As you walk through the clinic of a vitreoretinal specialist, you often find a disproportionate number of older adults in the waiting room. And given that more than 46 million US adults are 65 and older—a number expected to grow to more than 90 million by 2050—this is no surprise. According to the AAO’s Committee on Aging, ophthalmologists are second only to geriatricians in the number of patients they see who are older than 65 years.

AMD today accounts for the majority of a vitreoretinal specialist’s work with elderly patients, but other conditions are on the rise as the US population ages, including rhegmatogenous retinal detachment (RRD). The prevalence of RRD has a bimodal distribution: a peak at young ages (attributed to high myopia and trauma) and a greater peak between 60 and 69 years.

But what about elderly patients? Octogenarians and nonagenarians are an increasingly important segment of our society and our clinical practices, yet there is little in the literature describing the presentation and outcomes of older adults with RRD. Many factors can make RRD surgery challenging in the elderly patient. For example, positioning after vitrectomy-based procedures may be difficult for those with cervical and lumbar issues, and following postoperative instructions may be challenging for those with Alzheimer disease and other dementias. Patients in their 80s and 90s also have a higher incidence of hearing impairment, which can lead to difficulties communicating in the OR and during postoperative care. Higher anesthesia risk and medical comorbidities are also important considerations.

To better understand the characteristics and treatment outcomes of RRD in elderly patients, our group analyzed data from the Primary Retinal Detachment Outcomes (PRO) study, a large, comprehensive, observational data set from all patients at six centers who underwent primary RRD repair. Within the PRO database, we compared the presentations and outcomes of those over age 80 who underwent repair of RRD with patients between ages 40 and 79.

Based on data from the Primary Retinal Detachment Outcomes Study, patients 80 years and older were more likely to present with macula-off detachments and preoperative proliferative vitreoretinopathy compared with patients 40 to 79 years old.

Rhegmatogenous retinal detachment surgery was often more complex in elderly patients and more likely to require membrane peeling, intraoperative perfluoro-octane, and silicone oil tamponade.

Postoperative positioning is crucial to ensure a successful retinal detachment repair; however, postoperative positioning may not be possible for some older adults because of concomitant musculoskeletal disorders.

In elderly patients, the mean VA improved from preoperative 20/500 to postoperative 20/125, compared with 20/200 to 20/40 in younger patients.
COMPLEX PRESENTATIONS

When compared with younger adult patients (40–79), elderly patients (80 and older) were more likely to present with macula-off retinal detachments (49% vs 66%, respectively, $P < .001$) and preoperative proliferative vitreoretinopathy (7% vs 13%, respectively, $P = .023$). Furthermore, 59% of the elderly patients presented with VA worse than 20/200, and the mean presenting VA was much worse for elderly patients (20/500) compared with those in the younger cohort (20/200, $P < .001$).

One factor contributing to this disparity may be that elderly patients have poorer access to eye care at multiple levels. For example, a population-based study of 6,775 elderly patients in community dwellings in the Netherlands identified older age (> 85), being homebound due to health reasons, and having lower Mini Mental Status Exam scores as risk factors for untreated cataract. Further, in a study in Baltimore, nursing home residents were found to be more than 13 times more likely to be legally blind (VA > 20/200) than community dwelling adults of the same age. In that study, 40% of the cases of visual impairment were treatable or preventable, with cataract surgery being the most important factor.

Examining risk factors for preventable and reversible causes of blindness in the elderly provides insight into the delayed and more complex nature of RRD in this population.

COMPLEX REPAIRS

Before undertaking surgery in an elderly patient, surgeons must carefully consider the type of anesthesia they will use. Although general anesthesia poses more risks with increased comorbidities, it may be necessary in certain cases such as for patients with an inability to hold still or maintain the correct positioning or those with physical disability or cognitive difficulties. In our cohort of patients, most underwent monitored anesthesia care and local anesthesia, and not general anesthesia.

The majority of elderly patients in our cohort were pseudophakic (90% vs 44% in the younger patients, $P < .001$), and the most common procedure performed was pars plana vitrectomy (PPV) alone (74%), followed by PPV in combination with a scleral buckle (SB; 27%). However, the surgery itself was often more complex in elderly patients, as the older patients were more likely to require membrane peeling, intraoperative perfluoro-n-octane, and silicone oil tamponade (Figure).

Postoperative positioning is crucial to ensure a successful retinal detachment repair; however, postoperative positioning may not be possible for older adults because of concomitant musculoskeletal disorders. The increased use of silicone oil in older patients in our series reflects both the greater complexity of the RRDs and the potential difficulties with postoperative positioning.

WORSE OUTCOMES

Due to the increased complexity of both RRD presentation and surgical repair, the final outcomes of elderly patients with RRD are often worse than they would be in younger patients. In our cohort, we found that mean VA improved from 20/500 preoperatively to 20/125 postoperatively in the older patients, compared with 20/200 preoperatively to 20/40 postoperatively in the younger patients ($P < .001$). Single-surgery anatomic success rate was 78% in the older patients compared with 84% in younger patients ($P = .03$).

A previous study following patients over age 85 showed similar results. Nearly half of patients in that cohort who underwent PPV had a recurrent retinal detachment after
repair (46%, n = 10/22), although the mean VA improved from 1.962 logMAR (20/1832) preoperatively to 1.232 logMAR (20/341) after a mean follow-up of 7.25 months.9

WRAP-UP

Although RRDs in the elderly have worse prognoses, there is still an improvement of quality of life that must not be discounted.10 Retinal detachment surgery remains effective in improving visual function in patients over age 80, but outcomes may not be as favorable as they are in younger patients. Preexisting comorbidities, delayed presentation, difficulties with postoperative positioning, and many other factors likely contribute to worse outcomes for RRD repair in the elderly. Thus, thoughtful and individualized approaches to the care of elderly patients with RRDs are recommended, especially considering that these clinical scenarios are becoming more common as our global population ages.11


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