IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 19, Issue 10 Ser.9 (October. 2020), PP 23-26
www.iosrjournals.org

Late onset Case of Capsular bag distension syndrome

Dr Colaco Roshan[1], Dr Anand B[2]
[1](IOL fellowship,Sankara eye hospital ,India)
[2] (Cornea consultant,Sankara eye hospital ,India)

Abstract *:*
To present a case of late-onset capsular bag distension syndrome (CBDS).
Observations: A patient presented with decreased visual acuity and blurred vision in the left eye. She had undergone uncomplicated phacoemulsification and intraocular lens implantation into the capsular bag five years ago.
Slit-lamp biomicroscopy ,ultrasound biomicroscopyand anterior segment optical coherence tomography were performed . Ultrasound biomicroscopyshowed sagging of the posterior capsule with distension of capsular bag with no opacification of the Intra ocular lens and anterior segment OCT showed presence of hyper reflective material between the ioland capsularbag.Neodymium: Yag(Nd: Yag) capsulotomy was done which resulted in absorption of fluid.
Conclusions: Anterior segment optical coherence tomography is helpful in diagnosis of this condition.
ND: Yag capsulotomy can be an easy opd procedure to treat CBDS.

Date of Submission: 08-10-2020 Date of Acceptance: 22-10-2020

I. Introduction

Capsular bag distension syndrome is a rare complication post cataract surgery following continuous curvilinear capsulorhexsis .It was first described by Davison[1].

It can be classified into intraoperative, early-onset postoperative and late-onset postoperative[2].

Late postoperative CBS is also known as lacteocrumenasia[3].We describe a case of late onset of capsular bag distension syndrome 5 years after uneventful cataract surgery.

II. Case Report

The patient was a 65-year-old female who had undergone a phacoemulsification procedure in her left eye 5 years ago. It was an uneventful surgery with no complications and a foldable alcon IQ intra ocularlens(IOL) was implanted.

The patient presented at our hospital with a complaint of decreased vision in the left eye. On examination, she was found to have an uncorrected visual acuity of 6/36 in her left eye, which improved to 6/18 with a -0.75/-1.00 @20 degree D correction. She was reading N10 with addition of +2.50D.

There was no evidence of anterior segment inflammation on slit lamp examination, only a slight forward displacement of the iris and presence of a turbid liquid content between the lens and the capsular bag. Slit lamp photos (figure 1), anterior segment optical coherence tomography (AS-OCT)and ultrasound biomicroscopy (UBM) were used to acquire images.

UBM of the left eye showed sagging of the posterior capsule with distension of capsular bag with no opacification of the intra- ocular lens (figure 2). Anterior segment OCT of the lens–capsule showed presence of a hyper-reflective material between the IOL and the posterior capsule resulting capsule distension in the left eye (figure 3)

Treatment in the form of neodymium:Yag was performed to the posterior capsule to release the fluid into the vitreous and to relive the capsular block. Post Nd: Yag anterior segment OCT showed no presence of the hyper-reflective material behind the IOL(figure 4).

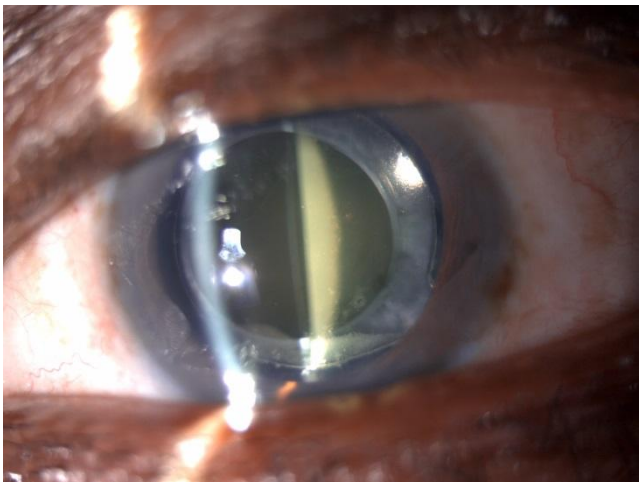

Figure 1-slit lamp photo

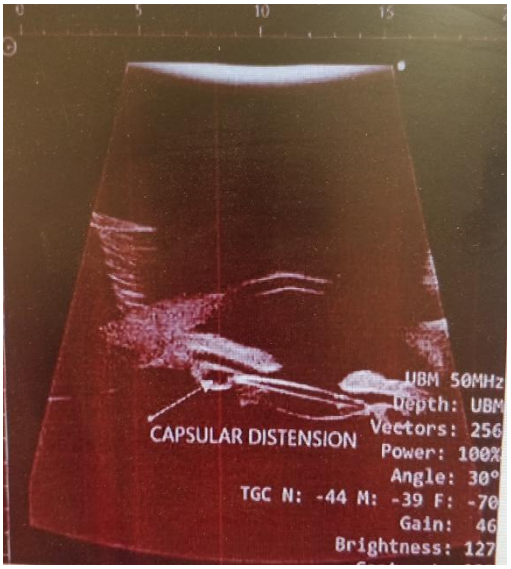

Figure 2- UBM showing capsular distension

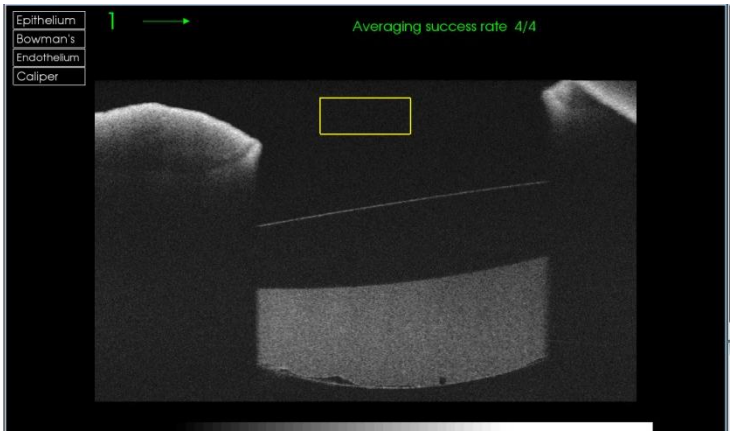

Figure 3- AS OCT pre ND:Yag

Figure 4- AS-OCT post Nd:Yag

III. Discussion

Capsular bag distension syndrome can be classified into intra-operative, early post-operative and late post-operative[2].The most common cause of Early-onset CBDS is inorganic material such as retainedviscoelastic materials. Intraoperative capsular block is seen more commonly in white cataract and a posterior polar cataract, as these cataract hydrodissection procedures involves high irrigation pressures.On average, late postoperative CBS occurs 3.8 years after surgery[3].

It has been seen that late postoperative capsular block occurs due to accumulationof particulate matter between the IOL and the capsule, which draws aqueous humor in this space by osmosis[4]. The anterior opening created by the continuous curvilinear capsulorhexisin post-operative period adheres to the IOL as the capsular bag shrinks,which results in collection of fluid behind the IOL[5, 6].

Myopic shift in the refraction, raised intra ocular pressure and shallow anterior chamber are more commonly seen with intra- operative and early onset capsular bag distension syndrome, these features may normalise in late onset cases[7, 8].Our case presented with 1D myopic shift as compared to post-operative refraction.

Anterior-segment OCT is a known investigation to diagnose CBDS [9–11]. It's a non – invasive, quick, simple test which demonstrates the location of the pathology between the IOL and posterior capsule.UBM holds advantage as compared to other imaging modalities as it can be used to view and measure irido-corneal angle and all of the structures surrounding the IOL's optic and haptics[12].

Neodymium:yttrium–aluminum–garnet laser posterior capsulotomy is the most used method to treat CBDS[8-11,13].However, there is a risk for the protiens which has seeked into the vitreous cavity to cause intra ocular inflammation. There have been reports of bacteria present in these protiens, in particular, Propionibacterium acnes resulting in endophthalmitis[14].

Other methods which have been tried to treat are slit-lamp needling .However, this has been limited to treating early-onset CBDS[15]. Anterior chamber aspiration has been reported as an effective treatment for late-onset CBDS[16].Pars plana vitrectomy with posterior capsulotomy has been performed a few times [14].Surgical approach however comes with various surgical risk associated with vitrectomy, longer time and a higher cost.

IV. Conclusion

Our case falls in the category of late post-operative capsular bag distension syndrome but had features of early CBDS like myopic shift in refraction, AS 0CT is an important diagnostic tool for CBDS and can demonstrate the resolution of turbid fluid post Nd:Yag. Traditional ND:Yag is still an excellent and cost effective method in the treatment of Late onset capsular bag distension syndrome.

References

[1]. Davison JA. Capsular bag distention after endophacoemulsification and posterior chamber intraocular lens implantation. J Cataract Refract Surg 1990; 16:99–108
[2]. Miyake K, Ota I, Ichihashi S, et al. New classification of capsular block syndrome. J Cataract Refract Surg. 1998; 24:1230–1234.
[3]. Miyake K, Ota I, Miyake S, Horiguchi M. Liquefied after cataract: a complication of continuous curvilinear capsulorhexis and intraocular lens implantation in the lens capsule. *Am J Ophthalmol*.1998; 125:429–435.
[4]. Sugiura T, Miyauchi S, Eguchi S, Obata H, Nanba H, Fujino Y, Masuda K, Akura J. Analysis of liquid accumulated in the distended capsular bag in early postoperative capsular block syndrome. J Cataract Refract Surg 2000; 26:420–425
[5]. Morgan-Warren P, Manna A. Late-onset capsular bag distension syndrome following cataract surgery. JRSM Short Rep. 2011; 2:53.
[6]. Bao Y-Z, Pei X-T, Li M-W, et al. Late postoperative capsular block syndrome versus liquefied after-cataract. J Cataract Refract Surg. 2008;34:1799–1802.

[7]. Koh JS, Song YB, Wee WR, et al. Recurrent late-onset fibrotic capsular block syndrome after neodymium-yttrium-aluminum-garnet laser anterior capsulotomy: a case report. BMC Ophthalmol. 2016;16:86.
[8]. Yang MK, Wee WR, Kwon JW, et al. Anterior chamber depth and refractive change in late postoperative capsular bag distension syndrome: a retrospective analysis. PLoS One. 2015;10:e0125895
[9]. Tan YL, Mohanram LS, Ti SE, et al. Imaging late capsular bag distension syndrome: an anterior segment optical coherence tomography study. ClinOphthalmol (Auckland,NZ). 2012;6:1455–1458.
[10]. Han SB, Liu Y-C, Noriega KM, et al. Applications of anterior segment optical coherence tomography in cornea and ocular surface diseases. J Ophthalmol. 2016;2016:4971572.
[11]. Mastropasqua L, Toto L, De Nicola G, et al. OCT imaging of capsular block syndrome with crystalline cortical remnants in the capsular bag. Ophthalmic Surg Laser Imag. 2009;40:399–402.
[12]. Nolan W. Anterior segment imaging: ultrasound biomicroscopy and anterior segment optical coherence tomography. *CurrOpinOphthalmol*. 2008;19:115–121.
[13]. Zafeiropoulos P, Katsanos A, Gorgoli K, et al. Late-onset capsular bag distension syndrome: a report of two cases. Acta Med. 2014;57:165–167.
[14]. Kollias AN, Vogel MA, de Kaspar HM, et al. Propionibacterium acnes in capsular bag distension syndrome. J Cataract Refract Surg. 2010;36:167–169.
[15]. Mardelli PG. Slitlamp needle revision of capsular block syndrome. J Cataract Refract Surg. 2008;34:1065–1069.
[16]. Huang Y, Ye Z, Li H, et al. Outcome of surgical treatment in late-onset capsular block syndrome. J Ophthalmol. 2017;2017:1847179.

Dr Colaco Roshan. "Late onset Case of Capsular bag distension syndrome." *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*, 19(10), 2020, pp. 23-26.