RESULTS

Follow - up Examination

Sheet

	2nd D.	3rd D.	4th D.	5th D.	6th D.	7th D.	2nd W.	3rd W.	4th W.	2nd M.	3rd M.	4th M.	5th M.	6th M.
1) Conj.														
2) Cataract W.														
3) Cornea.														
4) A.C.														
Depth.														
Contents.														
flare.														
hyphaema.														
after cataract.														
5) Iris.														
Iritis.														
Ant. Syn.														
Post Syn.														
6) pupil.														
Shape.														
Reaction.														
Capture.														
7) I.O.L.														
Position.														
Deposits.														
8) Post.Caps.														
Clear.														
Opacified.														
9) Fundus.														
10) I.O.P.														
11) Visual A.														
12) Res.ref.														

TABLE(2a): AGE & SEX DISTRIBUTION OF THE STUDIED CAS

SEX	MALE		FEMALE		TOTAL	
AGE(Y)	NO	%	NO	%	NO	%
< 6	4	16	-	-	4	16
6 -	6	24	4	16	10	40
13 +	4	16	7	28	11	44
TOTAL	14	56	11	44	25	100

TABLE(2b): AGE DISTRIBUTION OF THE STUDIED CASES ACCORDIND TO AETIOLGY

AETIOLGY	TRAUMATIC		CONGENITAL		TOTAL	
AGE(Y)	NO	%	NO	%	NO	%
< 6	2	8	2	8	4	16
6 -	9	36	1	4	10	40
13 +	6	24	5	20	11	44
TOTAL	17	68	8	32	25	100

Visual Results

The visual results are listed in table (3) and also in fig (5) These results are much better in traumatic cataract group than in congenital cataract group.

In Traumatic Cataract Patients:

Of the seventeen eyes that had a traumatic cataract,nine eyes(52.94%) achieved a corrected visual acuity of 6/6 to 6/12 and two cases (11.77%) achieved a visual acuity of 6/18. In four patients (23.53%) they had regained a visual acuity of 6/24. Among this group one patient (5.88%) had a visual acuity of 6/36, and another patient (5.88%), had a vision of 3/60.

In Congenital Cataract Patients:

Only one patient (12.50%) in the congenital cataract group achieved a 6/12 visual acuity. Three patients (37.50%) achieved a 6/18 visual acuity and two patients had a vision of 6/24.One patient (12.50%) had a poorer vision of 5/60.

Table (3)

The Corrected Visual Acuity 6 Months after surgery

VISUAL ACUITY	TRAUMATIC		CONGENITAL	
	NO	%	NO	%
6/6 - 6/12	9	52.94	1	12.50
6/18	2	11.77	3	37.50
6/24	4	23.53	2	25.00
6/36	1	5.88	1	12.50
5/60			1	12.50
3/60	1	5.88		
TOTAL	17	100	8	100

THE CORRECTED VISUAL ACUITY 6 MONTHS AFTER SURGERY

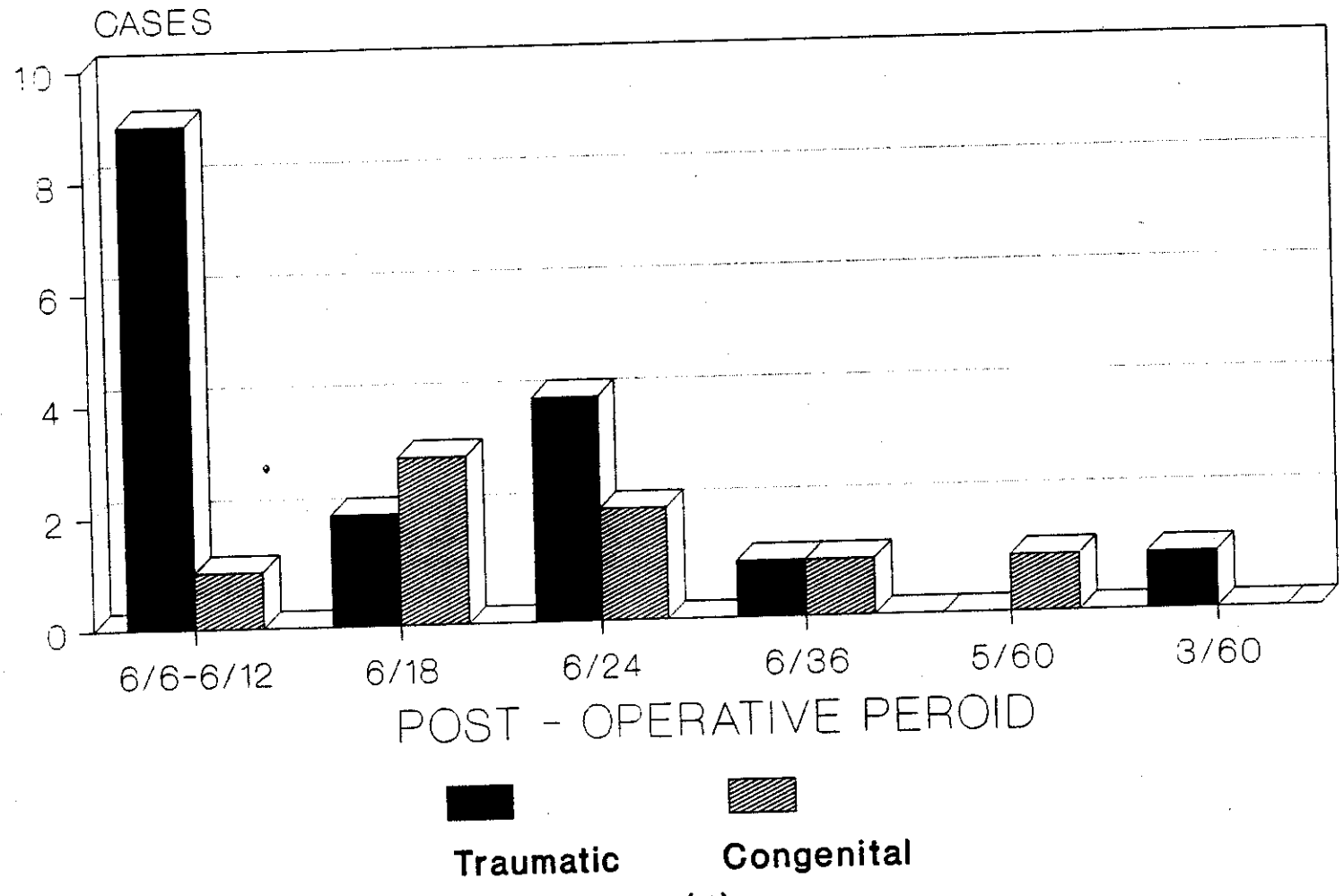

Fig.(5)

Residual Refractive Error:

Table (4):Residual refractive error 6 months after surgery.

The error in	Hyperopia		Myopia		Astigmatism	
dioptres	No	%	No	%	No	%
<1	4	16.0	7	28.0	6	24.0
1	3	12.0	1	4.0	5	20.0
2	-	-	1	4.0	1	4.0
3	1	4.0	-	-	-	-
Total	8	32.0	9	36.0	12	48.0

Retinoscopy 6 months after surgery showed a variable degrees of hypermetropia (<1 dioptre) in four cases (16 %), 1 dioptres in three cases (12%) and 3 dioptres in one case (4%).

The incidence of myopia among the studied cases was 36% which represent a nine cases. Seven cases (28%) were less than one dioptere while one case (4%) was myope by one dioptere and another case (4%) had myopia of two dioptres.

Lower degrees of astigmatism with the rule (0.50 - 2 dioptres) was present in twelve cases (48%).

Operative Complications

Table(5):Operative complications.

Type of complication	No	%
Hyphaema	2	8.00
Vitreous loss during posterior capsulotomy	4	16.00

Two eyes (8%) had surgical hyphaema. It was minimal and it was most probably due to vascularized anterior and/ or posterior synaechiae, it faded at the 5th post-operative day.

Four eyes (16%) had vitreous loss. The formed vitreous was presented in the anterior chamber and extruded through the incision immediately following primary posterior capsulotomy. In other words, we can say that among the nine cases for which primary posterior capsulotomy was done, 4 cases presented with vitreous loss. Anterior mechanical vitrectomy was done to eliminate most of the vitreous anterior to the I.O.L. implant followed by air injection in the anterior chamber.

Post-Operative Complications

Only one case (case No.6), (4%), for whom an operation had been done for congenital cataract was complicated with suture rupture and wound dehiscence which occurred within the first 48 hours. The wound was successfully resutured.

Residuals of lens matter of variable degrees were detected in five cases only (20%). The time of its absorption varied from the second week to the fourth month.

Corneal Complications: fig.(6) tab.(6)

TABLE (6): DISTRIBUTION OF CORNEAL OEDEMA AMONG THE STUDIED CASES DURING THE FOLLOW-UP PERIOD

CORNEAL OEDEMA	EARLY PERIOD (DAYS)												LATE PERIOD											
	2nd		3rd		4th		5th		6th		7th		2nd wk.		3rd wk.		4th wk.		2nd mon.		3rd mon.		4th mon.		5th mon.		6th mon.	
	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%
MILD	-	-	1	4	13	52	15	60	15	60	12	48	4	16	4	16	-	-	-	-	-	-	-	-	-	-	-	-
MODERATE	15	60	17	68	12	48	8	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SEVER	10	40	7	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	25	100	25	100	25	100	23	92	15	60	12	48	4	16	4	16	-	-	-	-	-	-	-	-	-	-	-	-

Ten of cases (40 %) have had a severe corneal oedema and striate keratopathy in the second day of operation. However, all cases (25 eyes) showed a moderate to mild corneal oedema and striate keratopathy from the start of the fourth day and the cornea regained its clarity within the next few days. In four cases (16%) only the cornea regained its clarity at the end of the third week.

CORNEAL COMPLICATION
CORNEAL OEDEMA

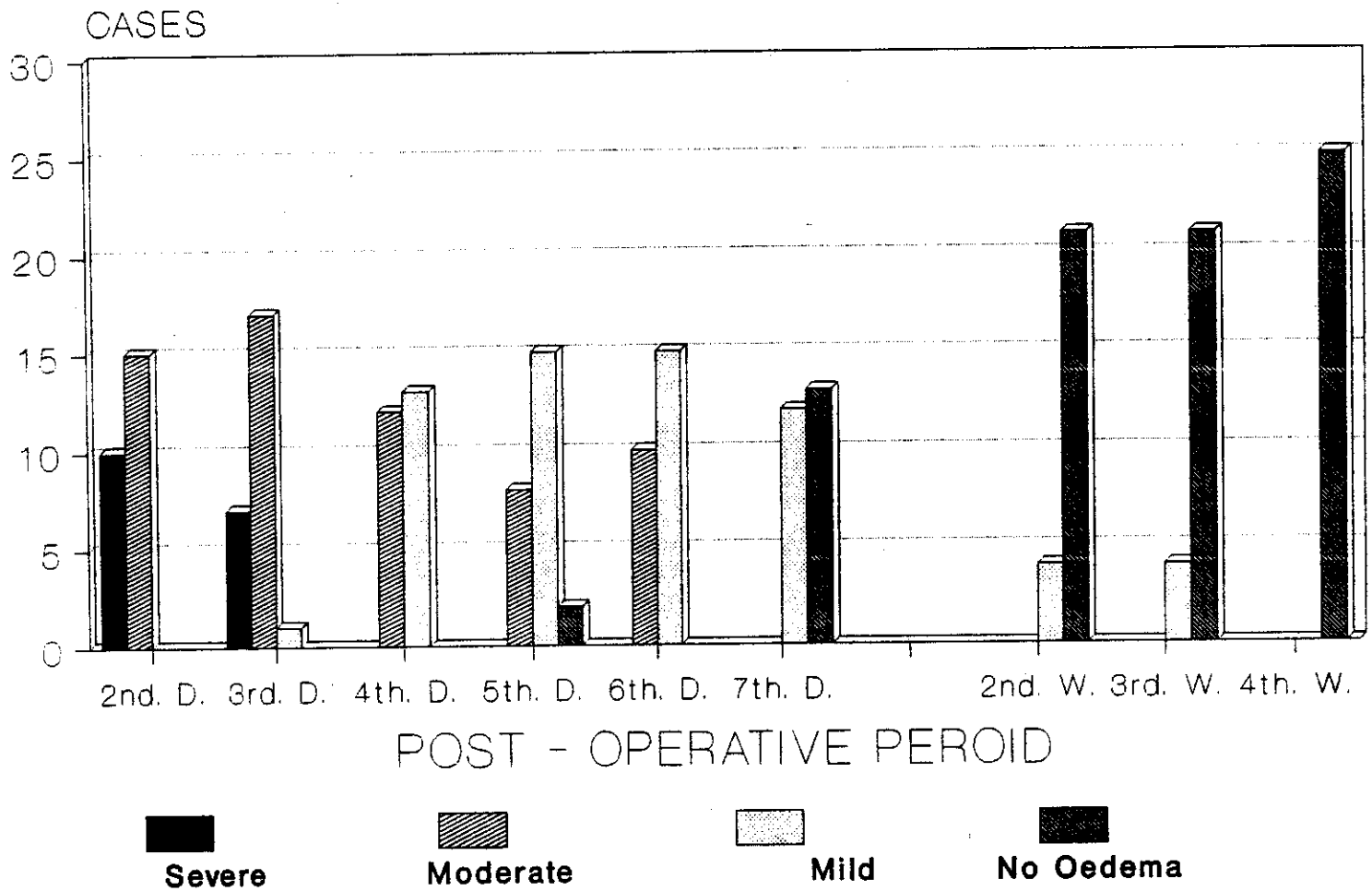

Fig.(6)

Changes in the Anterior Chamber: fig.(7) table.(7)

TABLE (٧): DISTRIBUTION OF ANTERIOR CHAMBER FINDINGS AMONG THE DURING THE FOLLOW-UP PERIOD STUDIED CASES

ANTERIOR CHAMBER	EARLY PERIOD (DAYS)												LATE PERIOD											
	2nd		3rd		4th		5th		6th		7th		2nd wk.		3rd wk.		4th wk.		2nd mon.		3rd mon.		4th mon.		5th mon.		6th mon.	
	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%
HYPHAEMA	2	8	2	8	2	8	2	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FLARE	25	100	25	100	11	44	2	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AFTER CAT.	5	20	5	20	5	20	5	20	5	20	5	20	4	16	3	12	2	8	1	4	1	4	1	4	-	-	-	-

The majority of cases (24 eyes) showed a normal pseudophakic depth of the anterior chamber in which the peripheral anterior chamber depth = 1/4 to 1/2 corneal thickness according to Van Herick's method (1969). One eye (4%) showed a shallow anterior chamber during the first 48 hours post-operatively due to wound leak. Resuturing of the wound was done and the anterior chamber regained its normal pseudophakic depth.

Aqeous flare was a very frequent happening. It was present in almost all cases (100%) during the second and third post-operative days but it subsided rapidly and completly dissappeared during the six post-operative day.

A variable amount of after cataract was present in five cases (20%) In most of these cases it was absorbed completly up to one month, while in one case (4%) who had dense after cataract it was absorbed up to five months.

Hyphaema was present in two cases (8%), it never lasts more than the first few post-operative days.

ANTERIOR CHAMBER DEPTH

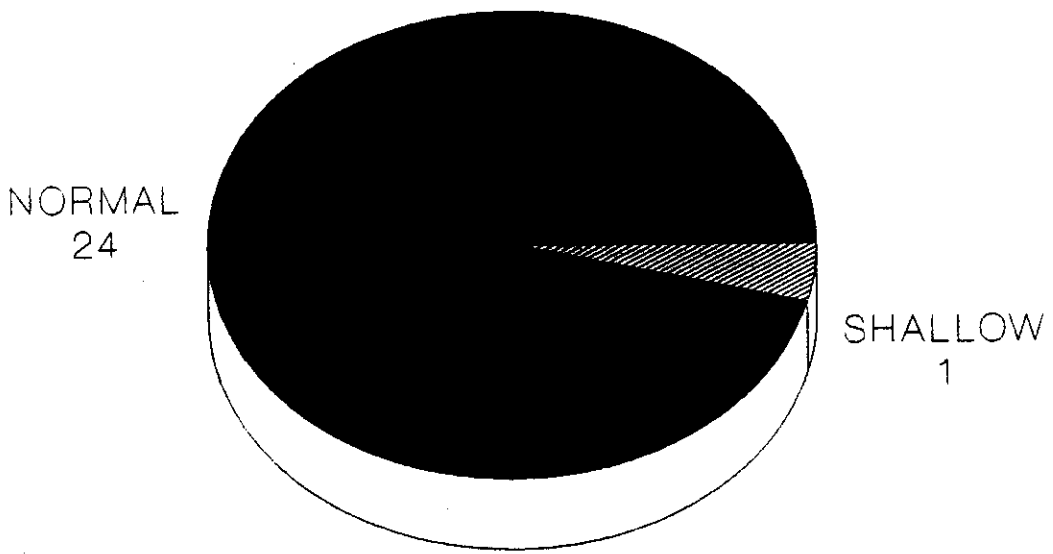

Fig.(7)

A.C. DEPTH DURING THE SECOND AND THIRD DAYS.

Iris Complication: fig.(8 & 8a) tab.(8)

TABLE (8): DISTRIBUTION OF IRITIS AMONG THE STUDIED CASES

IRITIS	DURING THE FOLLOW-UP PERIOD: EARLY PERIOD (DAYS) 2nd		3rd		4th		5th		6th		7th		LATE PERIOD: 2nd wk.		3rd wk.		4th wk.		2nd mon.		3rd mon.		4th mon.		5th mon.		6th mon.	
	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%
MILD	-	-	-	-	14	56	16	64	14	56	9	36	5	20	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MODERATE	21	84	21	84	8	32	6	24	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SEVER	4	16	4	16	3	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	25	100	25	100	25	100	22	88	15	60	9	36	5	20	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-

The most frequent early post-operative complications was a fibrinous uveitis. In 18 cases (72%) it was severe enough to cause posterior synaechia with its sequale of pupillary irregularity and pupillary capture in some cases.

Frequent topical steroids and cycloplegic eye drops, in addition to systemic steroids were enough to overcome uveitis . The usual time to resolve was between the end of the first week and the end of the second week.

INCIDENCE OF IRITIS

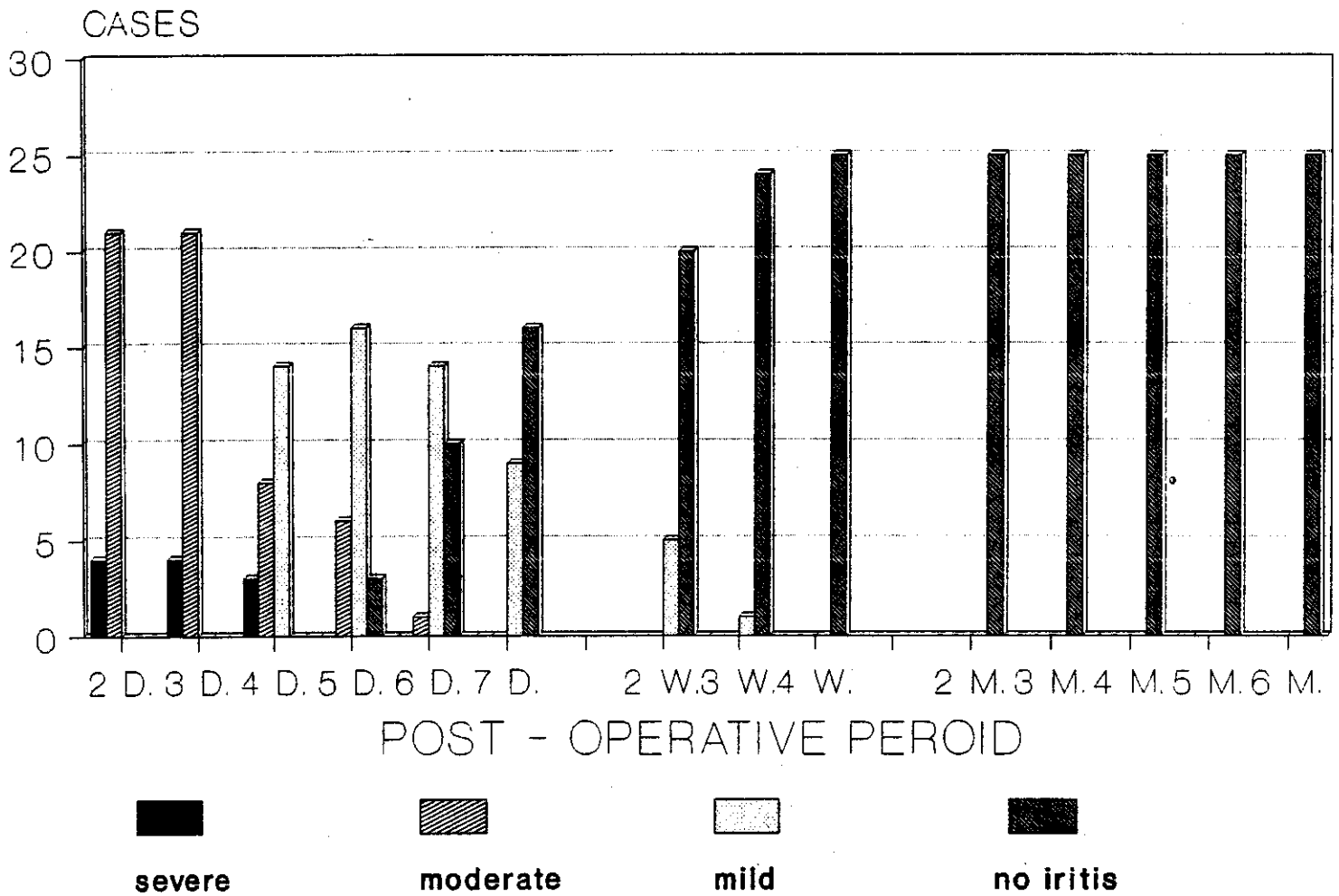

Fig.(8)

INCIDENCE OF POSTERIOR SYNACHIAE

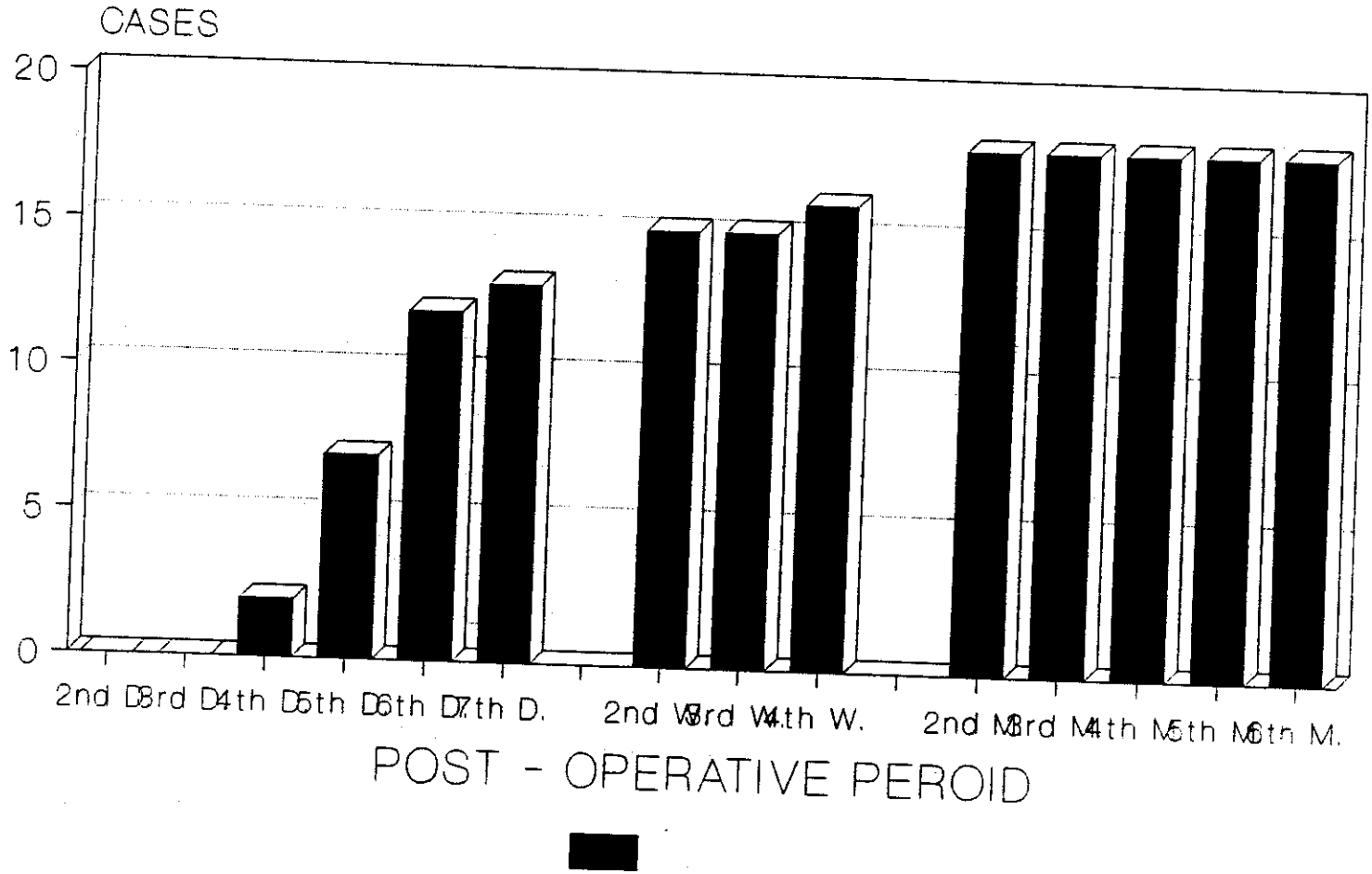

Fig.(8a)

Pupillary Complications: fig.(9 & 9a) table (9 & 9a)

TABLE (9): PUPILLARY SHAPE CHANGES AMONG THE STUDIED CASES DURING THE FOLLOW-UP PERIOD

PUPILLARY SHAPE	EARLY PERIOD (DAYS)												LATE PERIOD											
	2nd		3rd		4th		5th		6th		7th		2nd wk.		3rd wk.		4th wk.		2nd mon.		3rd mon.		4th mon.		5th mon.		6th mon.	
	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%
REGULAR	20	80	20	80	15	60	15	60	13	52	12	48	6	24	3	12	3	12	3	12	3	12	3	12	3	12	3	12
IRREGULAR	5	20	5	20	11	44	11	44	12	48	13	52	19	76	22	88	22	88	22	88	22	88	22	88	22	88	22	88
TOTAL	25	100	25	100	25	100	25	100	25	100	25	100	25	100	25	100	25	100	25	100	25	100	25	100	25	100	25	100

TABLE (9a): PUPILLARY REACTION AMONG THE STUDIED CASES DURING THE FOLLOW-UP PERIOD

PUPILLARY REACTION	EARLY PERIOD (DAYS)												LATE PERIOD											
	2nd		3rd		4th		5th		6th		7th		2nd wk.		3rd wk.		4th w		2nd mon.		3rd mon.		4th mon.		5th mon.		6t	
	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO		NO	%	NO	%	NO	%	NO	%	NO	%
REACTIVE	-	-	-	-	4	16	8	32	15	60	21	84	25	100	25	100	25	1	25	100	25	100	25	100	25	100	25	100
IRREACTIVE	25	100	25	100	21	84	17	68	10	40	4	16	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-
TOTAL	25	100	25	100	25	100	25	100	25	100	25	100	25	100	25	100	25	1	25	100	25	100	25	100	25	100	25	100

Changes in the Shape of the Pupil: **fig.(9) tab.(9)**

Twenty-two eyes (88%) showed a post-operative distortion of the pupils.Only three cases among our studied cases have had a regular round pupils Distorted pupils were associated with posterior synachiae in thirteen cases, and with pupillary capture ± posterior synechiae in nine cases.

Changes in the Pupillary Reaction: **tab.(9a)**

There was no pupillary reaction in the first few post-operative days due to the use of cycloplegic eye drops. From the start of the 2nd week all cases regained pupillary reaction which was variable, in nine cases which have had a pupillary capture the pupillary reaction was sluggish while in other cases it had a normal pupillary reaction.

Incidence of Pupillary Capture: **fig.(9a).**

Nine cases (36%) showed a pupillary capture. The pupillary capture started in one case in the second week of post-operative period and the incidence increased to involve the nine cases at the third month.

PUPILLARY SHAPE

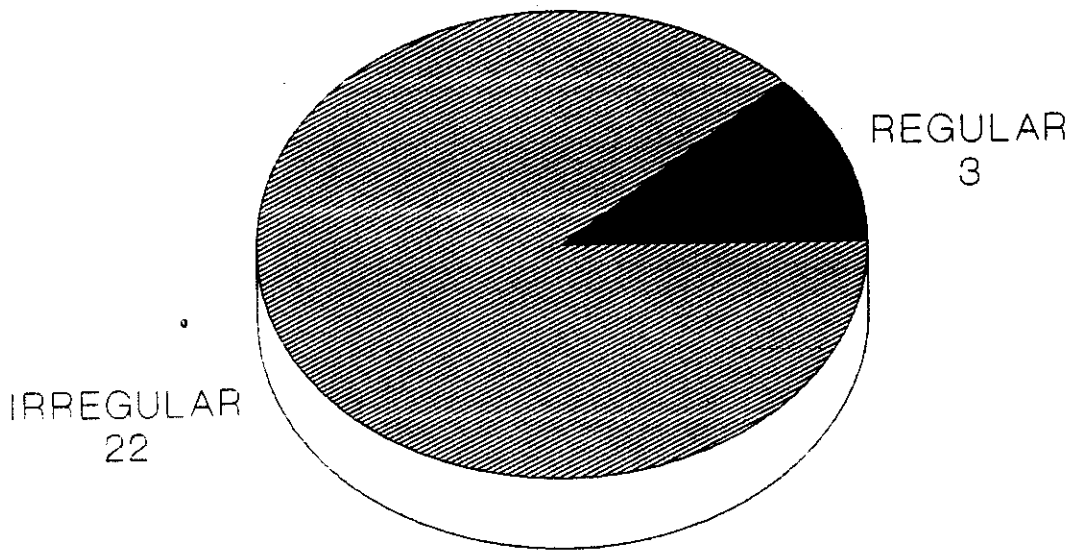

Fig.(9)

PUPILLARY CAPTURE

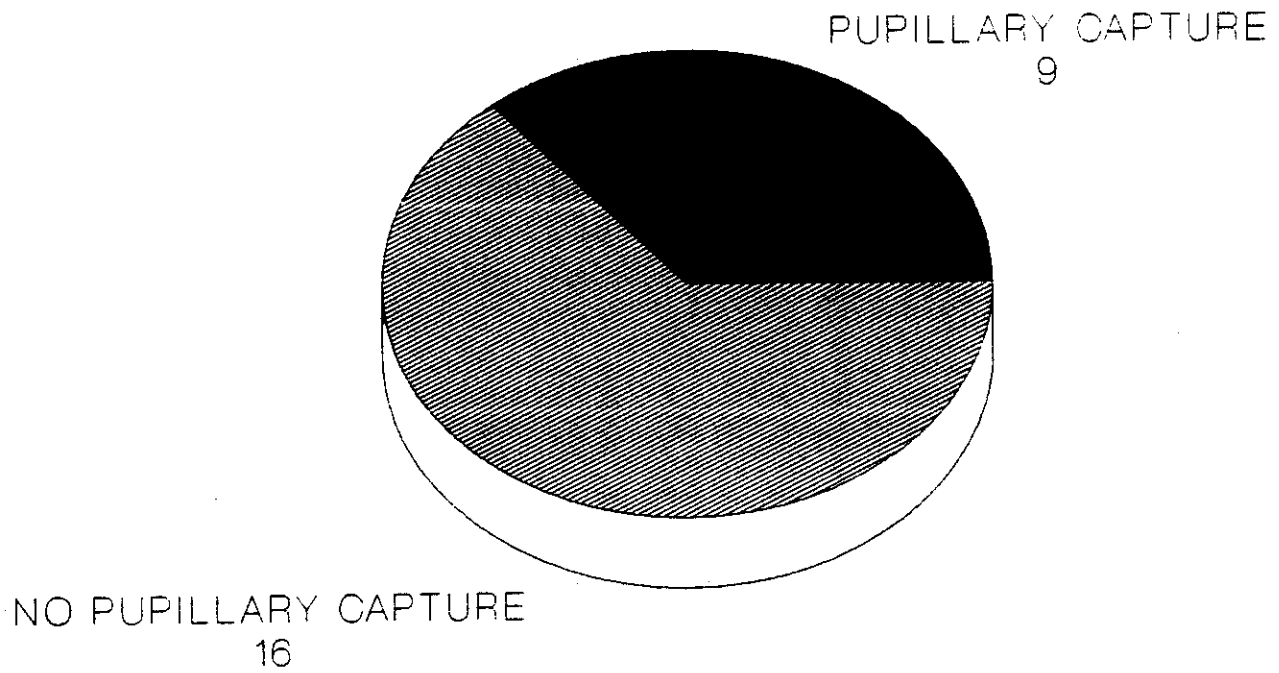

Fig.(9a)

Changes in the Intraocular Lens:

TABLE (10): INCIDENCE OF I.O.L PRECIPITATES AMONG THE STUDIED CASES DURING THE FOLLOW-UP PERIOD

I.O.L RECIPITATES	EARLY PERIOD (DAYS)										LATE PEROID					
	2nd	3rd	4th	5th	6th	7th	2nd wk.	3rd wk.	4th w		2nd mon.	3rd mon.	4th mon.	5th mon.	6th mon.	
	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%
MILD	10	40	14	56	19	76	14	56	18	72	18	72	12	48	12	48	11		9	36	7	28	6	24	6	24	6	24
MODERATE	4	16	4	16	4	16	5	20	5	20	5	20	11	44	12	48	13		15	60	17	68	17	68	16	64	16	64
SEVER	-	-	-	-	-	-	1	4	1	4	1	4	1	4	1	4	1		1	4	1	4	2	8	3	12	3	12
TOTAL	14	56	18	72	23	92	20	80	24	96	24	96	24	96	25	100	25	1	25	100	25	100	25	100	25	100	25	

Position and Fixation of the Lens: **fig.(10)**

The majority of intraocular lenses (96%) were stable in position while only one case (4%) showed mild lens descentration towards the temporal side. No cases of lens dislocation were recorded either in the anterior chamber or in the vitreous.

Intraocular Lens Precipitates: **fig.(10a) tab.(10)**

The incidence of I.O.L. precipitates was high among the studied cases. Eighteen eyes showed mild lens precipitation during the first post-operative week, while five eyes (20%) showed moderate precipitation and only one case (4%) have had a severe precipitation. 6 months post-operatively, lens precipitates include all cases, sixteen cases had moderate precipitation, six had mild precipitation and three cases had severe precipitation.

I.O.L POSITION

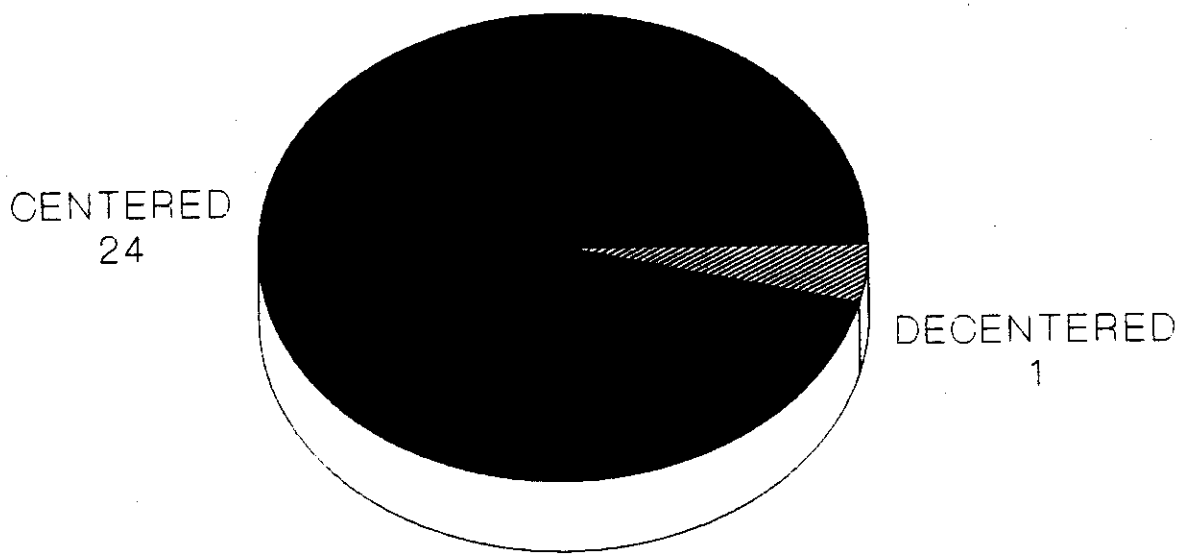

Fig.(10)

INTRAOCULAR LENS PRECIPITATES

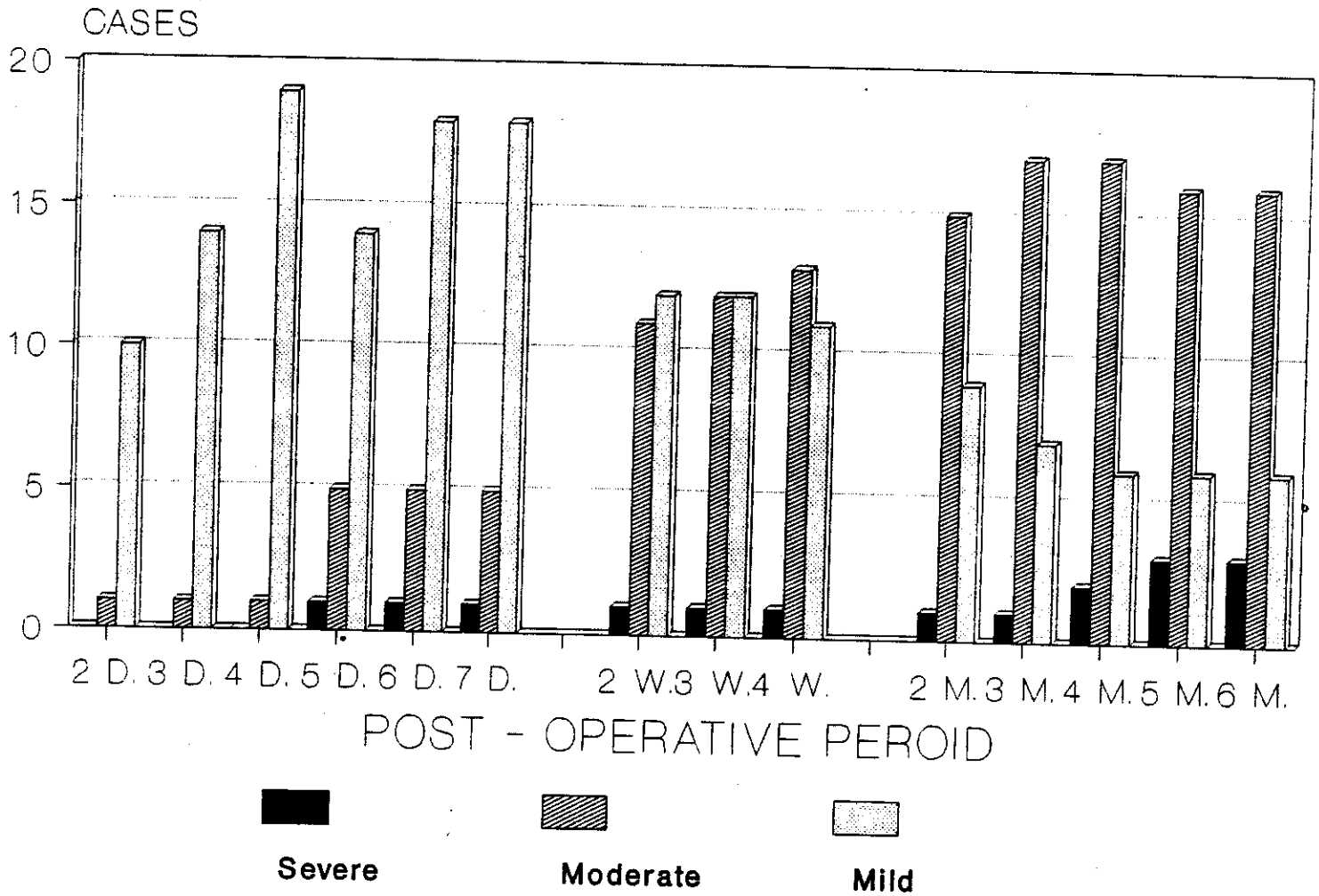

Fig.(10a)

Posterior Capsule Changes: fig.(11 & 11a & 11b) table (11)

TABLE (11): INCIDENCE OF POSTERIOR CAPSCULAR OPACIFICATION AMONG THE STUDIED CASES DURING THE FOLLOW-UP PERIOD

POST. CAP. OPACIFICATION	EARLY PERIOD (DAYS)												LATE PERIOD											
	2nd		3rd		4th		5th		6th		7th		2nd wk.		3rd wk.		4th w		2nd mon.		3rd mon.		4th mon.	
	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%	NO	%
MILD	5	20	5	20	7	28	7	28	8	32	8	32	12	48	12	48	9		11	44	8	32	7	28
MODERATE	1	4	1	4	1	4	1	4	2	8	2	8	5	20	4	16	8		7	28	10	40	11	44
SEVER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	4	1		3	12	3	12	3	12
TOTAL	6	24	6	24	8	32	8	32	10	40	10	40	17	68	17	68	18		21	84	21	84	21	84

POST. CAP. OPACIFICATION	LATE PERIOD											
	5th mon.		6th mon.									
	NO	%	NO	%								
MILD	7	28	7	28								
MODERATE	11	44	11	44								
SEVER	3	12	3	12								
TOTAL	21	84	21	84								

Posterior capsular opacification was encountered as one of the most frequent complications.It was significant in twenty-one eyes (84%) after 6 months of surgery, except in the area of posterior capsulotomy.The procedure of posterior capsulotomy was done primary in nine cases and secondary in three cases (one surgical and two by Yag laser). On the other hand we can say that the pupillary area was more or less clear in 19 cases which represent a 76% of our cases in this study.

The degree of opacification varied from mild to moderate degrees in the majority of cases and only one case (case 5)(4%) showed a severe degree of opacification. In this case a secondary posterior capsulotomy was done via a pars plana approach to get a clear pupillary area. In cases 4 & 15 the posterior capsule opacification became severe enough to obscure the vision. Yag laser posterior capsulotomy was done for these two cases and a clear pupillary area was achieved.

POSTERIOR CAPSULOTOMY

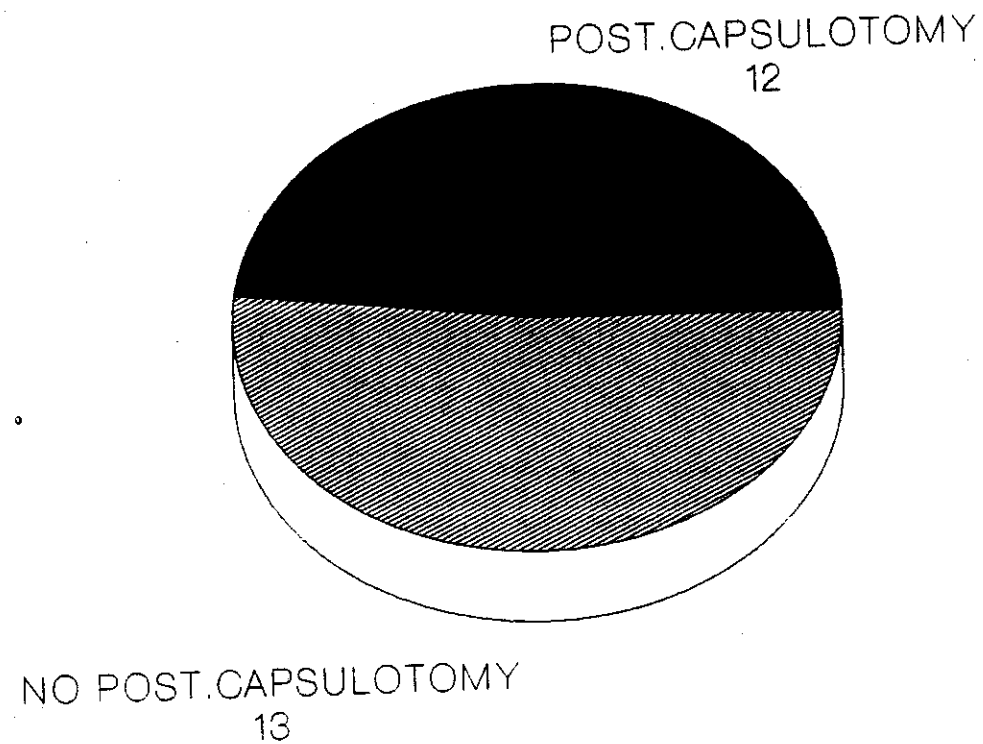

Fig.(11)

POSTERIOR CAPSULOTOMY

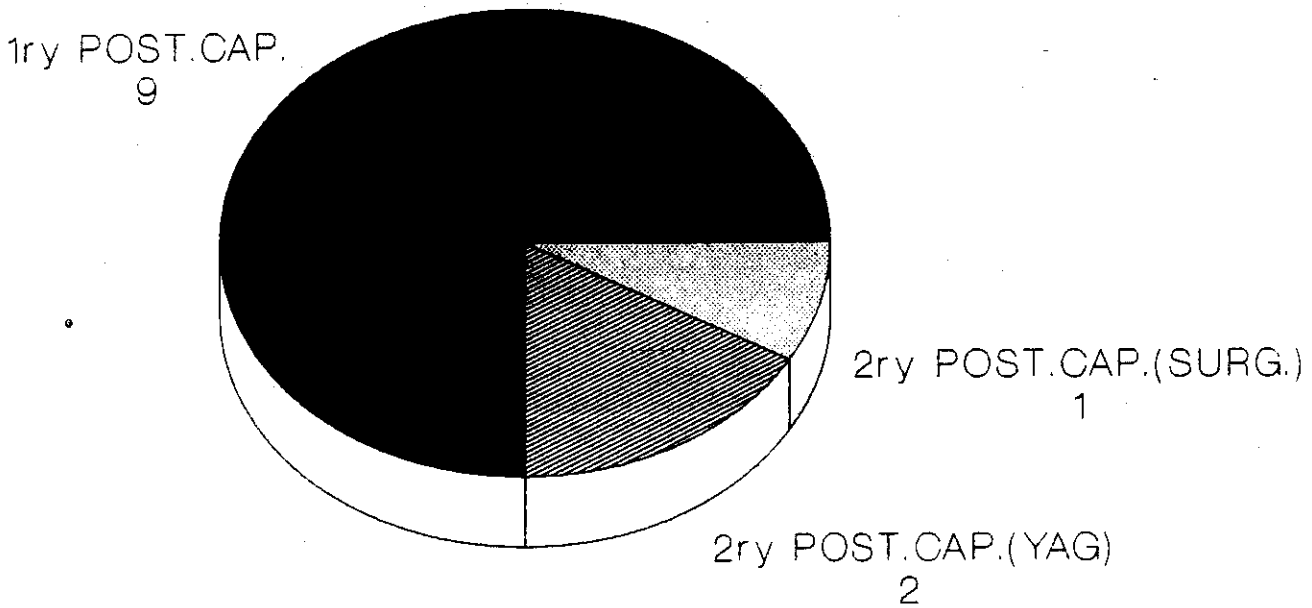

Fig.(11a)

POSTERIOR CAPSCULAR OPACIFICATION

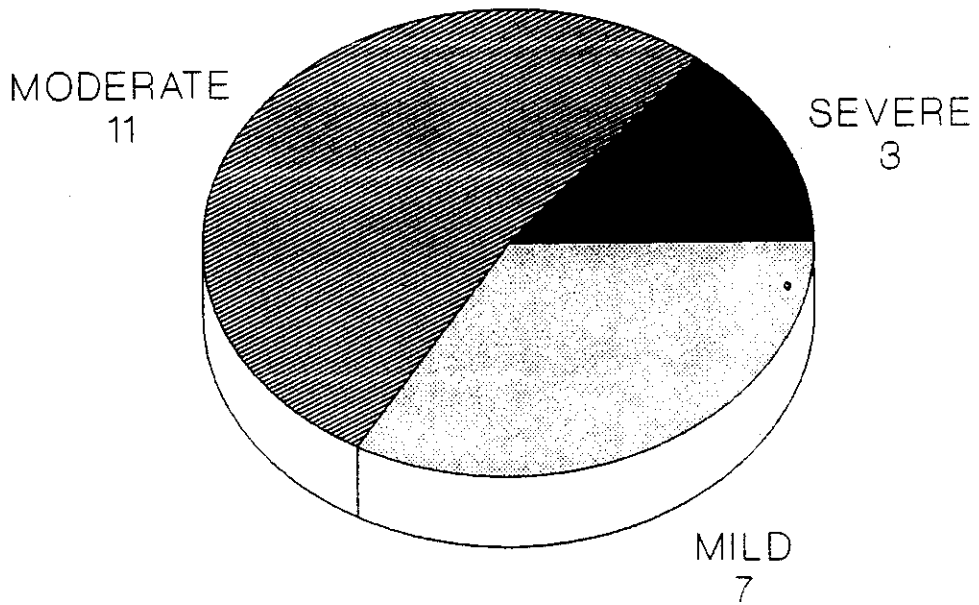

Fig.(11b)

Changes in the Intraocular Pressure: **fig.(12) tab.(12).**

Tab.(12): Intraocular pressure changes during the follow-up period.

I.O.P.	Pre-op.		1st week		1st month		3rd month		6th month	
mm.Hg	No	%	No	%	No	%	No	%	No	%
8-10	1	4.0	3	12.0	6	24.0	4	16.0	1	4.0
11-13	5	20.0	7	28.0	7	28.0	3	12.0	7	28.0
14-16	12	48.0	7	28.0	7	28.0	11	44.0	11	44.0
17-20	7	28.0	7	28.0	4	16.0	6	24.0	6	24.0
>20	-	-	1	4.0	1	4.0	1	4.0	-	-
Total	25	100.0	25	100.0	25	100.0	25	100.0	25	100.0

The pre-operative values of intraocular pressure ranged from 10-18.5 mm.Hg. (applanation or Schiotez tonometery).

Most of the eyes (96%) had normal range of post-operative values of intraocular pressure during the 1st week of post-operative period .One case (case 4) (4%) had mild elevation of I.O.P. Timolol 0.5% was given and the intraocular pressure regained to its normal level in the 3rd week. One month after, another case (case 19) showed an elevation of I.O.P. Stoppage of topical steroids and use of timolol 0.5% was enough to lower the I.O.P.to its normal value in this case.

6 months post-operatively all patients have had a normal intraocular pressure.

INTRAOCULAR PRESSURE CHANGES

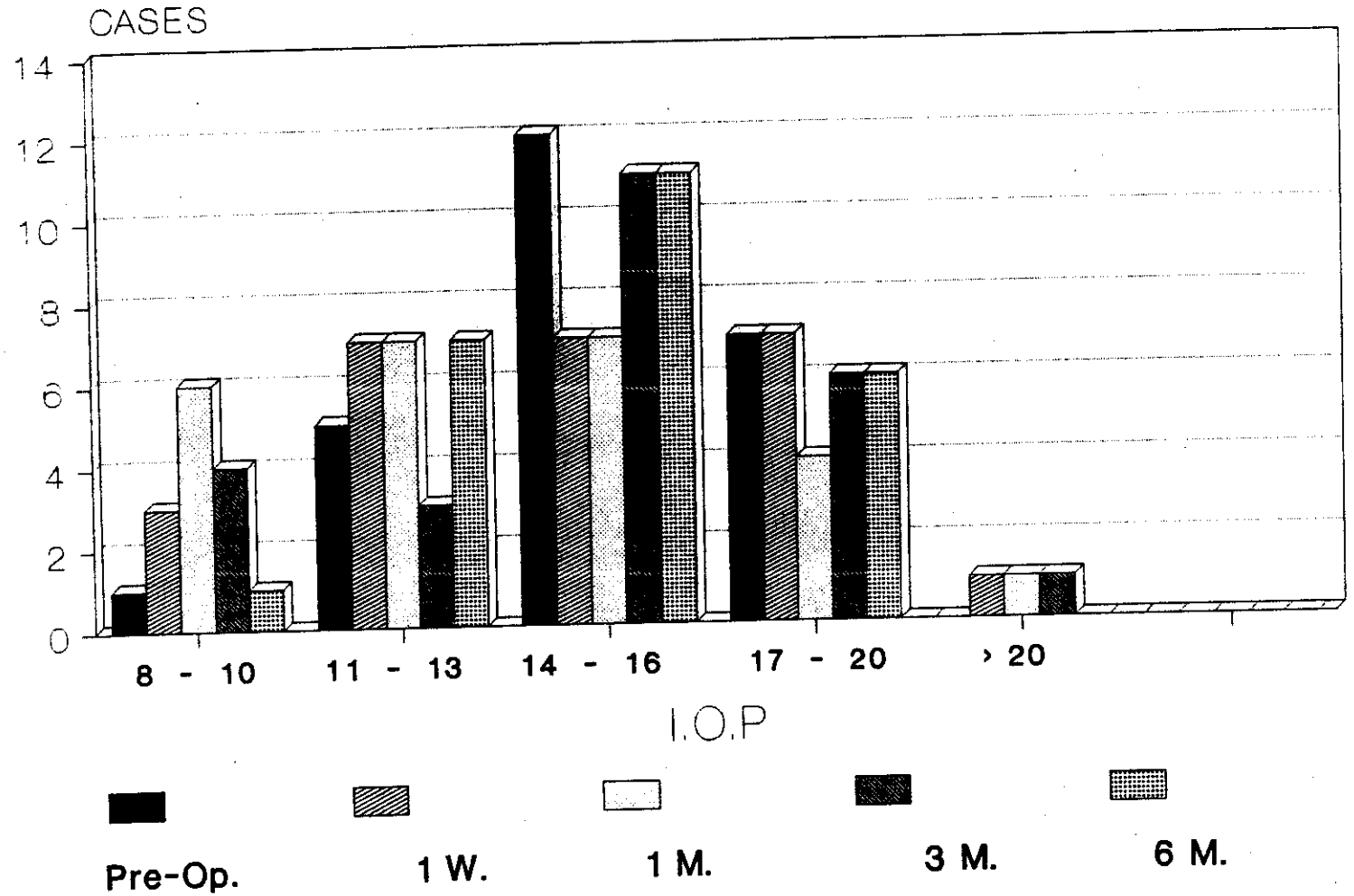

Fig.(12)