Commentary: Cataract surgery in retinitis pigmentosa

Retinitis pigmentosa (RP) is a hereditary retinal dystrophy that is characterized by night blindness and progressive diminution of vision as a result of damage to photoreceptors and retinal pigment epithelium.[1] Associated ocular conditions, such as complicated cataract and cystoid macular edema, may further aggravate the vision loss in these cases.[2] The ongoing inflammatory process from rapid photoreceptor degeneration is implicated as the probable cause for both these conditions.[3] The most common reported morphology of cataract in RP is posterior subcapsular cataract (PSC) which often requires cataract surgery for visual rehabilitation.[3,4] However, the rate of both intraoperative and postoperative complication following cataract surgery in eyes with RP is high when compared to routine cases of cataract.[4] The high rate of reported complication and risk of guarded visual outcome following cataract surgery due to the associated retinal pathology often result in apprehension when treating these cases. Hence, studies describing the factors determining the surgical and visual outcome following cataract surgery in cases of RP are needed for better preoperative prognostication and counseling of the patients. This will reduce both the surgeon's apprehension of an unexpected postoperative visual outcome and patient dissatisfaction.

At present, there is limited literature available on the outcome of cataract surgery in cases of RP.[4-6] In the current issue of this journal, Chatterjee *et al*.[7] have described the outcome of cataract surgery in RP patients and also discussed the factors predicting the postoperative visual outcome. The authors have well highlighted the differences observed in patients presenting in our country when compared to the western literature. As described in the study, in India, the patients present at a later age with worse presenting visual acuity when compared to western literature.[5] Also, unlike previous studies wherein PSC was the most common morphology, a combination of nuclear sclerosis, PSC, and cortical cataract was the most common type of cataract observed in these patients.[3] The postoperative visual outcome of cataract surgery in cases of RP as reported in this study is encouraging for surgeons who often defer surgery in fear of poor prognostic outcome. Over 90% of the cases showed some improvement in visual acuity and 84% eyes achieved a corrected distance visual acuity of 20/200 or better.[7] The number of cases who were preoperatively blind decreased by 70% postoperatively. The overall results of intraoperative complication of 4.5% as reported in the current study are also re-assuring for the cataract surgeons.[7]

The authors have reported central macular thickness and preoperative visual acuity as important predictive factors determining the postoperative visual outcome.[7] A reduced macular thickness was found to confer poor visual prognosis. Once cone photoreceptors start to degenerate in the later phase of the disease, the macula becomes progressively thin. A normal macular thickness and morphology despite prolonged duration of disease symptoms, suggest residual cone photoreceptors and predict good visual outcome. Similarly, a good preoperative visual acuity is an indirect indicator of preserved retinal function and hence these cases have good postoperative visual outcome after cataract surgery.

In the context of cataract surgery in cases of RP, this study gives few important messages for an ophthalmologist. Firstly, the visual acuity does improve in majority of the cases and hence one should not hesitate in planning cataract surgery in these cases. Secondly, presenting visual acuity and central macular thickness should be used as a guide for preoperative prognostication of the case and patient counseling.

Pranita Sahay, Devesh Kumawat[1]

Department of Ophthalmology, University College of Medical Sciences and Guru Tegh Bahadur Hospital, New Delhi, [1]Department of Ophthalmology, All India Institute of Medical Sciences, Rishikesh, Uttarakhand, India.

Correspondence to: Dr. Pranita Sahay, Assistant Professor, Department of Ophthalmology, University College of Medical Sciences and Guru Tegh Bahadur Hospital, New Delhi - 110 095, India.
E-mail: drpranitasahay@gmail.com

References

1. Pagon RA. Retinitis pigmentosa. Surv Ophthalmol 1988;33:137-77.
2. Liew G, Strong S, Bradley P, Severn P, Moore AT, Webster AR, *et al*. Prevalence of cystoid macular oedema, epiretinal membrane and cataract in retinitis pigmentosa. Br J Ophthalmol 2019;103:1163-6.
3. Hong Y, Li H, Sun Y, Ji Y. A review of complicated cataract in retinitis pigmentosa: pathogenesis and cataract surgery. J Ophthalmol 2020;2020:6699103.
4. Dikopf MS, Chow CC, Mieler WF, Tu EY. Cataract extraction outcomes and the prevalence of zonular insufficiency in retinitis pigmentosa. Am J Ophthalmol 2013;156:82-88.e2.
5. Jackson H, Garway-Heath D, Rosen P, Bird AC, Tuft SJ. Outcome of cataract surgery in patients with retinitis pigmentosa. Br J Ophthalmol 2001;85:936-8.
6. Yoshida N, Ikeda Y, Murakami Y, Nakatake S, Fujiwara K, Notomi S, *et al*. Factors affecting visual acuity after cataract surgery in patients with retinitis pigmentosa. Ophthalmology 2015;122:903-8.
7. Chatterjee S, Agrawal D, Agrawal D, Parchand SM, Sahu A. Cataract surgery in retinitis pigmentosa. Indian J Ophthalmol 2021;69:1753-7.

Access this article online

Quick Response Code:

Website: www.ijo.in

DOI: 10.4103/ijo.IJO_598_21

Cite this article as: Sahay P, Kumawat D. Commentary: Cataract surgery in retinitis pigmentosa. Indian J Ophthalmol 2021;69:1759.