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Original Article

Clinical Study of Visual Outcome and Intraocular Pressure Changes Following Neodymium-doped Yttrium Aluminum Garnet Laser Capsulotomy in Post-operative Cataract Patients with Posterior Capsule Opacification

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Abstract

Background: The use of neodymium-doped yttrium aluminum garnet (Nd:YAG) laser procedure for posterior capsulotomy has been gradually replacing the surgical capsulotomy as it is less invasive, and can be performed as an outpatient procedure.

Objectives: The objectives of the study were to analyze the clinical results in terms of visual outcome, intraocular pressure (IOP) changes, and complications following Nd:YAG laser capsulotomy in small incision cataract surgery (SICS) and phacoemulsification surgery with posterior chamber intraocular lens.

Methods: The study was conducted in the Department of Ophthalmology, Government General Hospital, Kakinada. Over a period of 20 months, data of 100 numbers of post-operative patients coming with diminished vision due to posterior capsular opacification following cataract surgery were gathered after conducting Nd:YAG laser capsulotomy.

Results: Complications in Nd:YAG laser are minimal and transient. Improvement of visual acuity (VA) was excellent following Nd:YAG laser capsulotomy in SICS and phacoemulsification surgeries. VA improved to 6/6 in 16 cases, 6/9 in 36 cases, 6/12 in 16 cases, 6/18 in 10 cases, 6/24 in 8 cases, 6/36 in 7 cases, and 6/60 in 4 cases.

Conclusion: Nd:YAG capsulotomy is a safe procedure. Since significant pressure spikes occur, after laser procedure, it is important to put the patients on topical timolol maleate 0.5% drops. IOP after 1 h, 4 h, and 1 week is important. When the patient comes for follow-up after 1 week, 4 weeks, and 24 weeks, it is important to look for cystoid macular edema and retinal detachment and endophthalmitis.

Keywords: Cataract, Neodymium-doped yttrium aluminum garnet laser, Posterior capsular opacification

INTRODUCTION

A posterior capsular opacification (PCO) occurs after cataract surgery. After a cataract operation, symptoms such as blurred, hazy vision, or having lot of glare from lights, may be due to a PCO. Blurring and loss of vision from PCO is usually gradual, just as with real cataracts. While the symptoms are very similar to cataracts, there is no chance of an actual cataract reforming after cataract surgery.

During a cataract operation, the surgeon will carefully remove the cataract from the affected eye, and replace it with an artificial intraocular lens (IOL). The lens is located within a very thin membrane "bag" called the capsule. The front of the capsule must be opened to remove and insert the lenses. The back or "posterior" of the capsule remains

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intact to support the new lens. In a small proportion of patients – around 10% – the outer cells of the old lens remain and grow on the capsule. This causes the capsule to become hazy or clouded, which results in blurred vision. The treatment for PCO is very simple. A procedure called a YAG laser capsulotomy is used to remove the haziness and restore normal vision. It is a fast, painless, and very effective treatment. Neodymium-doped yttrium aluminum garnet (Nd:YAG) laser capsulotomy is a relatively non-invasive procedure that is used in the treatment of PCO. PCO is a common long-term complication of cataract surgery that causes decrease vision, glare, and other symptoms similar to that of the original cataract.[1] PCO is caused by a proliferation of lens epithelial cells which causes fibrotic changes and wrinkling of the posterior capsule. Its reported frequency varies from 8.7% to 33.4%.[2]

PCO is one of the common complications of extracapsular cataract extraction surgery and develops within 2 years after cataract extraction in 50% of the cases.[3,4] It causes reduction in visual acuity (VA) and contrast sensitivity by obscuring the view or by scattering the light that is perceived by patients as glare.[5]

It also decreases the field of view during therapeutic and diagnostic procedures and also causes uniocular diplopia.[6] In younger age group, it develops earlier, but in elderly, its incidence declines.[7] Since the use of Nd:YAG laser for posterior capsulotomy, the procedure has been gradually replacing the surgical capsulotomy as it is less invasive, and can be performed as an outpatient procedure.[8] Hence, in the present study is to study the visual outcome, intraocular pressure (IOP) changes, and complications following Nd:YAG laser capsulotomy.

MATERIALS AND METHODS

The study was conducted in the Department of Ophthalmology, Government General Hospital, Kakinada. The patients who were pseudophakic were considered for the study. The study design was hospital-based cross-sectional study and sampling techniques used was purposive sampling. Over a period of 20 months (December 2014–August 2016), data of 100 numbers of post-operative patients coming with diminished vision due to PCO following cataract surgery were gathered after conducting Nd:YAG laser capsulotomy. A thorough pre-operative assessment was made to confirm the visual loss due to PCO. After Nd:YAG laser capsulotomy, IOP was recorded every 1 h, 4 h, and 1 week to look for any pressure spike. Cases were followed up after 1 week, 4 weeks, 12 weeks, and 24 weeks and looked for any complications such as cystoid macular edema (CME), retinal detachment, rise of IOP, and persistent iritis. Complications such as transient rise of IOP, vitritis, bleeding from iris, pitting of IOL, and iritis have been reported in the study.

The data of the 100 post-operative patients were analyzed based on the following criteria, namely, complete ophthalmic and medical history, detailed examination of both eyes along with general physical examination, VA testing with Snellen chart, examination of anterior segment of eye by slit lamp biomicroscopy, examination of posterior segment of eye by direct and indirect ophthalmoscopy, and +90 D biomicroscopy, measurement of IOP, evaluation regarding treatment given including Nd:YAG laser capsulotomy and systemic and topical drugs given. The patients were interviewed, and clinical evaluation was conducted during the follow-up intervals of 1 week, 4 weeks, 12 weeks, and 24 weeks.

The study protocol was approved by the Institutional Ethics Committee. Informed consent was collected from the participants and confidentially was assured. A semi-structured pro forma was used for recording the socioeconomic profile, methods, situation about the vision loss, intent, methods, and clinical profile of the patient. Ophthalmic diagnosis was made according to diagnosis criteria for research of international classification of diseases - 10 by the researchers.

Inclusion criteria of patient for the study are patients having posterior capsular thickening/opacification on examination with slit lamp, patients having decrease in vision by at least 3 lines on Snellen chart, patients with at least 3 months interval between cataract surgery and development of PCO.

Patients who were excluded from the study are patients having <5 years of age, patients with subluxated IOL, patient having post-operative complications like endophthalmitis, uncooperative patients such as mental retardation, neurological problems, and patient having PCO in aphakic eyes.

RESULTS

The study was conducted after a short-term study of 6 months and the following observations were made, 100 patients were identified having PCO diagnosed by retinoscopy, slit lamp examination, and direct and indirect ophthalmoscopy. These cases were divided according to age and sex, and also according to the duration between cataract extraction and development of PCO. PCO was graded based on view of fundus details and Nd:YAG laser capsulotomy done for all the cases. Pre-laser and post-laser VA were recorded, compared, and analyzed. Safety, efficacy, and post-laser complications of Nd:YAG laser were recorded, followed, and treated.

About 56% of the patient had PCO in the right eye, and 100 samples were selected during 6 months, which included sample size of 52% males and 48% females. The average age of the patient was 40–80 years. 9% of the patient were under 40 years, 48% of the patient selected were in the age group between 40 and 60 years, and 40% of the patient selected were in the age group above 60 years Table 1.

The period between cataract extraction and development of PCO was found mostly at an early stage, i.e., within 1–20 months. A large proportion of these patients about 68% had the diagnosis of PCO within 1–12 months after surgery, 22% diagnosed within 12–36 months after surgery, and 10% developed PCO after 36–60 months after surgery.

After clinical evaluation through both direct and indirect ophthalmoscopy, the nature of the PCO was graded as mild, moderate, and severe categories. PCO diagnosed based on fundus details is severe PCO (Grade 3) were about 24%, moderate (Grade 2) were 52%, and mild (Grade 1) were 24%.

The duration of follow-up for Nd:YAG laser procedure was 4 h and 1 week. Overall, 100 patients were on Nd:YAG laser procedure. Among them, complications of vitritis (8%), rise in IOP (40%), pitting of IOL (6%), hyphema (4%), and iritis (32%) were noticed. The rise in IOP (40%) is the most common complication.

There was a remarkable and significant difference and improvement in VA of the Nd:YAG laser capsulotomy. Overall, 97% of the patients studied had visual improvement. However, 3% of the patients did not have visual improvement. VA improved to 6/6 in 16 cases, 6/9 in 36 cases, 6/12 in 16 cases, 6/18 in 10 cases, 6/24 in 8 cases, 6/36 in 7 cases, and 6/60 in 4 cases.

In the study, there was rise of IOP up to 2 mmHg within 4 h was 40%, 6% cases showed IOP rise of 3 mmHg, and 2 cases showed rise of 5 mmHg. In 49% of cases, there was no change. After 1 week, 14% cases showed rise of IOP by 2 mmHg, 3% cases showed rise by 3 mmHg, and 82% cases showed no change of IOP compared to pre-laser IOP. Almost cases came to precapsulotomy state within 4 weeks. Since all the cases have been given topical timolol maleate 0.5% rise of IOP was minimal Tables 2 and 3.

DISCUSSIONS

PCO is a major complication of cataract surgery with or without IOL implantation. The use of Nd:YAG laser has definitely simplified the treatment of PCO. Another great advantage is that is entirely non-invasive. In the study of 100 cases, the main aim was to evaluate the results of Nd:YAG laser capsulotomy in 100 patients. All the 100 patients had VA improvement of 1 or more lines after capsulotomy. No one had further declined in VA after capsulotomy.

Age of Presentation of PCO

The average age of presentation of PCO in patients under 40 years of age is within 1 year, followed by 2 years in the age group 42–60 years. Hence, it can be stated that younger the age earlier will be the PCO. The average age of presentation of PCO was 50 years and similar in the studies of Kundi and Younas[9] and Bari *et al.*[10]

Time Period Between Cataract Extraction and Nd:YAG Laser Capsulotomy

In the study, the average period between cataract extraction and performing Nd:YAG laser posterior capsulotomy was 19 months which are similar with the studies of Kundi and Younas[9] and Bari *et al.*,[10] whereas from the study of Hasan *et al.*,[11] the time period is 2 months.

Predominant Type of PCO

The most common type of PCO is capsular fibrosis which is similar to the studies of Kundi and Younas[9] and Bari *et al.*[10] but differed from the study of Hasan *et al.*,[11] who reported Elschnig's pearls as the most common type of PCO in pseudophakic eyes and secondary fibrosis in aphakic eyes.

Quantification and Grading of PCO

In the present study, grading of PCO is done using direct and indirect ophthalmoscopy and divided into mild, moderate, and severe types of PCO.

Complications After Nd:YAG Laser Capsulotomy

In the study, rise in IOP is the most common complication followed by iritis, vitritis, pitting of IOL, and lastly hyphema which was also the same complication seen in the studies. The rise in IOP is only transient. There is no permanent rise in IOP except in known glaucoma cases. This rise in IOP can be prevented by giving pre-laser anti-glaucoma medication and prescribing anti-glaucoma medications such as 0.5% timolol eye drops and tablet Diamox 250 mg BD after capsulotomy. Although there is transient rise in IOP at the end of 4 h, there is no much change in IOP at the end of 1 week.

In some of retrospective studies conducted by Gore[12] and Kundi and Younas,[9] it was found that addressed IOP changes after Nd:YAG capsulotomy. In the study, it is highlighted that increase in the IOP was significantly related to the IOP measurement 1 h after the capsulotomy, whereas the difference between baseline and final IOP at 1 week was not significant. Similar study was done by Slomovic and Parrish[13] who proved that in patients with no prior history of glaucoma, the use of prophylactic anti-

Table 1: Characteristics of the ophthalmology patients in government general hospital, kakinada, andhra pradesh (*n*=100)

Characteristics	Number of cases (%)
Gender	
Male	52 (52)
Female	48 (48)
Age	
<40	9 (9)
40–60	48 (48)
>60	40 (40)
PCO in eye	
Light eye	44 (44)
RE	56 (56)
Time period between cataract extraction and development of PCO (in months)	
1–4	23 (23)
5–8	20 (20)
9–12	25 (25)
13–20	22 (22)
36–60	10 (10)
Grading of PCO	
Grade 1 - Mild (fundus seen with direct ophthalmoscope)	24 (24)
Grade 2 - Moderate (fundus seen with indirect ophthalmoscope)	52 (52)
Grade 3 - Severe (no fundus view or details hazily see)	24 (24)

RE: Right eye, PCO: Posterior capsular opacification

Table 2: Complications of Nd: YAG laser posterior capsulotomy procedure

Complications	Number of eyes (%)	
Types of complications		
Vitritis	8 (8)	
Rise in IOP (transient)	40 (40)	
Pitting of IOL	6 (6)	
Hyphema	4 (4)	
Iritis	32 (32)	
Number of complications following post Nd: YAG laser		
Number of eye having no complication	38 (38)	
Number of eyes having only one complication	44 (44)	
Number of eyes having more than one complication	18 (18)	
Total complications		
Percentage of complications with Nd: YAG laser	38 (38)	
Rise in IOP after Nd: YAG laser posterior capsulotomy		
IOP	<4 h	1 week
No change	49	82
1–2 mmHg	40	14
3–4 mmHg	6	3
>5 mmHg	2	1

IOP: Intraocular pressure, Nd: YAG: Neodymium-doped yttrium aluminum garnet

and shock wave damage to the trabecular meshwork. Acute inflammatory cells and capsular debris cause increased IOP by demonstrating pigment granules, erythrocytes, fibrin, lymphocytes, and macrophages within the trabecular glaucoma medications was not indicated since the IOP elevation within the first 24 h appeared to be a self-limited process in most cases.

Flohr *et al.*[14] also found that a short-term IOP elevation after capsulotomy was more common in glaucomatous than in non-glaucomatous eyes in which transient immediate post-laser IOP elevation was seen in 25% of non-glaucomatous eyes.

On the other hand, Channell and Beckman[15] and Awan and Kazim[16] proved significant IOP elevation post-YAG CAP who were treated with anti-glaucoma medications. In a US food and drug administration report of 2110 Nd:YAG capsulotomies, the major post-operative complication was elevation of IOP.[17] The maximum IOP increase occurred between 1.5 and 4 h, and usually returned to baseline within 24 h after treatment, whereas in the study, maximum IOP increase occurred between 1.5 and 4 h without any anti-glaucoma treatment.

Steinert *et al.*[18] estimated an incidence of glaucoma developing in 1–6% of patients after capsulotomy which was only 3.75% cases in the study. Leys *et al.*[19] studied 67 eyes of 65 patients for 2 months after capsulotomy and documented a statistically significant decrease in IOP compared with the precapsulotomy IOP. Similarly, Fourman Sapisson,[20] Jahn *et al.*,[21] and Ge *et al.*[22] studied long-term effect of YAG capsulotomy on IOP elevation.

Other incidences of associated complications following Nd:YAG laser capsulotomy are:

Increased IOP

Elevated IOP is the most common, although usually transient, complication following Nd:YAG laser capsulotomy. IOP elevations >10 mmHg have been observed in 15–67% of eyes. IOP typically begins to rise immediately after the laser capsulotomy, peaks at 3–4 h, decreases but may remain elevated at 24 h, and usually returns to baseline at 1 week. Rarely, IOP remains persistently elevated, causing visual field loss requiring glaucoma surgery, or both. Acute IOP increase may cause loss of light perception vision.[23] Elevated IOP has been associated with preexisting glaucoma, capsulotomy size, lack of a posterior chamber IOL, sulcus fixation of a posterior chamber IOL, laser energy required for the capsulotomy, myopia, and preexisting vitreoretinal disease. Reliable in-the-bag fixation of posterior chamber IOLs has vastly reduced the incidence of clinically significant elevation of IOP after Nd:YAG laser capsulotomy.[23] Increased IOP following Nd:YAG laser capsulotomy is associated with a reduced facility for aqueous humor outflow. This reduction has been attributed to capsular debris, acute inflammatory cells, liquid vitreous,

Table 3: VA improvement after Nd: YAG posterior

Capsulotomy pre-laser VA	Post-laser VA								
	6/6	6/9	6/12	6/18	6/24	6/36	6/60	Lost for follow up	Total
6/9	3	0	0	0	0	0	0	0	3
6/18	3	1	0	0	0	0	0	0	4
6/24	5	1	0	0	0	0	0	0	6
6/36	3	9	2	1	2	0	0	0	17
6/60	2	23	4	3	1	2	0	1	36
CF 1 mt	0	0	1	2	2	2	1	1	9
CF 2 mt	0	1	4	2	1	3	1	0	12
CF 3 mt	0	0	1	0	0	0	1	0	2
CF 4 mt	0	0	2	0	1	0	0	0	3
CF 5 mt	0	1	1	2	1	0	0	0	5
CFCF	0	0	0	0	0	0	0	1	1
HM	0	0	1	0	0	0	1	0	2
Total	16	36	16	10	8	7	4	3	100

P<0.000, *P*>0.002. VA: Visual acuity, Nd: YAG: Neodymium-doped yttrium aluminum garnet

Chi-square tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-square	179.048[a]	84	0.000
Likelihood Ratio	126.631	84	0.002
Number of valid cases	100		

[a]100 cells (96.2%) have expected count<5. The minimum expected count is 0.03

meshwork after laser capsulotomy. Glaucomatous eyes may have increased frequency and magnitude of IOP elevation as they already have a reduced outflow facility.[24] Liquid vitreous as the cause of outflow obstruction is supported by the clinical association between increased IOP following laser treatment and myopia, preexisting vitreoretinal disease, lack of a posterior chamber IOL, and sulcus-fixated posterior chamber IOLs. A capsule-fixated posterior chamber IOL and a smaller capsulotomy may provide a barrier effect, preventing liquid vitreous from reaching the anterior chamber and trabecular meshwork. Liquid vitreous injected into the anterior chamber in owl monkey eyes was found to increase IOP. Nd:YAG laser-induced shock waves causing increased IOP resulting in damage to the trabecular meshwork have been supported clinically by the association between increased IOP and higher total laser energy used to create the capsulotomy. Photodisruption pulses in the aqueous of the mid-anterior chamber have not been associated with increased IOP, nor have there been microscopic evidence of damage to the trabecular cords.[25] Prevention of the IOP increase is appropriate. Apraclonidine, brimonidine, timolol, levobunolol, and pilocarpine decrease the frequency and magnitude of IOP increases. Apraclonidine is most effective. Apraclonidine, timolol, levobunolol, or other beta-adrenergic antagonists are administered 1 h before the procedure and again following the procedure. Pilocarpine should be administered only postoperatively due to its miotic effect. Patients at high risk for IOP elevation or with vulnerable optic nerves should be carefully monitored following the procedure as prophylactic therapy may not prevent late IOP increases. IOP following Nd:YAG laser capsulotomy may also be elevated by vitreous obstruction of a sclerostomy, the development of neovascular glaucoma, or pupillary block glaucoma. Patients with existing glaucoma or where high IOP developed acutely after capsulotomy may have long-term elevated IOP.[23] Elevation of IOP has been well documented after virtually all anterior segment laser surgeries. The IOP rise after Nd:YAG laser posterior capsulotomy may be absent or transient. Early researchers such as Aron-Rosa *et al.*[26] did not find any permanent elevation of IOP, but subsequent studies revealed that it might occur. Keates *et al.* found elevation of IOP in 0.6% of his patients, whereas Stark *et al.* reported 1.0% in their study. Ge *et al.* found that rise in IOP is more pronounced in patients with glaucoma and in those who experienced a higher rise of IOP within hours of capsulotomy. However, Shani *et al.* could not find any elevation of IOP in their study and postulated that healthy pseudophakic eyes do not generally show any elevation of IOP. Chao *et al.* in their 3-month follow-up study also did not find any persistent rise in IOP.

Retinal Detachment

In the study, there was no case of retinal detachment. This could be due to the absence of risk factors in the cases. Retinal detachment may complicate Nd:YAG laser posterior capsulotomy in 0.08–3.6% of eyes.[27] Retrospective review of Medicare claims found the cumulative probability of retinal detachment over 36 months following cataract surgery was 1.6–1.9% in patients who had laser capsulotomy versus 0.8–1% in patients undergoing cataract surgery alone. This review could not distinguish if the same or fellow eye had cataract surgery, capsulotomy, and retinal detachment, nor could it determine the sequence.[23] Retinal detachment may occur early after the laser capsulotomy or more than a year later. Asymptomatic retinal breaks were found at a rate of 2.1% within 1 month of posterior capsulotomy in one study. Myopia, a history of retinal detachment in the other eye, younger age, and male sex are risk factors following Nd:YAG laser posterior capsulotomy.[27] In uncomplicated phacoemulsification and PCIOL implantation, a rate of retinal detachment after laser capsulotomy of 0–0.4% over 1–8 years has been reported in two series. In one of these series, no retinal detachments occurred in eyes with axial lengths under 24.0 mm. A study found no increased risk of retinal detachment after Nd:YAG laser capsulotomy in eyes that did not have a posterior capsule tear at the time of cataract surgery.[23] Numerous studies have examined the relationship between Nd:YAG laser posterior capsulotomy and development of retinal detachment. Initial studies by Aron-Rosa *et al.*[26] claimed an incidence of 0.08%. Steinert *et al.*[28] reported 0.89%.

CME

CME develops in 0.55–2.5% of eyes following Nd:YAG laser posterior capsulotomy. CME may occur between 3 weeks and 11 months after the capsulotomy. Incidence of new CME is low following laser capsulotomy, although some patients may acquire CME at a later date.[27] Risk of CME could be lowered by a longer interval between extracapsular cataract extraction and laser capsulotomy, although other studies have not confirmed this. Treatment of CME following Nd:YAG laser posterior capsulotomy is identical to its treatment following cataract extraction.[23] The development of CME after Nd:YAG laser posterior capsulotomy has been demonstrated in many studies. The main diagnostic tools are evaluation with 78 D lens and fundus fluorescein angiography. In the study, there was no case identified having CME. The incidence of CME according to Winslow and Taylor was 0.55% and they attributed this occurrence to vitreous instability secondary to hyaluronic acid and prostaglandin diffusion through the compromised posterior capsule. According to Alhert *et al.*, the incidence of CME was 5.4% Jampol hypothesized that UV-A light may generate free radicals, facilitating prostaglandin production, and including inflammation and ultimately CME.

IOL Damage

Pitting of IOLs occurs in 15–33% of eyes during Nd:YAG laser posterior capsulotomy. Pitting is usually not visually significant, although rarely the damage may cause sufficient glare and image degradation that the damaged IOL must be explanted.[29] The type and extent of lens damage depend on the material used in the IOL. Glass IOLs may be fractured by the Nd:YAG laser. PMMA IOLs sustain cracks and central defects with radiating fractures.[30] Molded PMMA IOLs are more easily damaged than higher molecular weight lathe-cut lenses.[31] Damage to silicone lenses is characterized by blistered lesions and localized pits surrounded by multiple tiny pits.[32] The damage threshold is lowest for silicone, intermediate for PMMA, and highest for acrylic materials.[25] Frequency of damage depends on IOL style.[27] IOLs designed with a ridge separating the posterior capsule from the IOL sustain less damage than lenses with a convex posterior surface and close apposition between the posterior chamber IOL and the posterior capsule.[33]

Endophthalmitis

Propionibacterium acnes endophthalmitis has been reported following Nd:YAG laser posterior capsulotomy. Patients have decreased vision caused by PCO and an otherwise quiet eye. Following laser capsulotomy, the eyes developed significant uveitis and loss of vision. The capsulotomy is presumed to have created opportunity for organisms within the capsule to reach the vitreous and develop into endophthalmitis.[34]

Other Complications

Corneal complications such as corneal abrasions and exacerbation of epithelial dystrophies have not been noted in the study. Pitting of IOL is seen in 6 cases due to uncooperativeness of patients. Bleeding from iris occurred in 4 cases. These cases have dense synechiae. However, the bleeding was mild and it got subsided within 1 week in all 4 cases. Other rare complications such as corneal stromal scarring, macular holes, and endophthalmitis did not occur in the study.

VA Improvement After Nd:YAG Laser Capsulotomy

In the study, 97% cases had shown improvement in VA. VA improved to 6/6 in 16 cases, 6/9 in 36 cases, 6/12 in 16 cases, 6/18 in 10 cases, 6/24 in 8 cases, 6/36 in 7 cases, and 6/60 in 4 cases. 3 cases were lost for follow-up. Due to high astigmatism most of the cases could not be improved to 6/6.

Late Post-operative Complications

In the follow-up period of 1 week, 4 weeks, 12 weeks, and 24 weeks cases were examined for complications such as CME, retinal detachment, and chronic glaucoma. None of the cases presented with CME, retinal detachment, and chronic angle glaucoma.

CONCLUSIONS

Improvement in VA with Nd:YAG laser capsulotomy is excellent. Complications with Nd:YAG laser capsulotomy are minimal and transient. Careful follow-up with Nd:YAG laser capsulotomy is important and topical timolol maleate 0.5% drops after capsulotomy prevents spikes of IOP which may occur in some case. Oral acetazolamide along with topical timolol can be used in patients who show rise of IOP uncontrollable with topical timolol alone. Proper selection of case is important. Pitting of IOL may occur in uncooperative patients. Nd:YAG laser capsulotomy should be done with caution in patients with increase in axial length, peripheral degenerations, and retinal detachment in other eyes as these patients are at increased risk of retinal detachment. Nd:YAG laser capsulotomy should be postponed by at least 3 months after cataract surgery to decrease the incidence of iritis. Nd:YAG laser capsulotomy is a safe method of restoring vision in patients with PCO. The results of Nd:YAG laser capsulotomy were comparable to those reported in literature. Rise in IOP is the most common complication after the Nd:YAG laser capsulotomy, which is followed by iritis, vitritis, pitting of IOL, and hyphema.

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