Feb. 1869	R.	...	Clear	...	...

Panophthalmitis	Slough. cornea.	Closed pupil.	Resulting vision.	REMARKS.
...	...	...	1	Right eye lost after a cataract operation 2 or 3 years ago.
...	...	...	16	Chloroform was given; iritis on the 5th day; pupil was contracted upwards.
...	...	...	1	Slight iritis on 3rd day; collapse of cornea after operation; no chloroform.
...	...	...	1	
...	...	...	1	
...	...	...	1	Patient of intemperate habits.
...	...	...	1	A stout person, and subject to attacks of gout.
...	...	...	1	Needle was used to displace capsule.
...	...	...	1	A fortnight elapsed between the operations.
...	...	...	10	Extensive choroidal atrophy was seen afterwards, and vitreous opacities.
...	...	...	1	Posterior staphyloma.
...	...	...	4	Chloroform was administered; the wound was rather long in healing.
...	...	...	1	Both eyes were operated upon at one sitting; patient unsteady.
...	...	...	1	
...	...	...	1	Posterior polar cataract and thickened capsule; collapse of eyeball after operation, and pupil filled with blood.
...	...	...	1	Incision was enlarged with blunt curved scissors, as the nucleus was very large.
...	...	...	1	
...	...	...	1	Capsule afterwards cut across.
...	...	...	1	
...	...	...	1	Both eyes operated upon at one sitting.
...	...	...	1	Eye collapsed after operation.
...	...	...	1	Slight iritis on 7th day.
...	...	...	1	Slight iritis on 4th day; blood in anterior chamber.
...	...	...	1	
...	...	...	1	
...	...	...	1	In making section knife cut a portion of iris; iritis on 9th day.
...	...	...	1	In both eyes the cataracts were immature; very large amber-coloured nuclei; no cortex; cornea very small; before the operation the pupils dilated very little with atropine; in right eye the pupil was slightly contracted upwards after iritis.
...	...	...	2	
...	...	...	1	Patient most intemperate; very bloated looking and bronchitic; during his discharge from the hospital, between the 1st and 2nd operations, he drank excessively; in left eye cornea began to slough next day after operation.
...	Cornea slough.	...	Lost	
...	...	...	2	Iritis of a mild form 3 weeks afterwards; needle was used to clear the pupil.
...	...	...	1	Patient very unsteady during operation.
...	...	...	1	Collapse of cornea after operation; left eye lost after cataract operation 6 years ago.

No. of case.	Sex.	State of health.	Nature of cataract.	Complication.	Age.	Date of operation.	Right or left eye.	Loss of vitreous.	State of pupil immediately aft. oper.	Iritis.	Irido-choroiditis.
34	F.	Moderate	Morgag.	...	55	Feb. 1869	R.	...	Clear	...	...
35	F.	Very stout, brnchitic.	Ordinary hard nucleus	...	66	Mar. 1868	L.	Loss	Cortex left	...	...
36	F.	"	"	...	66	July, 1869	R.	...	Clear	...	...
37	M.	Good	Ordinary	...	61	Mar. 1869	R.	Loss	Blood	Irit.	...
38	M.	"	"	...	61	April, 1869	L.	...	Cpsule.	...	...
39	M.	"	"	...	58	"	L.	...	"	...	...
40	F.	"	"	...	64	"	L.	...	Clear	...	...
41	F.	"	"	...	64	July, 1869	R.	...	"	...	...
42	F.	"	"	...	74	May, 1869	R.	...	"	...	...
43	M.	"	"	...	65	June, 1869	R.	...	...	...	Irido-choroiditis.
44	M.	"	"	...	68	"	L.	...	Cpsule.	...	...
45	F.	"	Small nucleus and soft cort.	...	32	"	R.	...	...	...	...
46	F.	"	"	...	32	Aug. 1871	L.	...	...	...	...
47	F.	Marastic	Ordinary	...	60	June, 1869	L.	...	...	...	...
48	M.	Tremulous palsy	Hard, amber-coloured	Tremulous iris, &c.	74	July, 1869	R.	Loss	Cpsule.	...	...
49	M.	"	"	"	76	Sept. 1871	L.	"	Clear	...	...
50	F.	Moderate	Ordinary	...	75	Aug. 1869	R.	...	Cpsule.	...	...
51	F.	Good	Retro-grade	...	54	Sept. 1869	L.	...	Clear	...	...
52	F.	"	"	...	54	Oct. 1869	R.	...	Cpsule.	...	...
53	M.	"	Ordinary	...	57	Sept. 1869	L.	...	Clear	...	...
54	F.	Marastic	"	...	60	"	L.	...	"	...	...
55	M.	Good	"	...	51	Oct. 1869	R.	...	"	...	...
56	F.	"	"	...	59	"	R.	...	Cpsule.	...	...
57	F.	"	"	...	61	May, 1871	L.	...	Clear	...	...
58	M.	"	"	...	51	Nov. 1869	L.	...	"	...	...
59	M.	"	"	...	51	Mar. 1870	R.	...	Cpsule.	...	...
60	M.	"	"	...	59	Nov. 1869	R.	...	Clear	...	...
61	M.	"	Retro-grade	Pupill. adhes., &c.	69	Jan. 1870	R.	...	Cpsule.	...	...
62	M.	"	"	"	69	April, 1870	L.	...	Clear	...	...
63	F.	Marastic	Ordinary	...	52	Jan. 1870	R.	...	"	...	...
64	F.	"	"	...	52	Mar. 1870	L.	...	"	...	...
65	F.	Good	"	...	73	Jan. 1870	R.	...	"	...	...

Panophthalmitis	Slough. cornea.	Closed pupil.	Resulting vision.	REMARKS.
...	...	...	1	Cataract retrogressive; collapse of eyeball after operation.
...	...	...	1	Prominent eyeballs; vitreous escaped before lens; collapse of cornea; needle afterwards used to divide capsules.
Panop.	...	...	Lost	There was no accident during the operation; the incision was long on account of the very large nucleus; purulent iritis began next day, followed by panophthalmitis.
...	...	Closed pupil	Good percep. of light	Iritis began on 4th day, resulting in a closed pupil; perception of light good; suitable for iridectomy; collapse of cornea occurred after extraction.
...	...	...	1	Collapse of cornea after extraction.
...	...	...	1	Patient unsteady during operation.
...	...	...	1	
...	...	...	1	Unsteady at operation on second eye.
...	...	...	1	
...	...	...	Lost	On pressure being used to expel the lens the nucleus completely disappeared in the vitreous, and no further attempt at extraction was made; all went on well for nearly 3 weeks, when he went home. When I next saw him he had irido-choroiditis.
...	...	...	2	Right eye lost from chronic disease.
...	...	...	2	
...	...	...	2	
...	...	...	1	
...	...	...	1	Iris was tremulous; pupil uneven; lens slightly dislocated; fluidity of vitreous; needle used 2 or 3 weeks afterwards to divide capsule; patient very unsteady.
...	...	...	1	Cataract removed in its capsule with Bowman's spoon.
...	...	...	1	Needle afterwards used to capsule in pupil; left eye nearly lost from choroidal atrophy and vitreous opacities.
...	...	...	1	Capsule was much thickened, and was stripped from lens and removed with cystitome before expulsion of cataract; 4 days after, a little hæmorrhage occurred on surface of iris.
...	...	...	2	Capsule was very much thickened.
...	...	...	1	
...	...	...	1	Chloroform was given; collapse of cornea after operation.
...	...	...	1	
...	...	...	8	} Very small eyes and corneæ; patient very unsteady.
...	...	...	1	
...	...	...	1	} Patient unsteady at operation on second eye.
...	...	...	4	
...	...	...	1	
...	...	...	6	} In both eyes cataracts had contracted; only nuclei and tough and thickened capsule; T. in both eyes — 1; suppurating inflammation began next day.
Panop.	...	...	Lost	
...	...	...	16	Slight corneitis took place 4 or 5 days after operation, commencing at the corneal margin of wound and extending downwards, producing some opacity.
...	...	...	16	Cornea became similarly affected.
...	...	...	1	Patient very unsteady; slight hæmorrhage occurred in anterior chamber two days after operation.

No. of case.	Sex.	State of health.	Nature of cataract.	Complication.	Age.	Date of operation.	Right or left eye.	Loss of vitreous.	State of pupil immediately aft. oper.	Iritis.	Irido-choroiditis.
66	M.	Good	Ordinary	...	70	Feb. 1870	R.	...	Clear	...	...
67	M.	"	"	...	71	April, 1870	R.	...	"	...	...
68	M.	"	"	...	66	Feb. 1870	L.	...	Cpsule.	...	...
69	M.	"	"	...	67	July, 1871	R.	...	Clear	...	...
70	F.	"	Ordinary hard nucleus	...	69	April, 1871	R.	...	"	...	...
71	M.	"	"	...	51	May, 1870	L.	...	"	...	...
72	M.	"	"	...	53	Aug. 1872	R.	...	"	...	...
73	F.	Marastic	"	...	75	May, 1870	R.	...	"	...	...
74	F.	"	"	...	76	Mar. 1871	L.	Loss	Cpsule.	Irit.	...
75	M.	Good	"	...	56	May, 1870	R.	...	"	...	...
76	M.	"	"	...	66	Dec. 1870	R.	...	Clear	...	...
77	M.	"	"	...	61	April, 1870	R.	...	"	...	...
78	F.	"	"	...	68	July, 1870	R.	...	"	...	...
79	M.	Gouty	"	...	54	"	L.	...	"	...	...
80	F.	Good	Retro-gressive Ordinary	...	72	June, 1870	R.	...	Cpsule.	...	...
81	M.	"	"	...	36	July, 1870	L.	...	Clear	...	...
82	F.	"	"	...	71	"	R.	...	Cpsule.	...	...
83	F.	"	"	...	76	"	L.	...	"	...	...
84	F.	"	"	...	68	"	R.	Loss	Clear	Irit.	...
85	F.	"	"	...	68	"	L.	...	"	...	...
86	M.	Moderate	"	...	76	Aug. 1870	L.	...	"	...	...
87	M.	"	"	...	77	Aug. 1871	R.	...	"	...	...
88	M.	Good	"	...	70	Aug. 1870	R.	...	"	...	...
89	M.	"	"	...	71	April, 1871	L.	...	"	...	...
90	F.	Marastic	"	...	57	Aug. 1870	L.	...	"	Irit.	...
91	M.	"	"	...	64	"	R.	...	"	...	...
92	M.	"	"	...	65	April, 1871	L.	...	"	...	...
93	M.	"	"	...	60	Aug. 1870	R.	...	"	...	...
94	F.	"	"	...	59	Sept. 1870	R.	...	Blood	...	...
95	F.	"	"	...	60	July, 1871	L.	...	Clear	...	...
96	F.	Good	"	...	69	Sept. 1870	R.	...	"	...	...
97	F.	"	Retro-gressive Ordinary	...	59	Oct. 1870	R.	...	"	...	...
98	M.	Marastic	"	...	54	"	R.	...	"	...	...
99	M.	"	"	...	54	Nov. 1870	L.	Loss	Cortex	Irit.	...

Panophthalmitis	Slough. cornea.	Closed pupil.	Resulting vision.	REMARKS.
...	...	...	1	Collapse of eyeball after operation.
...	...	...	1	
...	...	...	16	
...	...	...	1	
...	...	...	1	
...	...	...	1	On rupturing capsule a bead of vitreous appeared; spoon used at once to remove lens; very little vitreous followed; some blood entered the anterior chamber; iritis began on the 8th day, resulting in a closed pupil with false membrane; good perception of light only. Iridectomy was performed 3 months after with very little good effect.
...	...	...	1	
...	...	...	1	
...	...	...	1	
...	...	Closed pupil	Good percep. of light	
...	...	...	1	Needle was used afterwards to divide remnants of capsule.
...	...	...	1	
...	...	...	1	
...	...	...	1	
...	...	...	1	
...	...	...	1	Needle was used to divide remnants of capsule in pupil.
...	...	...	1	
...	...	...	1	
...	...	...	1	
...	...	...	1	
...	...	...	Counts fingers	Extensive separation of the retina afterwards observed.
...	...	...	1	
...	...	...	4	
...	...	...	4	
...	...	...	1	
...	...	...	1	Most unmanageable patient; cataracts of deep amber colour; collapse of cornea took place after operation in her right eye, and there was slight iritis on 3rd day. Both eyes operated upon at one sitting. Section had to be enlarged with scissors.
...	...	...	1	
...	...	...	1	
...	...	...	1	
...	...	...	1	
...	...	...	1	Iritis took place on the 6th day, resulting in the formation of false membrane in the pupil and some contraction; pupil afterwards enlarged downwards, and needle used to capsule.
...	...	...	1	
...	...	...	1	
...	...	...	1	
...	...	...	1	
...	...	...	1	Section was enlarged by scissors.
...	...	...	1	
...	...	...	4	
...	...	...	1	
...	...	...	1	
...	...	...	1	Delicate and bronchitic subject. Point of knife caught iris; slight irido-dialysis; hæmorrhage into the anterior chamber.
...	...	...	1	
...	...	...	1	
...	...	...	1	
...	...	...	1	
...	...	...	1	A well-marked arcus senilis.
...	...	...	1	
...	...	...	1	
...	...	...	1	
...	...	...	1	
...	...	...	2	Left eye operated upon for cataract some years ago, resulting in a closed pupil.
...	...	...	2	
...	...	...	2	
...	...	...	2	
...	...	...	2	
...	...	Closed pupil	Good percep. of light	Collapse of eyeball after operation. Iritis began next day, and ended in a closed pupil, with false membrane; good perception of light; patient would not submit to another operation; very unsteady at operation on second eye.
...	...	...	Good percep. of light	
...	...	...	Good percep. of light	
...	...	...	Good percep. of light	
...	...	...	Good percep. of light	

No. of case.	Sex.	State of health.	Nature of cataract.	Complication.	Age.	Date of operation.	Right or left eye.	Loss of vitreous.	State of pupil immediately aft. oper.	Iritis.	Irido-choroiditis.
100	M.	Good	Ordinary	...	40	Aug. 1870	R.	...	Clear	...	...
101	F.	Marastic	"	...	76	Dec. 1870	R.	...	Cpsule.	...	...
102	F.	"	"	...	77	Jan. 1871	L.	...	Clear	...	...
103	M.	Good	"	...	45	"	R.	...	"	...	...
104	M.	"	"	...	54	"	L.	...	"	...	...
105	M.	"	Ordinary hard	...	65	"	R.	...	Cpsule.	Irit.	...
106	M.	"	"	...	65	Mar. 1871	L.	...	"	...	...
107	F.	"	"	...	53	Feb. 1871	L.	...	Clear	...	...
108	F.	Marastic	"	...	74	Mar. 1871	R.	...	"	...	Irido-chor.
109	F.	Good	"	...	44	"	L.	...	"	...	...
110	M.	"	"	...	60	"	R.	...	"	...	...
111	M.	"	"	...	60	April, 1871	L.	...	"	...	...
112	M.	"	"	...	73	Mar. 1871	R.	Loss	Cpsule.	...	...
113	M.	"	"	...	73	April, 1871	L.	...	...	...	...
114	M.	"	"	...	68	Mar. 1871	L.	...	Clear	...	...
115	F.	"	"	...	60	"	R.	...	"	...	...
116	F.	"	"	...	65	"	L.	...	"	...	...
117	M.	"	"	...	69	"	R.	...	"	...	...
118	F.	"	"	Lac. obstr.	42	April, 1871	L.	...	"	...	...
119	F.	"	"	...	54	Mar. 1871	R.	...	"	...	...
120	M.	Bad	"	...	62	April, 1871	L.	...	"	...	...
121	F.	Moderate	"	...	75	"	R.	...	...	...	...
122	F.	"	"	...	75	June, 1871	L.	...	...	...	...
123	F.	Good	Glutin.	...	54	April, 1871	L.	...	...	...	...
124	F.	"	"	...	54	Jan. 1872	R.	...	Cpsule.	...	...
125	F.	Marastic	Ordinary	...	66	May, 1871	R.	...	...	...	...
126	F.	"	"	...	66	"	L.	...	...	...	...
127	F.	Bad	Polar cataract	...	56	"	R.	Loss	Cpsule. &c.	...	...
128	F.	"	"	...	56	July, 1871	L.	"	Clear	...	...
129	M.	Good	Ordinary	...	43	May, 1871	L.	"	Cpsule.	Irit.	...
130	M.	"	"	...	33	"	R.	...	Clear	...	...
131	F.	Bad	"	...	61	"	L.	...	Blood	...	...
132	F.	"	"	Glaucoma	61	July, 1871	R.	...	Clear	...	...
133	M.	Good	"	...	65	May, 1871	L.	Loss	...	...	...
134	M.	"	"	...	76	"	R.	...	...	...	...
135	M.	"	"	...	64	"	R.	...	Clear	...	...

Panophthalmitis	Slough. cornea.	Closed pupil.	Resulting vision.	REMARKS.
...	...	...	1	Exophthalmos; left eye atrophied after inflammation many years ago.
...	...	...	4	Capsule in pupil obstructs the vision.
...	...	...	1	Collapse of eyeball.
...	...	...	4	Small hæmorrhages occurred repeatedly between 5th and 9th days after operation, and the eye remained weak for more than a fortnight.
...	...	...	1	Repeated attacks of slight hæmorrhage into anterior chamber after 3rd day.
...	...	...	1	Slight iritis on 6th day; needle afterwards used to divide capsule.
...	...	...	1	Needle afterwards used to capsule.
...	...	...	4	Chloroform was given; two days after operation a small hæmorrhage occurred in anterior chamber.
...	...	...	Lost	Patient had bronchitis with emphysema and cardiac disease; purulent iritis, followed rapidly by irido-choroiditis and atrophy.
...	...	...	1	
...	...	...	1	Small cornea.
...	...	...	1	Small cornea; collapse of cornea after extraction; key-shaped pupil.
...	...	...	1	
...	...	...	1	On rupturing capsule a bead of vitreous appeared, and spoon was used to remove cataract.
...	...	...	4	
...	...	...	1	
...	...	...	1	
...	...	...	1	Immature cataract.
...	...	...	1	Immature cataract; key-shaped pupil.
...	...	...	1	Epiphora and lachrymal obstruction on same side.
...	...	...	1	
...	...	...	1	Patient has diabetes mellitus of 5 years' duration.
...	...	...	1	Some bronchitis.
...	...	...	1	Patient very unsteady during operation.
...	...	...	1	Unsteady during operation.
...	...	...	1	Needle used to capsule.
...	...	...	1	Collapse of eyeball.
...	...	...	1	
...	...	...	1	Cataract immature; after rupturing capsule vitreous was likely to escape on the slightest pressure; spoon was used to extract lens, followed by liquid vitreous; needle afterwards used to divide capsular remnants.
...	...	...	1	Liquid vitreous escaped on completing section; lens removed by spoon with capsule entire.
...	...	...	1	Immature cataract; iritis on 4th day; pupil contracted upwards; pupil afterwards enlarged downwards and capsule cut.
...	...	...	1	
...	...	...	1	A spirit drinker; hæmor. in ant. chamber aft. operation.
...	...	...	1	An upper iridectomy had been performed by me 12 months ago for an acute attack of glaucoma.
...	...	...	1	
...	...	...	1	Has shaking palsy.
...	...	...	1	

No. of case.	Sex.	State of health.	Nature of cataract.	Complication.	Age.	Date of operation.	Right or left eye.	Loss of vitreous.	State of pupil immediately aft. oper.	Iritis.	Irido-choroiditis.
136	M.	Good	Ordinary	...	62	Oct. 1871	L.	...	Clear	...	...
137	F.	Bad	Glutinous	Post. disease	63	"	L.	...	Cortex	Irit.	...
138	M.	Marastic	Ordinary	"	70	June, 1871	R.	...	...	"	...
139	M.	"	"	"	70	Sept. 1871	L.	Loss	...	"	...
140	M.	Good	Ord. hard	...	64	June, 1871	L.	...	Clear	...	...
141	M.	"	Morgag.	...	40	"	R.	...	"	...	...
142	F.	"	Ord. hard	...	58	"	R.	Loss	Cpsule.	...	...
143	M.	"	"	Con-junct.	70	"	L.	...	...	...	...
144	M.	"	"	"	70	Aug. 1871	R.	...	...	Irit.	...
145	M.	"	"	...	65	July, 1871	L.	...	Clear	...	...
146	M.	Marastic	"	...	67	Aug. 1871	R.	...	Cpsule.	...	...
147	F.	"	"	...	64	"	R.	...	Clear	...	...
148	F.	Good	"	...	59	"	L.	...	"	...	...
149	M.	"	"	...	77	"	R.	...	...	...	...
150	M.	"	"	...	72	"	R.	...	Clear	...	...
151	M.	"	"	...	72	"	L.	...	"	...	...
152	M.	"	"	...	59	Sept. 1871	R.	Loss	...	...	...
153	M.	"	"	...	59	Dec. 1871	L.	...	Clear	...	...
154	F.	"	"	...	58	Sept. 1871	R.	...	"	...	...
155	F.	"	"	...	58	Oct. 1871	L.	...	"	Irit.	...
156	M.	"	"	...	56	Sept. 1871	R.	...	"	...	...
157	M.	"	"	...	56	Dec. 1871	L.	...	"	...	...
158	F.	"	"	...	38	Sept. 1871	L.	...	Cpsule.	Irit.	...
159	F.	Marastic	"	...	70	"	R.	...	...	...	...
160	F.	"	"	...	70	Oct. 1871	L.	...	...	Irit.	...
161	F.	Good	"	...	46	"	R.	...	...	...	...
162	M.	"	"	Glau-coma	53	"	L.	...	...	...	...
163	F.	"	"	...	49	"	R.	Loss	Cortex	...	...
164	F.	Bad	"	...	80	Nov. 1871	R.	...	Clear	Irit.	...

Panoph- thalmitis	Slough. cornea.	Closed pupil.	Result- ing vision.	REMARKS.
...	...	...	1	
...	...	Closed pupil	Per- ception of light only	Patient has been nervous and delicate for many years; perception of light was indifferent; lens was so glutinous that the pupil could not be cleared of cortical masses; cornea collapsed; sclera pitted on pressure. 4 days after operation purulent iritis set in, ending in a closed pupil with false membranes.
...	...	...	4	Pupil acted feebly under atropine; iris tremulous; a dull cornea; very weakly patient. Some extravasations of blood took place in anterior chamber a few days after operation; some iritis on the 14th day.
...	...	...	19	Wound was enlarged with scissors; lens was likely to sink; spoon was used; liquid vitreous escaped; slight iritis on the 4th day.
...	...	...	1	
...	...	...	1	
...	...	...	1	
...	...	...	1	Collapse of cornea after extraction.
...	...	Closed pupil	Good percep. of light	Collapse of cornea; eye did well, and patient went home 3 weeks after operation, and could see small objects well. He returned with iritis. Iris now healthy and
...	...	...	1	Right eye leucomatous. [promises well for artificial pupil.
...	...	...	1	Unsteady during operation; needle afterwards used to clear pupil of capsule.
...	...	...	1	Pupil key-shaped.
...	...	...	1	Pupil key-shaped.
...	...	...	2	
...	...	...	1	Both eyes operated upon at one sitting; patient had an attack of acute mania three days after operation, and was sent to workhouse hospital, and remained there for three weeks; no harm took place to his eyes.
...	...	...	1	
...	...	...	1	Vitreous appeared through wound on completing section.
...	...	...	6	
...	...	...	1	On 3rd day some blood observed in anterior chamber.
...	...	...	1	Slight iritis on 3rd day after operation.
...	...	...	1	
...	...	...	1	
...	...	...	14	Iritis on 9th day; pupil contracted upwards; pupil enlarged downwards, and capsule divided; needle again required to displace caps., but patient would not submit [to further interference.
...	...	...	6	
...	...	Closed pupil	Good percep. of light	Incision was enlarged by scissors; iritis began 2nd day; pupil closed; patient has not been seen again.
...	...	...	1	Needle was used to displace capsular remnants.
...	...	...	1	Operated upon for an acute attack of glaucoma seven wks. previously; right eye lost from glaucoma some years ago.
...	...	...	1	Vitreous escaped on rupturing capsule; ocular muscles contracted powerfully; eyeball collapsed.
...	...	Closed pupil	Good percep. of light	Patient a spirit drinker, bloated look; iritis began on the 3rd day. A day or two afterwards she went home and would not stay in hospital. When next seen she had no irritation in the eye, a closed pupil, and good perception of light.

No. of case.	Sex.	State of health.	Nature of cataract.	Complication.	Age.	Date of operation.	Right or left eye.	Loss of vitreous.	State of pupil immediately aft. oper.	Iritis.	Irido-choroiditis.
165	M.	Good	Ordinary hard	...	56	Oct. 1871	R.	...	Clear	Irit.	...
166	M.	"	"	...	56	Jan. 1872	L.	...	"	...	...
167	F.	"	"	Iritic adhes.	81	Nov. 1871	R.	...	"	...	...
168	F.	"	"	"	81	"	L.	...	"	...	...
169	F.	"	"	...	57	"	R.	...	"	...	...
170	F.	"	"	...	57	"	L.	...	"	...	...
171	F.	Marastic	"	...	64	"	R.	Loss	...	...	...
172	M.	Good	"	...	63	Dec. 1871	L.	...	Blood	...	...
173	F.	Marastic	"	...	61	"	R.	...	Cpsule.	...	...
174	F.	"	"	...	61	"	L.	...	...	...	...
175	M.	Weak	Retrog.	...	39	"	R.	...	...	...	...
176	M.	"	"	...	39	"	L.	Loss	...	...	Irido-chor.
177	F.	Good	Ord. hard	...	51	Feb. 1872	L.	...	...	...	...
178	M.	"	"	...	70	"	R.	...	...	...	...
179	M.	"	"	...	66	"	R.	...	...	Irit.	...
180	F.	"	"	Myop.	65	April, 1872	L.	...	Cpsule.	...	...
181	F.	"	"	...	63	June, 1872	R.	...	Clear	...	...
182	F.	"	"	...	63	"	L.	...	"	...	...
183	F.	"	"	...	52	April, 1872	R.	...	"	...	...
184	M.	"	"	...	58	"	R.	...	"	...	...
185	M.	"	"	...	58	Sept. 1872	L.	...	"	...	...
186	M.	"	Morgag.	...	60	April, 1872	L.	...	...	...	...
187	F.	Marastic	Ord. hard	...	63	"	R.	...	...	...	...
188	F.	"	"	...	63	"	L.	...	...	...	...
189	M.	Good	"	...	71	May, 1872	R.	...	...	...	...
190	M.	"	"	...	71	Sept. 1872	L.	Loss	Cortex, &c.	Irit.	...
191	M.	"	"	...	48	May, 1872	R.	...	Clear	...	...
192	M.	"	"	...	43	June, 1872	R.	...	"	...	...
193	M.	"	"	...	43	"	L.	...	"	...	...
194	M.	"	"	...	54	"	L.	...	"	...	...
195	F.	"	Morgag.	...	65	July, 1872	L.	Loss	Cpsule.	...	...
196	F.	Marastic	Ordinary	...	77	June, 1872	R.	...	"	Irit.	...
197	F.	"	Morgag.	...	77	"	L.	...	...	...	...
198	F.	Good	Ordinary	...	64	Aug. 1872	R.	...	...	Irit.	...
199	M.	"	"	...	67	Sept. 1872	L.	...	Cortex & caps.	...	...
200	M.	"	"	...	65	Aug. 1872	R.	...	Clear	...	...

Panophthalmitis	Slough. cornea.	Closed pupil.	Resulting vision.	REMARKS.
...	...	...	1	Struck eye during night three days after operation and produced some iritis.
...	...	...	1	
...	...	...	1	Incision was enlarged with scissors; cataract was removed by spoon without accident; extraction in both eyes made at one sitting.
...	...	...	2	Iris was adherent to capsule all round the pupillary margin; six months after the extraction was made pupil was enlarged downwards.
...	...	...	4 }	Both eyes operated upon at one sitting.
...	...	...	2 }	
...	...	...	1	Rheumatic subject; unsteady during the extraction; slight prolapse of iris.
...	...	...	8	
...	...	...	2 }	Both eyes operated upon at one sitting; needle used to capsule in right eye.
...	...	...	1 }	
...	...	...	1	Collapse of cornea; both eyes operated upon at one sitting; patient was thin, badly nourished, and of weak intellect.
...	...	...	Lost }	
...	...	...	1	
...	...	...	1	
...	...	Closed pupil	Good percep. of light	Iritis on 9th day after operation; he brought on the inflammation by reading the newspaper with his good eye for 2 days before the attack; there is good perception of light.
...	...	...	1	Patient myopic $\frac{1}{2}$ th; needle afterwards used to displace capsule.
...	...	...	1 }	Both eyes operated upon at one sitting.
...	...	...	$1\frac{2}{3}$ }	
...	...	...	2	
...	...	...	1	
...	...	...	1	
...	...	...	2	Liquid cortex.
...	Supp. cornea	...	Lost }	Cornea very small; next day purulence began in wound and spread rapidly to cornea. Both eyes operated upon at one sitting.
...	...	...	1 }	
...	...	...	1	Deaf.
...	...	Closed pupil	Good percep. of light	Patient unsteady at 2nd operation; iritis commenced on the 4th day after operation; after inflammation had subsided there was very good perception of light.
...	...	...	1	Immature cataract.
...	...	...	1 }	Both eyes operated upon at one sitting; prominent eye-balls and small cornea.
...	...	...	1 }	
...	...	...	1	Key-shaped pupil.
...	...	...	1	Vitreous escaped after excising iris; spoon at once used.
...	...	...	2 }	Incision was enlarged with scissors. Both eyes operated upon at one sitting.
...	...	...	1 }	
...	...	...	1	Slight iritis began on 5th day; patient a rheumatic subject.
...	...	...	1	Needle was afterwards used to clear pupil.
...	...	...	$1\frac{2}{3}$	





