

ORIGINAL

Study of Intraocular Lens Implants in Bahrain Review of 41 Cases

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ABSTRACT :

A retrospective study of 43 eyes which underwent cataract extraction with intraocular lens implants at Salmaniya Medical Centre between January 1982 and December 1984 was carried out. The final visual outcome does not compare favourably with other published series because of the reasons discussed. Nevertheless 84% achieved 6/60 vision or better. The incidence of complications is no more than the other published series. This procedure is recommended for all and will be especially beneficial for Bahraini patients who are reluctant to use glasses.

In 1951 Harold Ridley reported the results of intraocular implants after cataract extraction¹. These implants were placed in the posterior chamber but this procedure was abandoned due to the high incidence of complications². As a result, the lenses never became popular and most surgeons were

against the procedure. Despite this, Choyce in England³ and Binkhorst in Holland⁴ carried on with refined techniques and different designs of lenses and once again the lenses are becoming increasingly popular. In Bahrain the first iris supported implant surgery was performed in July 1979 by one of us (H.A.) and the patient is still maintaining 6/12 vision.

MATERIAL AND METHODS

Forty-one patients underwent cataract surgery with implant and two cases had bilateral surgery performed giving a total number of 43 implanted eyes. The cases were selected randomly provided they were clinically free of ophthalmic diseases except the mature cataract. There were 27 males and 14 females with an age range from 8 — 80 years. There were 34 Bahrainis and 7 non-Bahrainis. The follow up period was a minimum of 6 months and a maximum of 3 years.

All patients had surgery performed under general anaesthesia by senior members of the staff. The technique differed according to the surgeon. There were 24 cases of intracapsular cryo-extraction and 19 cases of planned extracapsular extraction. Twenty cases had anterior chamber implants (Choyce mark VIII and IX, Azar style), 12 cases had iris supported implants (Binkhorst and Fyoderov I style) and 11 cases had posterior chamber implants (Boberg-Ans style, J loop Sinskey style, C loop Simco style).

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**DETAILS OF INDIVIDUAL CASES
THAT UNDERWENT INTRAOCULAR IMPLANT**

NO.	INITIALS	AGE	SEX	VISION	COMPLICATIONS
1.	I.A.Z	47	M	6/9	Secondary Implant
2.	Z.A.E	60	F	6/36	Lens Tilted in Front of Iris.
3.	A.H.N	50	M	6/12	
4.	A.A.N	60	M	6/36	
5.	F.A.R.A	65	F	6/36	
6.	A.S.A	55	F	6/12	Lower Loop Behind Iris.
7.	S.H.S	68	F	6/36	
8.	S.J.M.J	60	F	6/60	
9.	L.A.Y	60	F	6/36	
10.	M.N.H	70	M	L 6/24 R 6/12	Leaking Wound.
11.	E.S.A.L	41	M	6/12	
12.	A.H.A	65	M	3/60	Cystoid Macular Oedema
13.	A.A.S.S	43	F	6/6	
14.	J.C.C	30	M	6/18	Gaping Wound – Resutured.
15.	K.M.A	60	F	6/12	
16.	A.A.A.M	72	M	3/60	
17.	A.J.H	8	F	6/6	Slight Tilting of Lens
18.	A.S.H.I	40	M	6/9	
19.	A.H.Y	60	M	3/60	Endothelial Decompensation.
20.	E.H.A.S	27	M	6/60	
21.	S.S.	48	M	CF	Macular Degeneration
22.	K.C.	40	M		
23.	A.M.S	60	M	R 6/ L 6/9	
24.	M.A.M	55	F	6/6	
25.	E.H.A.S	27	M	6/60	
26.	Y.M.N	56	M	6/9	
27.	H.M.	55	M	6/9	
28.	A.F.H	40	M	6/18	
29.	A.H.A.N	80	M	PL+	Developed Endophthalmitis
30.	H.A.M	70	M	CF	1 – 2 ft. Counting Finger. Bilateral Macular Degeneration.
31.	G.R.S.A	34	M	6/6	Prima. Post. Capsu.
32.	Z.A.M	60	F	6/36	
33.	H.A.B	65	M	6/24	
34.	M.A.A.S	75	F		Lower Loop Behind Iris.
35.	M.A.H	52	M	6/24	
36.	S.K.B	54	M	6/18	
37.	H.A.M.S	17	M	6/24	
38.	K.A.S	35	F	PL+	Lens Removed
39.	M.Y.	37	M	6/18	Tr. Perforation
40.	T.S.	70	F	6/9	
41.	THA. A.H.TA	60	M	6/36	Macular Degeneration

RESULTS

Vision :

Sixteen eyes (37%) achieved 6/12 or better. Eighteen eyes (42%) achieved between 6/18 — 6/60. Seven eyes (16%) achieved less than 6/60. In two cases (4.6%) vision was not recorded as the patients did not come for follow up.

Complications

The operative complications observed during the patients' stay in the first week in the hospital were: Two cases (4.6%) nos. 10 and 14 developed wound leak with shallow anterior chamber which required suturing with no further complications. Two cases (4.6%) nos. 6 and 34 had subluxated loops which were left alone as this did not cause a problem with vision or irritable eyes. There were no cases of hypopyon or pupil block glaucoma.

Late complications included patient no. 29 who developed corneal ulcer leading to endophthalmitis and the eye was subsequently lost as the patient presented quite late. Patient no. 19 developed bullous keratopathy in the early postoperative period which in our opinion was the result of irrigating solution (Hartman's) as two more corneas developed corneal decompensation the same day. This patient underwent keratoplasty. Patient no. 4 is suffering from recurrent attacks of uveitis which has caused a membrane behind the lens which will need incision. Anterior chamber lens implant in patient no. 28 was moving freely in the anterior chamber because it was a small size and was replaced by another anterior chamber lens. Implant in patient no. 38 was removed because of the remaining lens matter and irritable eye, also the cornea was becoming oedematous.

DISCUSSION

The visual results (37% achieving 6/12 or better) does not compare favourably with other reported series. Cheng et al. 84%⁶, Drews 87%⁷, Worst et al. 68.2%⁸, Kline 75.93%⁹, Binkhorst 83%¹⁰, Roper-Hall 91%¹¹, Kratz et al. 91.2%¹², Fyoderov 93.2%¹³. This variation in result depends on certain factors such as the total period of follow up, many patients did not like to use correction, exclusion of preoperative pathology, average age of patients etc., and with our patients one of the main drawbacks is

very poor cooperation from them and poor follow up. Nevertheless, 79% (84% including those patients who did not come for follow up at all) achieved 6/60 or better. The causes of poor vision in the remaining cases are, 3 cases (nos. 2, 30, 41) macular degeneration, one case (no. 29) of endophthalmitis, one case (no. 19) of endothelial decompensation and one case (no. 11) of definite clinically diagnosed cystoid macular oedema.

4.6% of eyes developed loop dislocation and this compares favourably with other series. Atkins et al. 8.8%¹⁴, Schott 2.4%¹⁵, Draeger 4.8%¹⁶, Jaffe et al. 2.8%¹⁷.

4.6% of eyes developed wound leak with shallow anterior chamber, this compares well with other series, Cheng et al.¹⁸.

CONCLUSION

Intraocular lens implant surgery is quite safe in experienced hands and definitely has advantages over the other forms of aphakia treatment, especially for our type of patient as some do not wish to use glasses and it would be impossible for them to use the contact lens. Implant surgery does not carry more risk when compared to simple cataract surgery and after a little experience is not difficult to perform.

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