RESULTS

A. Demographic data:

The study was conducted on 14 patients **group A (receiving adjuvant 5-FU and LMWH)** and 14 patients **group B (receiving no adjuvant)**. There was no statistically significant difference as regards age and sex between the two groups. The mean age in group A (adjuvant group) was 48.2 years ±11.71 SD and in group B was 40.8 years ± 16.52 SD. Group A consisted of 8 males (57.1%) and 6 females (42.9%) while group B consisted of 11 males (78.6%) and 3 females (21.4%) with non significant P value (> 0.05) of comparison using independent samples t-test. Tables 6-1 and 6.2 display demographic data analysis with convenient display using charts 6-1 to 6.5.

1-Age :

The age of group A ranged from 17 – 61 years with a mean of 48.21 years with SD of 11.71 years, while the age of group B ranged from 14 – 63 years with a mean of 40.86 years with SD of 16.52 years.

Table (1) : Age distribution of group A and group B

	Group A	**Group B**	**Statistical data using independent samples t –test**
Mean age	48.21	40.86	P value > 0.05 (non – significant)
Mode			
Minimum age	17	14	
Maximum age	61	63	
SD	11.71	16.52	

(2) Sex:

Among group A there were 8 males and 6 females, while among group B there were 11 male and 3 females

Table (2) : Sex distribution in group A and group B.

Group A			Group B		
No. of patients	**Male**	**Female**	**No. of patients**	**Male**	**Female**
14	8(57.1%)	6 (42.9%)	14	11 (78.6%)	3 (21.4%)
P value > 0.05 (non – significant)					

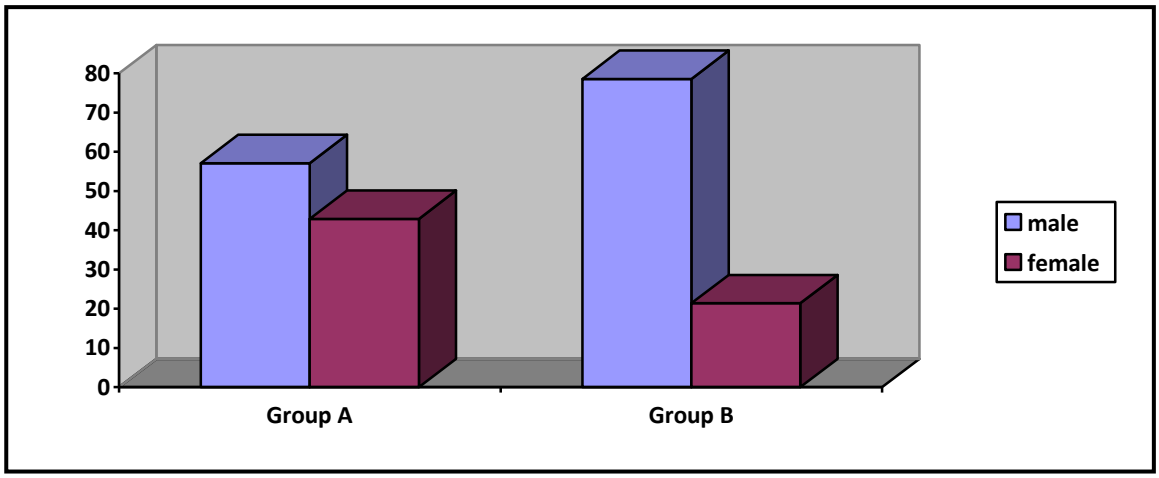


Chart (6-1): Sex distribution in group A and group B

B- Pre-operative examination data:

Preoperative examination showed statistical similarity of the data of the two groups as a basis for applying the study. These data included laterality (table 3), history of high myopia (table 4) and history of trauma (Table 4).

Also lens status with group A showing 14.3 % aphakic, 28.6% pseudophakic, 42.9% with clear lens and 14.3% cataractous lens. While group B showed 21.4% aphakic, 21.4% pseudophakic, 42.9% with clear lens and 14.3% with cataractous lens. The P – value for difference with x^2 – test was > 0.05 (non significant). Table 6-5 and charts 6-6 and 6-7 demonstrate these data.

1- Laterality:

Among group A, there were 6 right eyes affected and 8 left eyes effected, while among group B, there were 8 right eyes affected and 6 left eyes affected.

Table (3): Laterality in group A and group B.

	Group A	**Group B**	
Rt – eye	6(42.9%)	8(57.1%)	P value > 0.05
Lt – eye	8 (57.1%)	6(42.9%)	(non–significant)

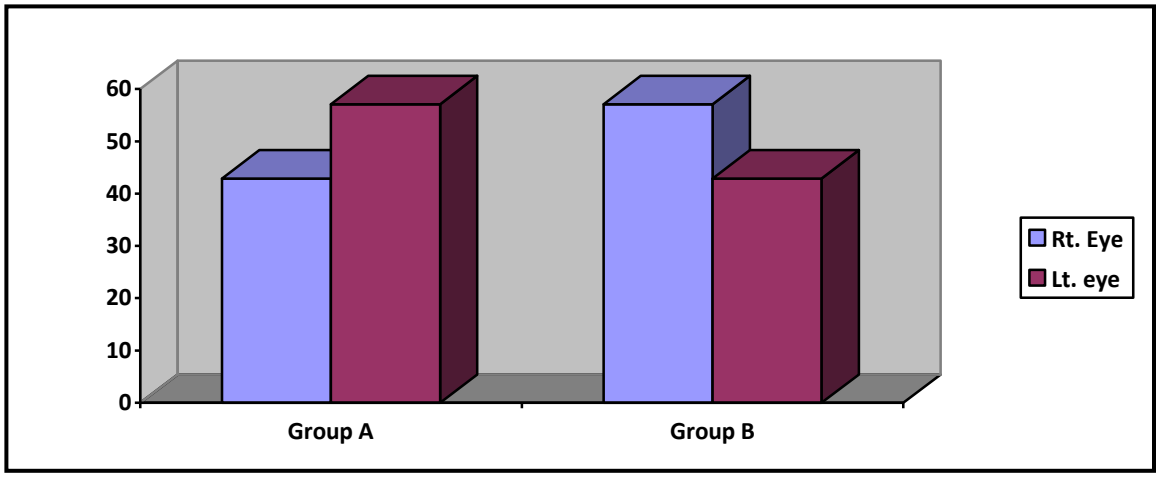


Chart (6-2): Laterality in group A and group B.

2- Myopia and trauma:

Table (4): History of myopia and trauma in group A and group B

	Group A	Group B	
High myopia	8 (57.1%)	7 (50.0%)	P value > 0.05 (non significant)
Trauma	1 (7.1%)	2 (14.3%)	P value > 0.05 (non significant)

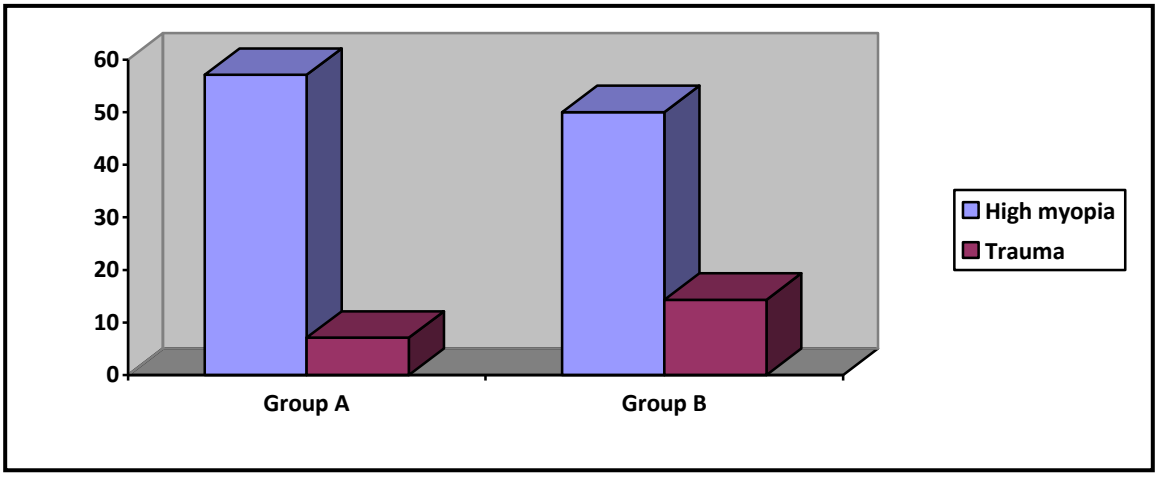


Chart (6-3): High myopia and trauma in group A and group B.

3- Lens status:

Table (5): Lens status in group A and group B

	Group A	Group B	Statistical data using chi – square test
Aphakia	2 (14.3%)	3 (21.4%)	P value > 0.05 (non significant)
Pseudophakia	4 (28.6%)	3 (21.4%)	
Clear lens	6 (42.9%)	6 (42.9%)	
Cataract	2 (14.3%)	2 (14.3%)	

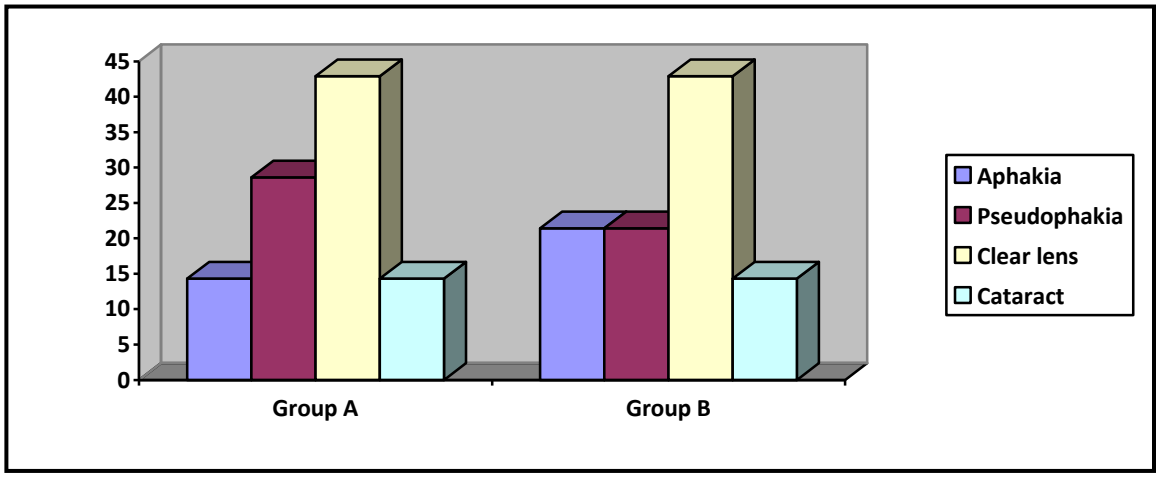


Chart (6-4): Lens status in group A and group B.

5. Risk factors of postoperative PVR:

Risk factors of postoperative PVR as identified in the review of literature and our inclusion criteria were similar in the two groups. All patients had multiple risk factors for PVR.

Analysing the two groups we had in **group A** 14.3% aphakic, 28.6% pseudophakic with opened posterior capsule, 21.4% with PVR

grade B, 57.1% with PVR grade C1, 21.4% with higher grade of PVR, 14.3% recurrent cases after buckling combined with cryopexy procedure, 71.4% had four quadrants RD, 14.3% had vitreous hemorrhage, 14.3% had multiple tears and 7.1% with giant tear. While **group B** showed 21.4% aphakia, 21.4% pseudophakia with opened posterior capsule, 28.6% grade B PVR, 50% grade C1 PVR 21.4% higher grades of PVR, 21.4% recurrent cases after buckling, 50% with total R.D. 7.1% with vitreous hemorrhage.

These data are demonstrated conveniently in table 6 and chart 8.

Table (6): Risk factors of postoperative PVR in group A and group B

	Group A	Group B	P – value
Aphakia	2(14.3%)	3 (21.4%)	> 0.05 (non significant)
Pseudophakia with open posterior capsule	4(28.6%)	3 (21.4%)	> 0.05 (non significant)
PVR B	3(21.4%)	4(28.6%)	> 0.05 (non significant)
PVR C1	8(57.1%)	7(50%)	> 0.05 (non significant)
PVR C2 or more	3 (21.4%)	3(21.4%)	> 0.05 (non significant)
Recurrence after buckling	2 (14.3%)	3 (21.4%)	> 0.05 (non significant)
Total RD	10 (71.4%)	7 (50%)	> 0.05 (non significant)
Vitreous hemorrhage	2(14.3%)	1 (7.1%)	> 0.05 (non significant)
Multiple tears(>= 3 breaks)	1 (7.1%)	0	> 0.05 (non significant)
Hypotony, associated uveitis	0	1 (7.1%)	> 0.05 (non significant)
Giant tears	1 (7.1%)	0	> 0.05 (non significant)

(5) Detachment characteristics:

(a) types of retinal detachment:

Among **group A,** there were 10 eyes with total R.D and 4 eyes with subtotal R.D, while among **group B**, there were 7 eyes with total R.D. and 7 eyes with subtotal R.D.

(b) Retinal breaks:

Among **group A**, there was one eye with undetectable breaks, 8 eyes with one retinal break, 3 eyes with two retinal breaks and 2 eyes with three retinal breaks, while among **group B**, there were 5 eyes with undetectable retinal breaks, 6 eyes with one retinal break, 3 eyes with two retinal breaks and no eyes with three retinal breaks.

(c) Duration of detachment:

Among **group A,** there were 12 eyes with less than 3 months duration and 2 eyes with more than 3 months duration of retinal detachment, while among **group B,** there were 11 eyes with less than 3 months duration and 3 eyes with more than 3 months duration of retinal detachment.

Table (7): Detachment characteristics in group A and group B

	Group A	Group B	P-value
Total RD	10 (71.4%)	7 (50%)	> 0.05
Subtotal RD	4 (28.6%)	7 (50%)	> 0.05
No. of breaks			
Mean	1.43	0.86	>0.05
Maximum	3	2	
SD	0.852	0.770	
Undetectable Breaks	1(7.1%)	5 (35.7%)	
1 break	8 (57.1%)	6 (42.9%)	
2 breaks	3 (21.4%)	3 (21.4%)	
3 breaks	2 (14.3%)	0	
Duration of detachment			
< 3 m	12(85.7%)	11 (78.6%)	> 0.05
3 m or more	2 (14.3%)	3 (21.4%)	

(6) History of previous operation:

Among **group A**, preoperatively, there were 6 eyes with no history of previous operations, 2 eye with previous scleral buckle surgery, 4 eyes with previous extracapsular cataract extraction (ECCE) surgery and 2 eyes with previous phacoemulsification.

Among **group B**, preoperatively, there were 5 eyes with no history of previous operations, 3 eyes with previous sclera buckle surgery, 3 eyes with previous extracapsular cataract extraction (ECCE) surgery and 3 eyes with previous phacoemalsification.

Table (8): Comparison between group A and group B regarding history of previous operations.

Previous operations	Study groups	
	Group A	Group B
No	6 (42.9%)	5 (35.7%)
Scleral buckle	2 (14.3%)	3 (21.4%)
ECCE	4 (28.6%)	3 (21.4%)
Phaco	2 (14.3%)	3 (21.4%)
X^2	0.6	
P	>0.05	

n = numbers, % = percentage, phaco = phacoemulsification, x2 = chi-square test, P = probability.

This table shows a statistically non – significant difference between **group A and group B** regarding history of previous operations using chi – square test.

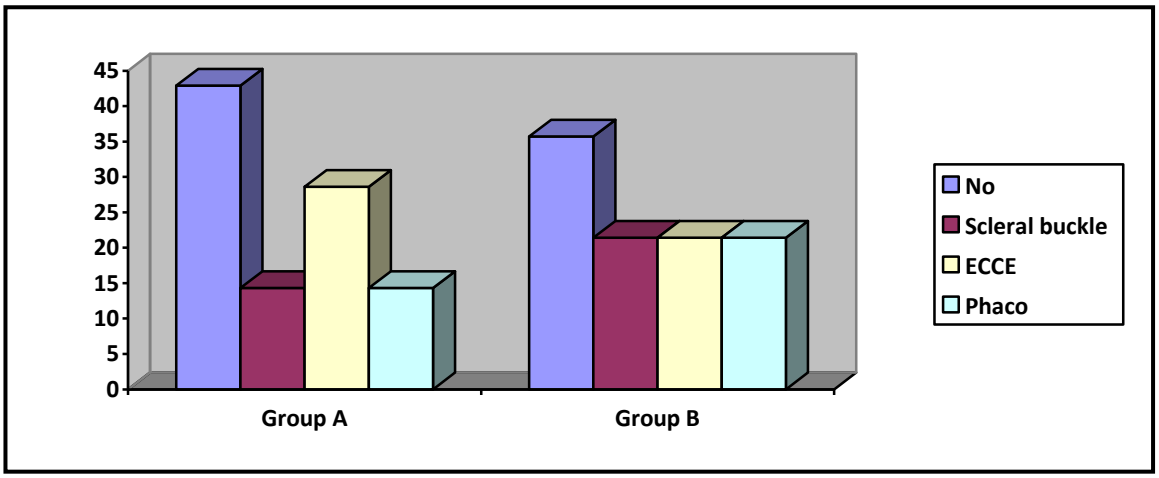


Chart (6-5): History of previous operations in group A and group B

(7) IOP preoperative:

There was no significant difference in pre – operative IOP between two groups. There was 3 cases showing preoperative hypotony in group A (21.4%) and 4 cases in group B (28.6%).

Table (9) : Preoperative IOP values in group A and B

	Group A	Group B
1	8	10
2	5	8
3	9	8
4	10	10
5	8	12
6	12	7
7	10	5
8	7	5
9	5	8
10	14	5
11	6	8
12	8	10
13	10	12
14	13	6
Mean	8.4	8.1
SD	3.7	2.4
t	0.2	
p	>0.05	

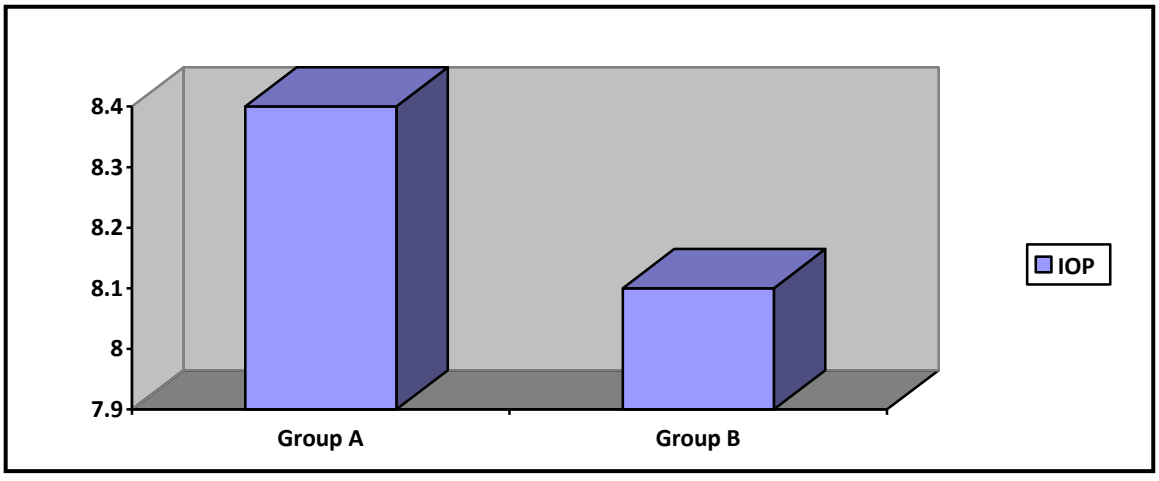


Chart (6-6): Mean preoperative IOP in group A and group B

7- Visual acuity :

Table (10): Preoperative visual acuity in group A and group B

	Group A	**Group B**	P- value
1	CF 50 cm	HM	>0.05
2	HM	HM	
3	HM	CF 50 cm	
4	HM	HM	
5	HM	HM	
6	HM	HM	
7	HM	1/60	
8	CF 30 cm	HM	
9	HM	HM	
10	HM	CF 30 cm	
11	HM	HM	
12	HM	HM	
13	HM	HM	
14	HM	HM	

Table (11): Comparison between visual acuity changes between group A and group B.

		Group A		Group B		Total	
		No.	%	No.	%	No.	%
Visual acuity	1/60	0	.0%	1	7.1%	1	3.6%
	CF 30 cm	1	7.1%	1	7.1%	2	7.1%
	CF 50 cm	1	7.1%	1	7.1%	2	7.1%
	HM	12	85.7%	11	78.6%	23	82.1%
	Total	14	100.0%	14	100.0%	28	100.0%

X^2=1.04 p>0.05

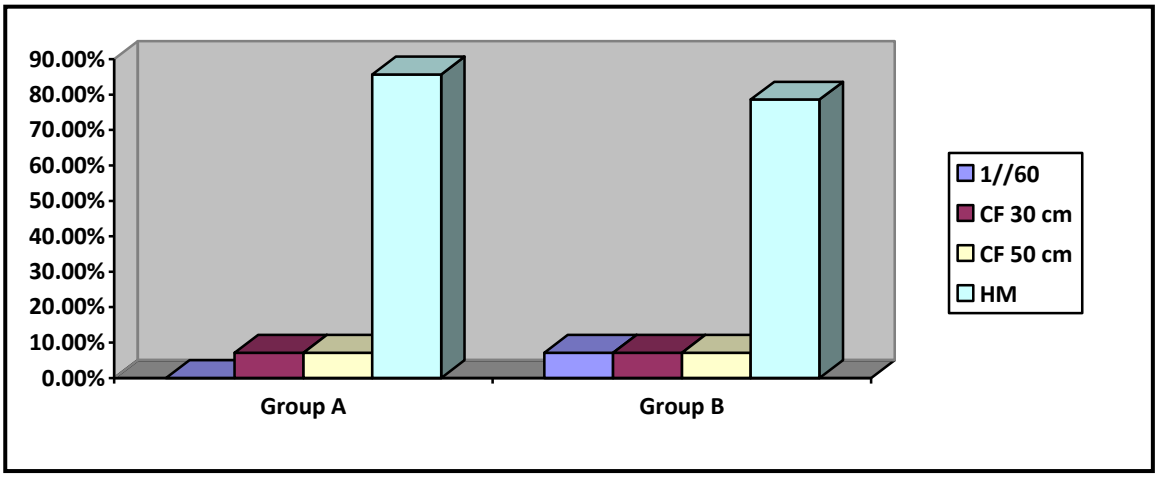


Chart (6-7): Preoperative visual acuity in group A and group B

C- Post – operative data:

1-IOP postoperative course:

** IOP values : group A*

Table (12): Postoperative IOP values in group A

	IOP 2w	1m	3m	6m
1	14	16	16	17
2	18	16	14	14
3	22	18	18	16
4	14	11	10	10
5	18	20	17	16
6	18	17	18	14
7	20	18	18	18
8	18	20	19	20
9	19	17	18	18
10	18	16	16	16
11	20	26	30	25
12	18	19	19	19
13	20	22	16	16
14	16	14	16	17

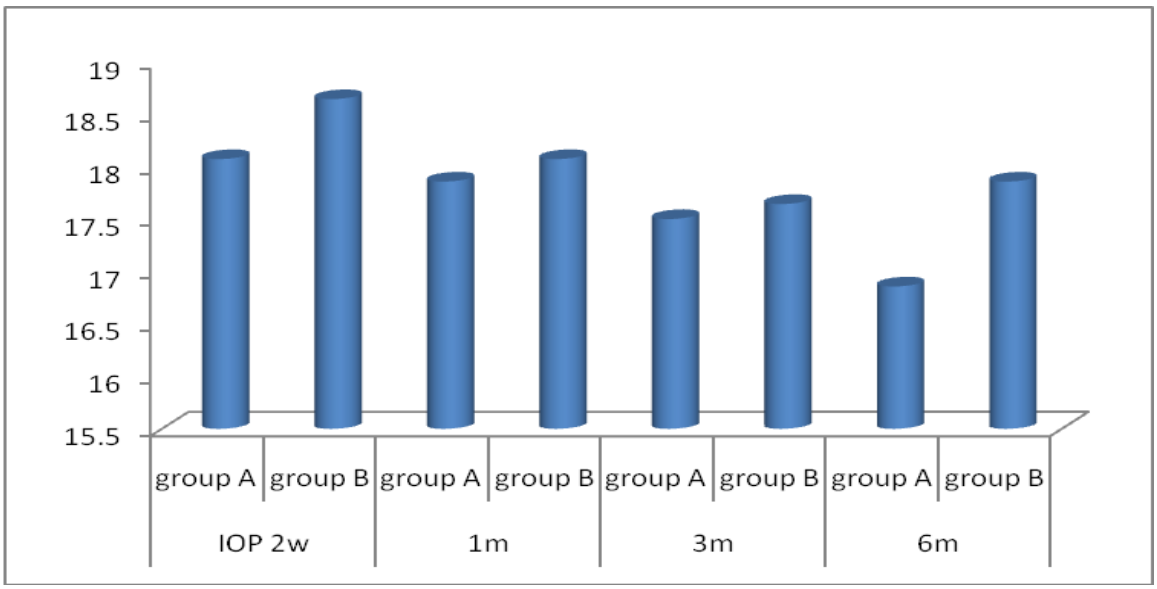
* IOP values : group B

Table (13): Postoperative IOP values in group B

	IOP 2w	1m	3m	6m
1	24	20	20	19
2	18	17	17	18
3	20	22	19	19
4	16	17	17	18
5	25	26	25	27
6	14	15	15	16
7	16	18	18	17
8	16	14	14	13
9	22	24	20	21
10	20	18	18	18
11	18	16	16	17
12	18	16	16	15
13	18	17	18	18
14	16	13	14	14

Table (14): Comparison between postoperative IOP between group A and group B .

		N	Mean	Std. Deviation	t	p
IOP 2w	**group A**	14	18.0714	2.23484	0.5	>0.05
	group B	14	18.6429	3.22507		
1m	**group A**	14	17.8571	3.59181	0.2	>0.05
	group B	14	18.0714	3.73063		
3m	**group A**	14	17.5000	4.29221	0.1	>0.05
	group B	14	17.6429	2.87180		
6m	**group A**	14	16.8571	3.39359	0.8	>0.05
	group B	14	17.8571	3.37085		



Chaprt (6-8): Mean postoperative IOP in group A and group B

2. Best corrected *visual acuity changes:*

Group A visual acuity changes:

Table (15): Best corrected visual acuity changes in group A (BCVA)

	Vision 2w	1m	3m	6m
1	0.1000	0.1000	0.1000	0.1000
2	0.0300	0.0300	0.0160	0.0160
3	0.0670	0.0670	0.0300	0.0160
4	0.1000	0.3000	0.3000	0.3000
5	0.0670	0.0830	0.0670	0.0670
6	0.0300	0.0300	0.0300	0.0300
7	0.0500	0.1000	0.1000	0.1000
8	0.0830	0.1000	0.1000	0.1000
9	0.0500	0.0300	0.0300	0.0300
10	0.0830	0.0830	0.0830	0.0500
11	0.0167	0.0167	0.0167	0.0167
12	0.0500	0.0500	0.0500	0.0300
13	0.0500	0.0500	0.0500	0.0500
14	0.1000	0.1000	0.0830	0.0500

Group B visual acuity changes:

Table (16): Visual acuity changes in group B

	Vision 2w	1m	3m	6m
1	0.0500	0.0500	0.0300	0.0300
2	0.0830	0.1000	0.1000	0.0830
3	0.0500	0.0830	0.0830	0.0830
4	0.0300	0.050	0.0500	0.0500
5	0.0025	0.0025	0.0025	0.0025
6	0.0500	0.8300	0.8300	0.0500
7	0.0160	0.0300	0.0300	0.0025
8	0.0500	0.0500	0.0167	0.0167
9	0.0160	0.0300	0.0300	0.0160
10	0.0830	0.1600	0.1600	0.1600
11	0.0025	0.0166	0.0300	0.0300
12	0.0167	0.0167	0.0167	0.0167
13	0.0830	0.1600	0.1600	0.1600
14	0.0500	0.1000	0.0500	0.0500

Table (17) : Comparison between postoperative Visual acuity changes in group B

		N	Mean	Std. Deviation	t	p
IOP 2w	group A	14	.0626	.02764	1.9	>0.05
	group B	14	.0416	.02858		
1m	group A	14	.0814	.06987	0.7	>0.05
	group B	14	.1199	.21041		
3m	group A	14	.0754	.07173	0.6	>0.05
	group B	14	.1135	.21228		
6m	group A	14	.0683	.07351	0.6	>0.05
	group B	14	.0536	.05180		

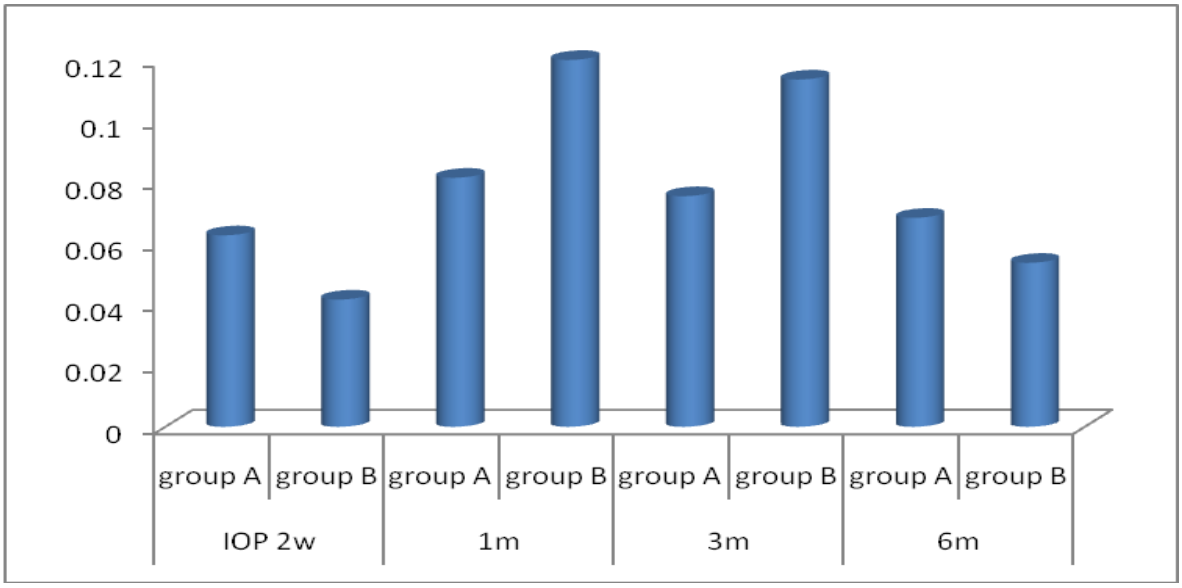


Chart (6-9): Postoperative visual acuity changes in group A and group B

Retina status::

Regarding the primary outcome measure (success rate), it was considered as the rate of posterior retinal reattachment after silicone oil removal without any reoperations at 6 months.

Among **group A,** 6 months postoperatively after silicone oil removal, there were 11 eyes with attached retinae (success) and 3 eyes with RD (failure); while among **group B**, there were 10 eyes with attached retinae (success) and 4 eyes with RD (failure).

Table (18): Comparison group A & group B as regards Primary outcome measure

	Group A		Group B		Total		X^2	P
	No.	%	No.	%	No.	%		
Succcess	11	78.6	10	71.4	21	75	0.1	>0.05
Failure	3	21.4	4	28.6	7	25		
Total	14	100	14	100	28	100		

No. = Numbers, % = Percentage.

X^2 = Chi – squire test, P = Probability

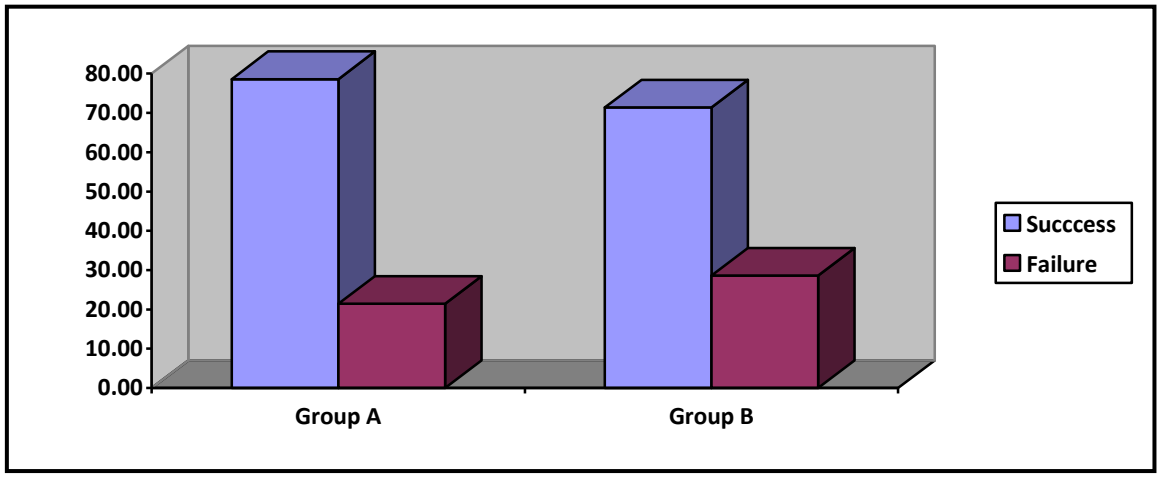


Chart (6-10): Primary outcome measure in group A and group B

This table shows a statistically non – significant difference in success rate between group A and group B. Using chi – square test.

However, there is higher number of eyes with attached retinae, 6 months postoperatively after silicore oil removal, among **group A** than among **group B**, yet failed to reach statistical significance.

Also, among **group A,** 6 months postoperatively with or without silicone oil removal, there were 13 eyes with attached retinae, 1 eye with RD with tractional element; while among **group B,** there were 11 eyes with attached retinae, 2 eyes with RD with tractional element and 1 eye with rhegmatogenous retinal detechment (RRD).

Table (19):Comparison group A & group B as regards retina status at 6 month

	Group A		**Group B**		**Total**		**X^2**	**P**
	No.	**%**	**No.**	**%**	**No.**	**%**		
Attached	13	92.9	11	78.6	24	85.7	1.2	>0.05
Detached	1	7.1	3	21.4	4	14.3		
Total	14	100	14	100	28	100		

No. = Numbers, % = Percentage.

X^2 = Chi – squire test, P = Probability

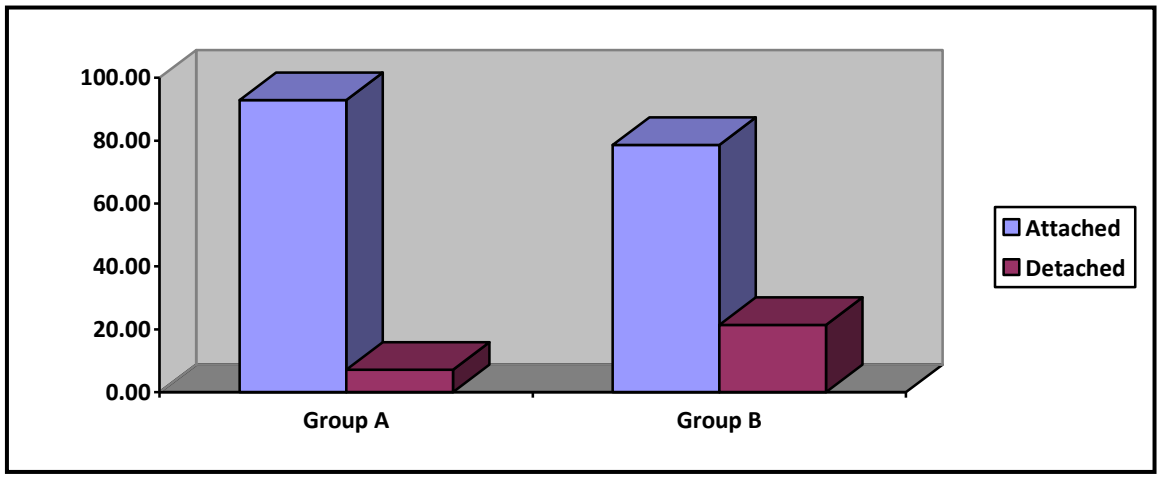


Chart (6-11): Retina status at 6 month in group A and group B

This table shows a statistically non – significant difference in 6 – months postoperative retina status between group A and group B using chi – square test.

However, there is a higher number of eyes with attached retinae and / lower number of eyes with RD with tractional element, with no eyes with RRD, 6 months postoperatively, among group A than among group B, yet this difference failed to reach statistical significance.

There were 3 patients who underwent reoperation within 6 months postoperatively (2 in group A and 1 in group B).

There were 3 patients who did not undergo silicone oil removal at 6 months due to recent reoperation and hypotony (2 in group A and 1 in group B).

Postoperative proliferation:

We considered postoperative proliferation present when we clinically found RD with tractional element and / or macular pucker 6 months postoperatively.

Among **group A**, 6 months postoperatively, there was one eye with RD with tractional element, and no eyes with macular pucker; while among group B there were 3 eyes with RD with tractional element with no eyes with macular pucker.

Table(20): Comparison group A & group B as regards postoperative proliferation:

	Group A		Group B		Total		X^2	P
	No.	%	No.	%	No.	%		
Persent	1	7.1	3	21.4	4	14.3	1.2	>0.05
Absent	13	92.9	11	78.6	24	85.7		
Total	14	100	14	100	28	28.6		

n = numbers, % = percentage,

x^2 = chi – square test, *p* = probability.

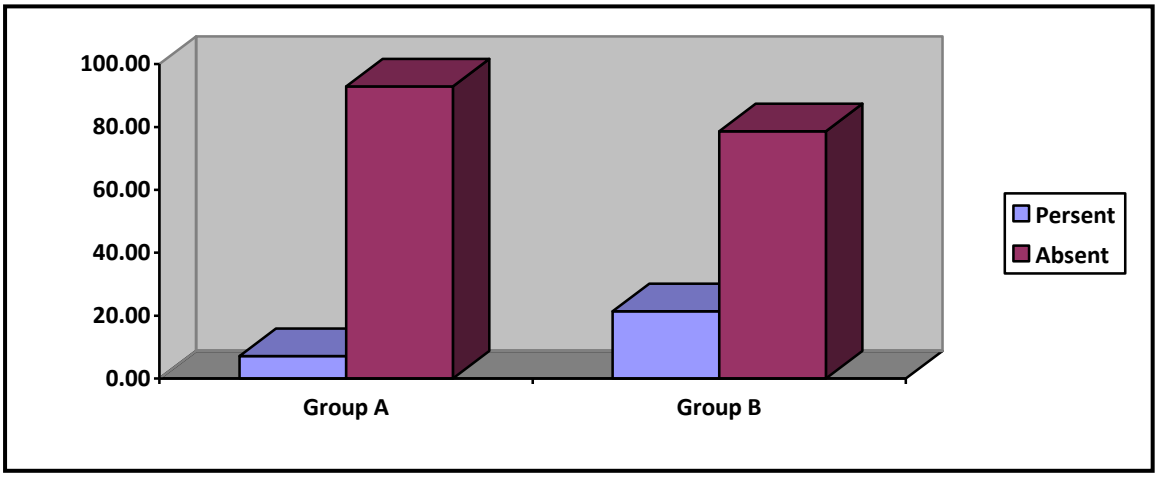


Chart (6-12): Postoperative proliferation in group A and group B

This table shows a statistically non – significant difference between both groups as regard postoperative proliferation using chi – square test.

However, there is a lower number of eyes with postoperative proliferation (RD with tractional element and / or macular pucker) among **group A** than among **group B**, yet this difference failed to reach statistical significance.

Postoperative complications:

Among group A, there were 1 eye with Keratopathy, 5 eyes with complicated cataract, 3 eyes with secondary glaucoma, 1 eye with hyphema, 1 eye with retinal haemorrhage and 2 eyes with silicone oil in the anterior chomber; while among group B, There were 1 eye with kerotopathy, 6 eyes with complicated cataract, 2 eyes with secondary glaucoma, 1 eye with hyphema, 1 eye with retinal hemorrhage 2 eyes with silcome oil in the anterior chamber and 1 eye with pale optic disc.

Table (21): Comparison group A & group B as regards late postoperative complications.

	Group A (n = 14)		Group B (n = 14)		Total	
	No.	%	No.	%	No.	%
Keraptopathy	1	7.1	1	7.1	2	7.1
Cataract	5	35.7	6	42.9	11	39.3
Glaucoma (high IOP)	3	21.4	2	14.3	5	17.9
Silicone in AC	2	14.3	2	14.3	4	14.3
Hyphema	1	7.1	1	7.1	2	7.1
Retinal hemorrhage	1	7.1	1	7.1	2	7.1
Pale optic disc	0	0	1	7.1	1	3.6

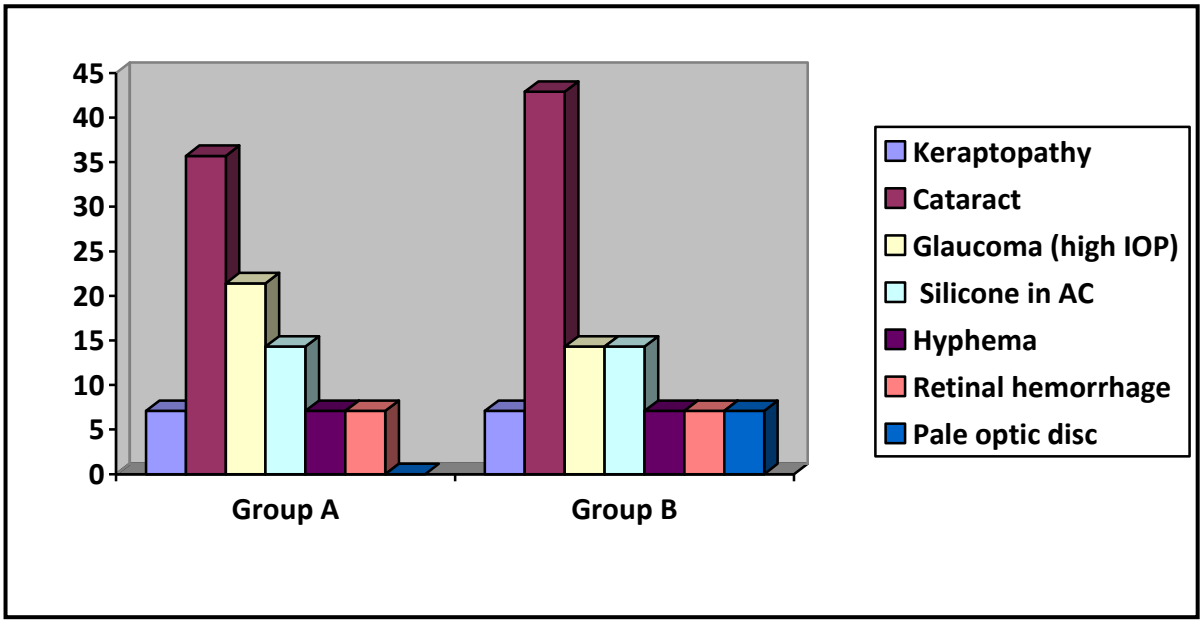


Chart (6-13): Late postoperative complications in group A and group B

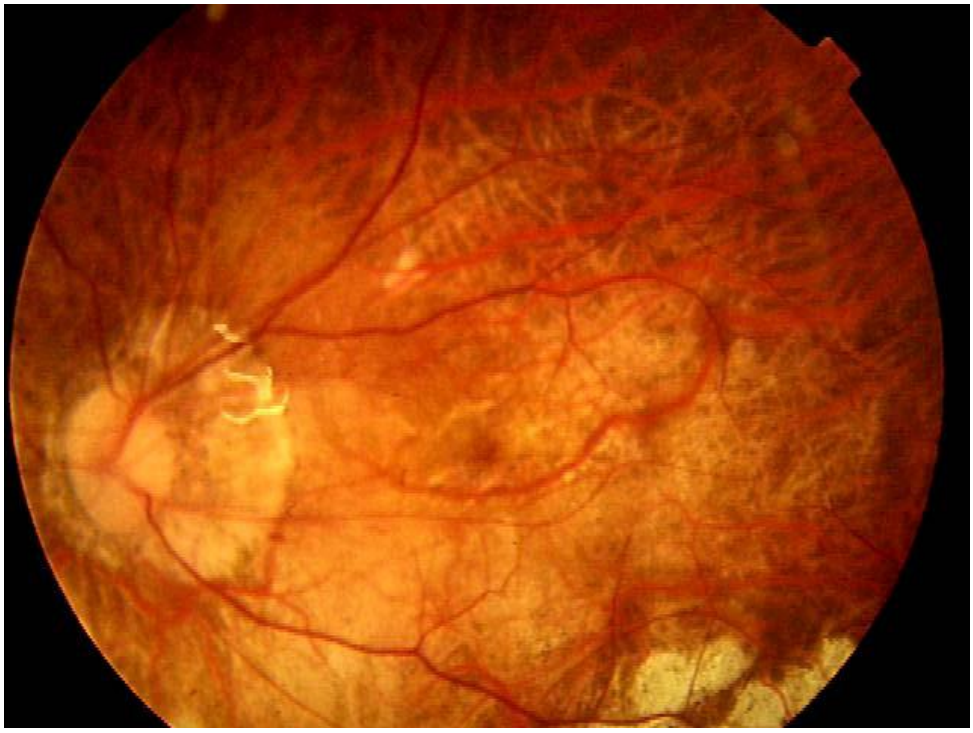


Fig. 6-1: Aphakic retinal detachment attached under silicone.

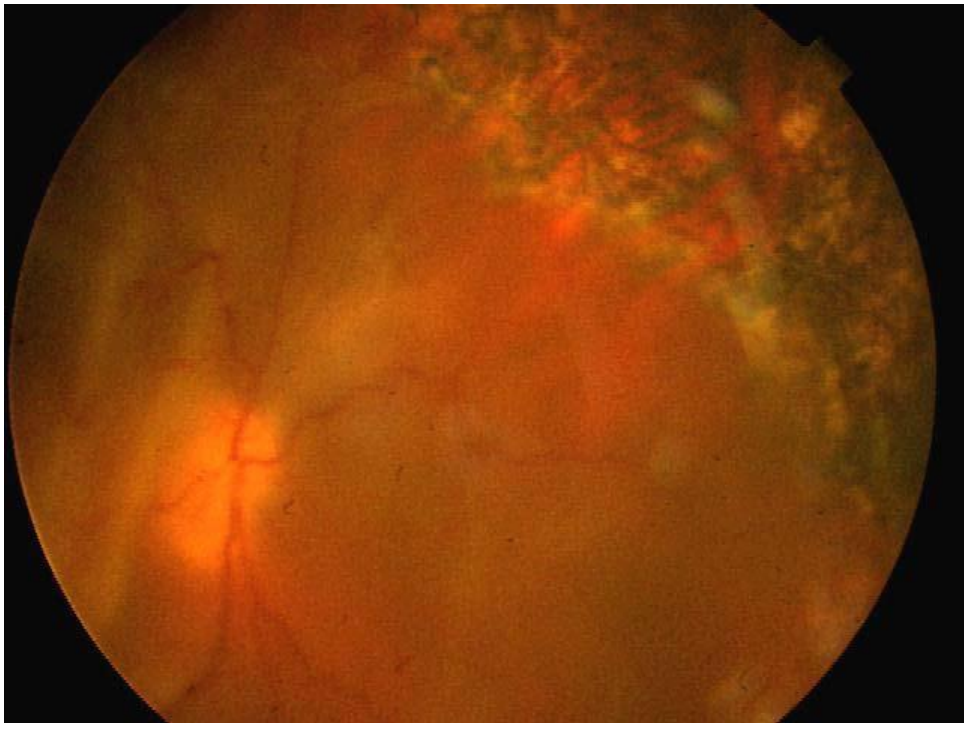


Fig. 6-2: Case showing recurrence after silicone oil removal in group B with laser marks extending centrally.

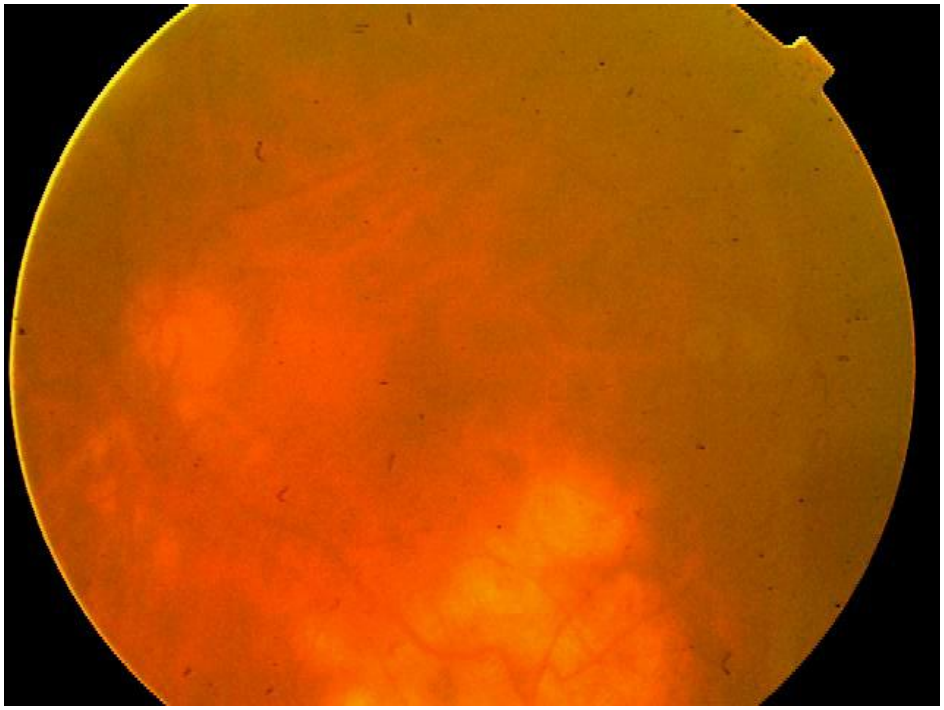


Fig. 6-3: postoperative case with preoperative mild vitreous hemorrhage showing attached retina with cataractous lens.

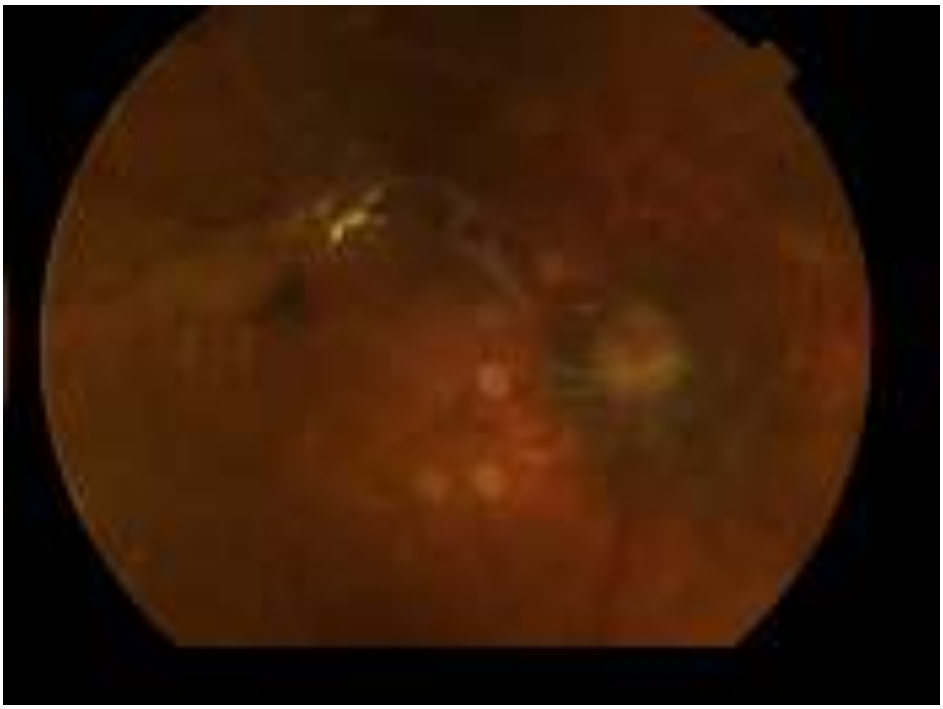


Fig. 6-4: case of phacovitrectomy showing pigmented membrane at upper arcade under silicone with dense PCO.

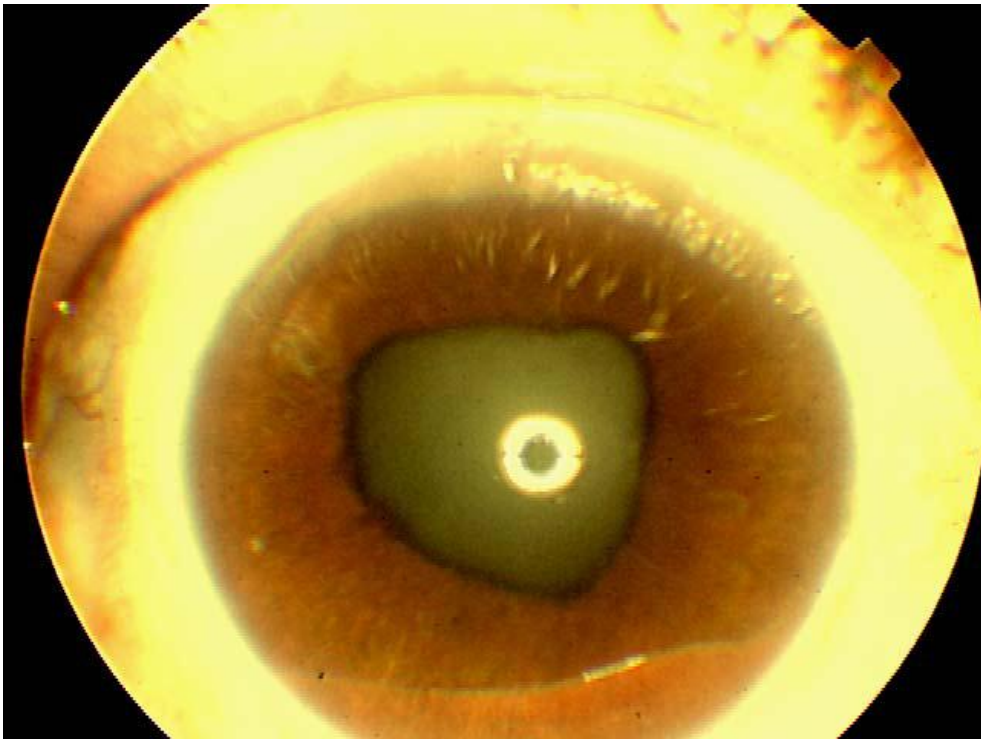


Fig. 6-5: silicone cataract after two procedures.

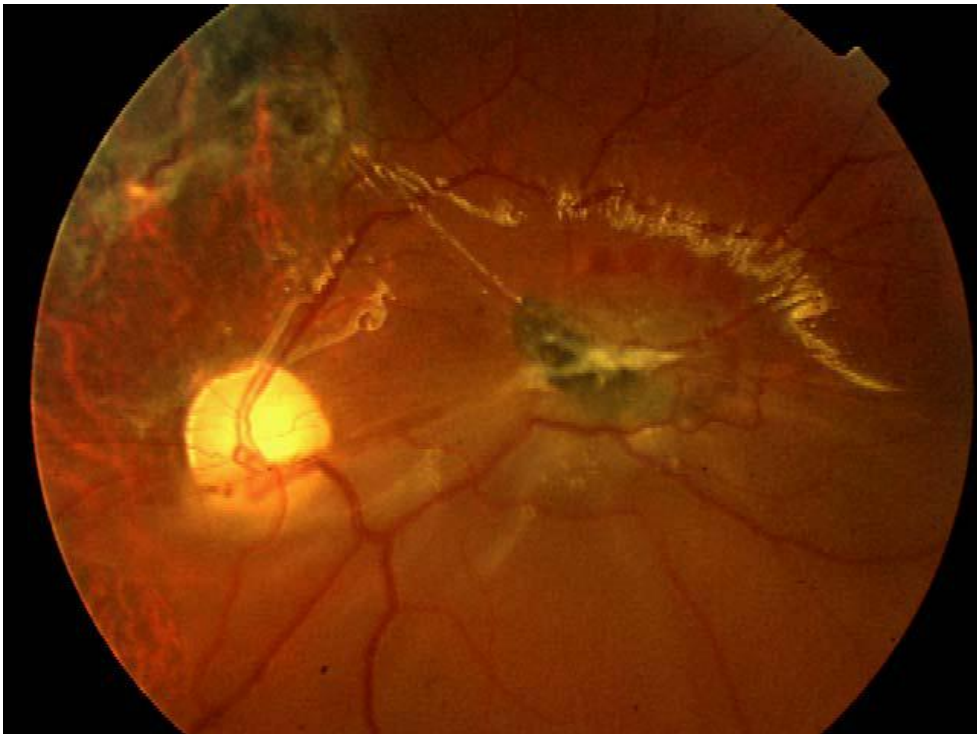


Fig. 6-6: case of recurrent traumatic PVR, showing epiretinal membrane at macula with tractional RD.

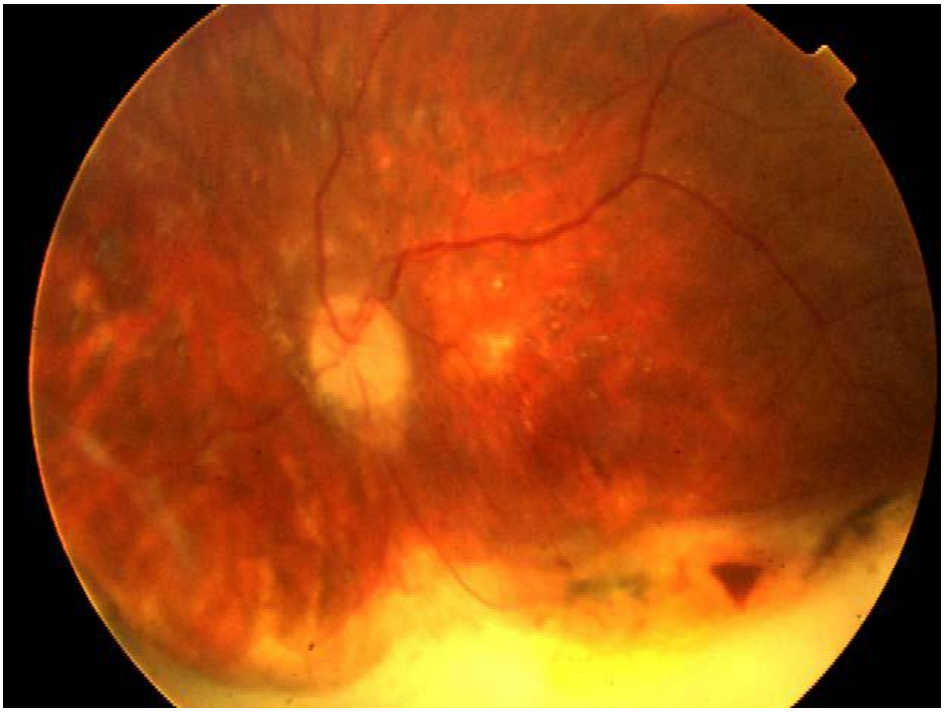


Fig. 6-7: case that needed inferior retinectomy for recurrent RD after vitrectomy, showing attachment under silicone.

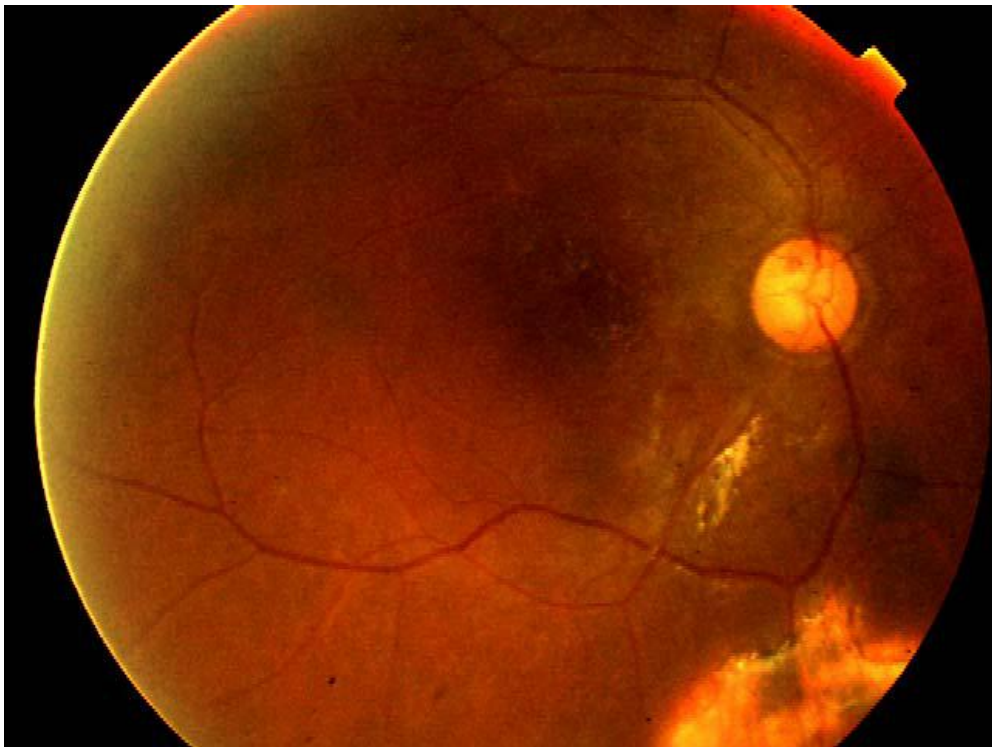


Fig. 6-8: one eyed patient showing attached retina with pale disc and glaucomatous changes.

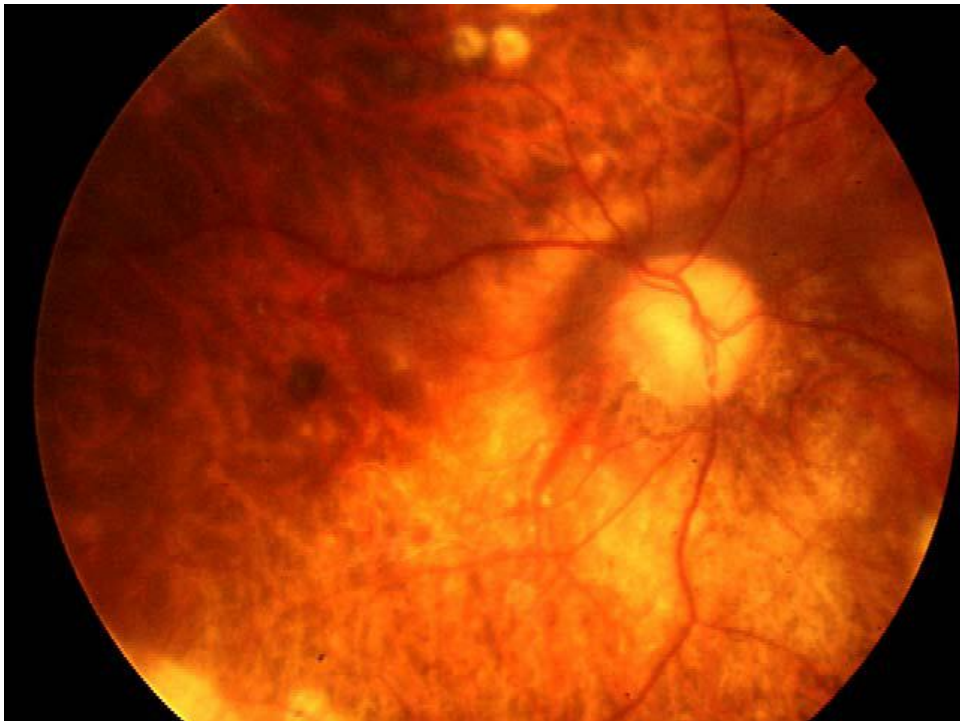


Fig. 6-9: case of pseudophakic RD showing final attachment under silicone.

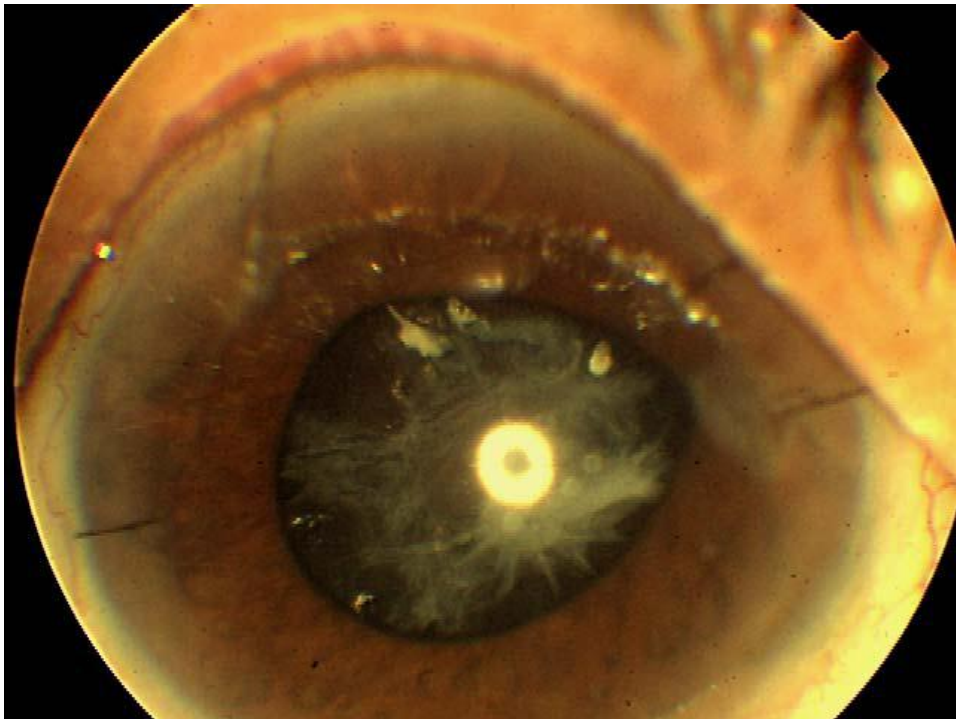


Fig. 6-10: case of phacovitrectomy showing dense PCO that resisted YAG capsulotomy with difficult evaluation of retinal condition.

Fig. 6-11: Pre- and postoperative images for pseudophakic detachement case in group B.