Bilateral Rhegmatogenous Retinal Detachment in an Asymptomatic Patient  
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Retinal detachments occur in approximately 2.8% of patients who have lattice degeneration with holes.1,2 We present a case of bilateral asymptomatic rhegmatogenous retinal detachments successfully repaired with a silicone exoplant encircling buckle, cryotherapy, and barrier laser.

I. Case history

A 44-year-old African-American male presented with no visual or ocular complaints for an ocular examination to update their spectacle and contact lens prescriptions. The patient denied history of trauma, flashes, floaters, or decreased vision. The patient’s ocular and medical histories were unremarkable.

II. Pertinent findings

Best-corrected visual acuities measured 20/20 OD and 20/70 OS. Pupils were equal, round, and responsive to light with an afferent pupillary defect noted OS. Brightness and red cap testing were negative. Versions were smooth and full in all positions of gaze. Confrontation visual fields were full to finger counting OD. Confrontation visual field testing OS revealed an 8-degree superior nasal defect, which was confirmed with an Amsler grid. Refractive error was measured with negligible changes at -5.50 – 2.50 X 180 OD and - 7.50 – 3.00 X 180 OS. Slit lamp examination was unremarkable in both eyes. Intraocular pressures measured 14 mmHg OU by Goldmann applanation tonometry. Dilated fundus examination of both eyes revealed lattice degeneration with holes in all quadrants. The left eye demonstrated an inferior temporal retinal tear infiltrated with subretinal fluid creating a rhegmatogenous retinal detachment, extending into the macula. Examination of the right eye uncovered a small area of lattice degeneration with holes sequestering subretinal fluid superior temporally, inducing a shallow rhegmatogenous retinal detachment. The findings were confirmed with a B-scan ultrasonography and spectral domain optical coherence tomography (OCT). An immediate emergent referral was made to retinology where the findings were confirmed and surgical repair was scheduled. The right eye was protected with barrier laser photocoagulation and the left eye was repaired with a silicone exoplant encircling buckle and cryotherapy.

III. Differential Diagnosis

The differential diagnoses included retinoschisis, atypical white without pressure, choroidal detachment, and choroidal melanoma.

IV. Diagnosis and Discussion

Recent studies indicate that lattice degeneration is present in approximately 18.7% of eyes diagnosed with rhegmatogenous retinal detachments.1 Detachments have the capability of inducing catastrophic vision loss when fluid created by vitreous collapse enters the subretinal space between the photoreceptors and retinal pigment epithelium. Separation of the photoreceptors from the supportive retinal pigment epithelium induces dysfunction.
V. Treatment and Management

A treatment plan for retinal detachment is traditionally formulated based on its size, location, age of the patient, involvement of the macula and whether or not the patient has a history of retinal detachment in the fellow eye. Debates have surfaced as to the need for scleral buckling as well as the extent of any laser barrier photocoagulation necessary. Studies have also produced controversy regarding the need for scleral buckling demonstrating that pars plana vitrectomy (PPV) combined with scleral buckling (SB) for the repair of noncomplex primary rhegmatogenous retinal detachment (RRD) has no benefit over PPV alone. Recently, researchers have experimented with the use of low-molecular-weight silicone oil as an infusion media to facilitate an internal search for additional retinal breaks, to accomplish vitreous base shaving and to assist in the efficient drainage of subretinal fluid. The exigency for convening a surgical team for immediate repair has also been evaluated for efficacy.

VI. Conclusion

The typical signs and symptoms of retinal detachment, photopsia (flashing lights) and entopic phenomena (floating spots) are not always present. Dilated retinal examination should be completed on all patients with or without symptoms.


