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Management of Degenerative Retinoschisis–Associated Retinal Detachment

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Purpose: To review a population of degenerative retinoschisis (RS) patients, with attention to those with schisis cavity breaks and with retinal detachment complicating retinoschisis (RDRS), to identify management considerations and incidence for this rare clinical entity.

Design: Retrospective chart review of patients with RS and schisis cavity breaks over a 15-year period in a tertiary, multiple-physician vitreoretinal practice.

Subjects: A total of 587 cases of RS were confirmed on chart review, with 59 meeting inclusion criteria.

Methods: Included charts required documented RS with schisis cavity breaks, a minimum of 3 months of follow-up, detailed fundus drawings and notes, and filed operative report if surgical interventions were performed. Charts were excluded if the patient had undergone any previous history of laser, cryotherapy, or intraocular surgery (except for cataract surgery).

Main Outcome Measures: Incidence of RS with schisis cavity breaks and RDRS, time to development of symptomatic RDRS, clinical characteristics predisposing development of progressive RDRS.

Results: Sixty-seven cases (11.4%) presented with schisis cavity breaks, but only 59 met inclusion. Initially, 35 of the 59 included cases (59%) were observed with stability in 54.3% at a mean follow-up of 40.2 months. Only 10 of the initially observed 35 eyes (28.6%) exhibited new-onset symptoms of retinal detachment, with a mean time to progression of 20.6 months. Posterior progression involving the major arcades or macula occurred in 86.7% of symptomatic eyes, as compared with 11.4% of asymptomatic eyes ($P < 0.0001$). Of the 15 eyes with symptomatic RDRS, 14 eyes underwent vitreoretinal surgery for RDRS, with a single-procedure success rate of 86%.

Conclusions: RDRS requiring vitreoretinal surgical repair is a rare, symptomatic, and progressive condition occurring in 2.4% of 587 cases of RS over a 15-year period in a large, tertiary referral, vitreoretinal-only practice. In cases with RS and outer wall breaks, 54.3% were nonprogressive at 3 years of follow-up, but 28.6% progressed to symptomatic RDRS at a mean of 20.6 months. Surgery is not recommended in asymptomatic individuals except in rare situations based on clinical judgement regarding the observed behavior of the RS. The presence of symptoms should warrant treatment. *Ophthalmology Retina 2017;■:1–6 © 2017 by the American Academy of Ophthalmology*

Retinal detachment complicating retinoschisis (RDRS) is a rare clinical entity[1] described in few case reports and series discussing management of this condition.[2–8]

Posterior extension of retinoschisis can be thought of in 3 clinical scenarios[9]: (1) posterior extension of the retinoschisis cavity without retinal breaks, (2) posterior extension of the retinoschisis cavity due to accumulation of subretinal fluid associated with outer and/or inner wall breaks—"schisis detachment," and (3) posterior extension of subretinal fluid associated with outer and/or inner wall breaks that may assume a more typical rhegmatogenous retinal detachment morphology—RDRS. Typically, posterior extension of the retinoschisis cavity rarely extends to involve the entire macula[1] and remains stable without therapy. In the setting of retinoschisis with outer wall breaks, outer wall breaks can be seen in 11% to 24% of cases of retinoschisis,[1,9] with 58% of patients (14 of 24) exhibiting asymptomatic schisis detachments that remained stable without intervention at a mean follow-up of 9 years.[1] In comparison, RDRS is progressive and acutely symptomatic and warrants management, especially with macular involvement and vision loss.[9] RDRS is a rare clinical entity with an estimated incidence of 0.05% of patients with degenerative retinoschisis.[1]

Management of retinoschisis and its related entities has had a history of disagreement in terms of treatment.[9] Retinoschisis without the presence of inner or outer wall breaks has been shown to remain clinically stable with multiple years of follow-up without posterior extension to the macula.[1] There is a general consensus for observation for this presentation.[9] In contradistinction, there has been disagreement regarding the need for treatment of the asymptomatic condition of "schisis detachment." Although "schisis detachment" typically remains asymptomatic and nonprogressive,[1] some authors have attempted laser and/or cryotherapy demarcation instead of observation.[1,9] As for

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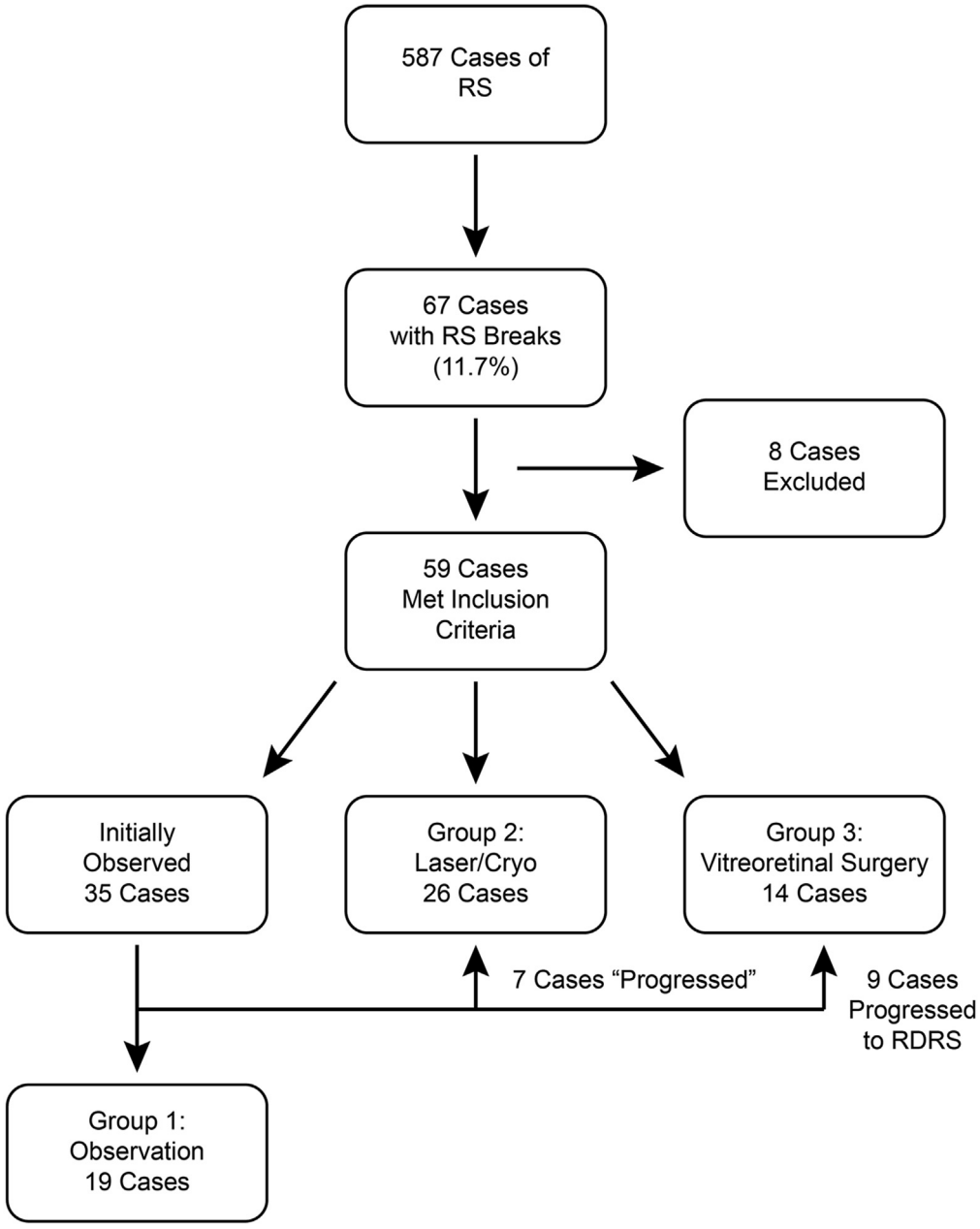

Figure 1. Flow diagram of included patients in the series. Cryo = cryotherapy; RDRS = retinal detachment complicating retinoschisis; RS = retinoschisis.

RDRS, there is no controversy regarding the need for treatment of this rapidly progressive, symptomatic condition, but there are insufficient data to comment on the optimal technique for repair.[9] Repair using laser/cryotherapy demarcation, pneumatic retinopexy, scleral buckling, vitrectomy, and scleral buckling with vitrectomy have been reported, with success rates for vitreoretinal surgical repair ranging from 62% to 97% in eyes with no or less than grade B proliferative vitreoretinopathy (PVR) at initial presentation.[3–9]

The purpose of this study was to review a population of retinoschisis (RS) patients with attention to RS patients with outer wall breaks, as well as to describe the clinical features of a series of RDRS patients to identify management considerations and the incidence for this rare entity from a population of patients with retinoschisis.

Methods

A retrospective chart and electronic medical record review of patients with the diagnosis of retinoschisis (ICD-9 361.1) at a multiple-physician, tertiary, vitreoretinal surgery practice from January 2000 to October 2015 was conducted to confirm the diagnosis of degenerative retinoschisis and the presence of an associated schisis cavity break or retinal detachment. Institutional Review Board/Ethics Committee approval for this HIPAA-