

June 2025





#### **RETINA ROUND UP ARTICLES – June 2025**.

#### 1. <u>RISK FACTORS FOR PROLIFERATIVE VITREORETINOPATHY IN A LARGE CLINICAL DATABASE</u>

Oncel, Damla; Minaker, Samuel; Shepherd, E. Annie; Rezaei, Sam; Boucher, Nick; Aggarwal, Nitika; MacCumber, Mathew

Retina. 45(5):818-826, May 2025.

#### **Purpose:**

Proliferative vitreoretinopathy (PVR) is the leading cause of surgical failure after rhegmatogenous retinal detachment (RRD). In this study, we aimed to explore ocular and systemic risk factors for PVR due to RRD in a large patient database.

#### Methods:

Patients who have a diagnosis of RRD and PVR and who have been seen in the last 7 years before analysis (January 2015–February 2023) were identified in the Vestrum Health database. The variables selected for univariate and multivariate analyses in this study included age, gender, history of smoking, diabetes, hypertension, dyslipidemia, anemia, Wagner syndrome, Stickler syndrome, vitreous hemorrhage, high myopia, ocular trauma, choroidal detachment, uveitis, giant retinal tear, aphakia, and endophthalmitis. Eyes with proliferative diabetic retinopathy and those that had a history of PVR before the RRD diagnosis date were excluded from the study. The incidence of PVR was determined within each subset of the patient population.

#### **Results:**

There were 57,264 eyes that underwent a postoperative examination within 1 month after RRD diagnosis. Systemic factors younger age, female gender, smoking history, and hypertension, and ocular factors poor baseline visual acuity, history of ocular trauma, choroidal detachment, history of uveitis, giant retinal tear, pseudophakia, aphakia, and endophthalmitis were significantly and independently associated with increased odds of PVR development.

#### **Conclusion:**

The findings of this study indicate that there are several systemic and ocular risk factors that increase PVR development. Ophthalmologists should keep these in mind when planning surgical and therapeutic interventions for PVR prevention and treatment in patients with RRD.



# 2. <u>IDENTIFICATION OF LEAKAGE SITES IN CENTRAL SEROUS CHORIORETINOPATHY USING</u> <u>OPTICAL COHERENCE TOMOGRAPHY AND THE ASSESSMENT OF THE CHARACTERISTICS OF THE</u> <u>BIOMARKERS</u>

Funatsu, Ryoh; Terasaki, Hiroto; Mihara, Naohisa; Sonoda, Shozo; Shiihara, Hideki; Miyake, Shoki; Imatsuji, Hiroki; Sakamoto, Taiji

Retina. 45(5):893-900, May 2025.

#### **Purpose:**

To identify optical coherence tomography-based imaging biomarkers that can localize focal leakage points without fluorescein angiography in central serous chorioretinopathy (CSC).

#### Methods:

This retrospective case–control study analyzed 119 consecutive patients (123 eyes) with CSC between April 2018 and February 2024, comprising 66 eyes with focal-leakage type and 57 eyes with diffuse-leakage type. We assessed leakage sites using optical coherence tomography, and the proportions of optical coherence tomography findings were compared between focal-leakage and diffuse-leakage types.

#### **Results:**

Hyporeflective lucency signs were observed in 27 eyes (40.9%) with focal-type CSC, while no such signs were detected in diffuse-type CSC cases (0.0%; P < 0.001). In focal-type CSC, these signs were exclusively localized to leakage points, with no occurrence in other areas within serous retinal detachment. Microrips of retinal pigment epithelium and subretinal hyperreflective material were identified in 23 (34.8%) and 47 eyes (71.2%) with focal-type CSC, respectively, and also in eyes with diffuse-type CSC (5.3% and 19.3%, respectively; P < 0.001 for both comparisons).

## **Conclusion:**

Only the hyporeflective lucency sign is present exclusively in focal leakage points of fluorescein angiography. Our findings suggested that the hyporeflective lucency sign may serve as a potential therapeutic target in CSC.



# 3. <u>A COMBINATION REGIMEN OF INTRAVITREAL CLINDAMYCIN WITH DEXAMETHASONE,</u> <u>SYSTEMIC CO-TRIMOXAZOLE AND STEROIDS FOR MACULAR TOXOPLASMA</u> <u>RETINOCHOROIDITIS IN IMMUNOCOMPETENT CASES</u>

Satavasia, Sushree; Mishra, Akshay; Jadhav, Vishal; Abhishek, Talluri Ronnie; Kelgaonkar, Anup; Patel, Anamika; Basu, Soumyava; Pathengay, Avinash

Retina. 45(5):871-876, May 2025.

#### **Purpose:**

To study the role of intravitreal clindamycin with dexamethasone as an adjuvant to systemic cotrimoxazole and steroids in macular Toxoplasma retinochoroiditis.

#### Methods:

Retrospective study of Toxoplasma retinochoroiditis cases from January 2014 to December 2021 treated with a combination of oral and intravitreal therapy in immunocompetent patients.

#### **Results:**

Thirty-nine eyes of 39 patients were included in this study after meeting the inclusion criteria with the mean age of presentation being 25.25 years ( $\pm$ 9.30; range 4–52 years). Male preponderance with 61.53% of male patients (n = 24) and 38.47% of female patients (n = 15) was observed. Active retinitis was unilateral in all eyes (20 right eyes; 19 left eyes). Five lines of improvement in visual acuity on Early Treatment Diabetic Retinopathy Study (ETDRS) chart were noted at final visit. The location of retinitis was either foveal (n = 24) or extrafoveal (n = 15). The mean size of retinitis was 1.24 ± 0.70-disc diameter. The mean number of injections given was 1.79 with a mean interval of 1.39 weeks.

## **Conclusion:**

Intravitreal clindamycin with dexamethasone when used as an adjunct to systemic therapy showed resolution of retinitis in all cases with visual improvement.



## 4. EFFICACY OF SPLIT-THICKNESS THIN AMNIOTIC MEMBRANE GRAFT FOR CLOSURE OF REFRACTORY OR LARGE MACULAR HOLES

Trivedi, Vichar; You, Qisheng; Lee, Patrick S. Y.; More

Retina. 45(5):833-838, May 2025.

#### **Purpose:**

To assess the effectiveness of split-thickness amniotic membrane grafts in achieving closure of refractory or large macular holes (MH).

#### Methods:

This retrospective study reviewed data from patients who underwent surgical repair of MHs using split-thickness amniotic membrane grafts between January 2019 and December 2023. Key parameters, including best-corrected visual acuity and MH size, were evaluated both preoperatively and postoperatively.

#### **Results:**

The study included 13 patients (nine females; mean age 63.5 years). Before surgery, the median best-corrected visual acuity was  $1.30 \pm 0.56$  logarithmic measure of angle of resolution (approximate Snellen equivalent: 20/400) and the median MH size measured 717 ± 246.6  $\mu$  m. After an average follow-up period of 28 months, the median best-corrected visual acuity improved significantly to  $1.00 \pm 0.52$  logarithmic measure of angle of resolution ( P < 0.05) (approximate Snellen equivalent: 20/200). All MHs were successfully closed, and no intraoperative complications were observed.

## **Conclusion:**

Split-thickness amniotic membrane grafting is a safe and reliable option for closing refractory or large MHs, resulting in significant improvements in best-corrected visual acuity and successful hole closure. Compared with full-thickness grafts, split-thickness amniotic membrane grafts offer advantages such as increased flexibility in placement and ease of removal post-closure, due to their thinner and more pliable nature, which facilitates easier handling and positioning within the MH.



# 5. <u>VITRECTOMY AND COMPLETE DRAINAGE OF SUPRACHOROIDAL FLUID WITHOUT</u> <u>PERIOPERATIVE STEROIDS FOR RHEGMATOGENOUS RETINAL DETACHMENT COMBINED WITH</u> <u>CHOROIDAL DETACHMENT: A Randomized Clinical Trial</u>

Lin, Wei; Chen, Hao; Ren, Minxue; More

Retina. 45(5):863-870, May 2025.

#### Purpose:

To investigate the surgical effect of complete drainage of suprachoroidal fluid before vitrectomy to avoid perioperative steroids in rhegmatogenous retinal detachment combined with choroidal detachment eyes.

#### Methods:

It was a prospective, randomized controlled trial. Fifty-eight eyes were randomly divided into the no steroids (NS) group and local steroids (LS) group, 29 eyes each, respectively. Patients in the LS group received a single preoperative periocular injection of methylprednisolone, while suprachoroidal fluid drainage was performed before vitrectomy in eyes of the NS group. Follow-up assessments were performed at 1 week, 1 month, 3 months, and 6 months postoperatively.

#### **Results:**

The postoperative retinal reattachment rate was similar in the NS and LS groups (96.6% vs. 93.1%, P = 1.00). Best-corrected visual acuity was improved in 72.4% and 75.9% in the NS and LS groups, respectively. Inflammation occurred in five eyes (17.2%) in the NS group and six eyes (20.7%) in the LS group (P = 0.74). Hypotony occurred in 11 (37.9%) and 14 eyes (48.3%) in the LS and NS groups (P = 0.43), respectively. Macular chorioretinal folds were found in 21 (72.4%) and 22 eyes (75.9%) in the LS and NS groups (P = 0.76), respectively. Hypotony and chorioretinal folds disappeared after 1 week postoperatively.

## **Conclusion:**

Preoperative steroids may not be necessary for rhegmatogenous retinal detachment combined with choroidal detachment patients if the suprachoroidal fluid is completely drained before vitrectomy. Postoperative retinal reattachment does not depend on the use of preoperative steroids; instead, surgeons should focus on improving surgical techniques in rhegmatogenous retinal detachment combined with choroidal detachment to improve the retinal reattachment rate.



## 6. <u>YAG LASER-ASSISTED FRAGMENTATION OF DEXAMETHASONE IMPLANTS IN THE ANTERIOR</u> <u>CHAMBER</u>

Meduri, Alessandro MD, PhD<sup>1</sup>; De Luca, Laura MD<sup>1</sup>; Oliverio, Giovanni William MD, PhD<sup>1</sup>; Mancini, Maura MD<sup>1</sup>; Grenga, Pierluigi MD<sup>2</sup>; Fragiotta, Serena MD, PhD<sup>4</sup>; Carlà, Matteo Mario MD<sup>4</sup>; Aragona, Pasquale MD, PhD<sup>1</sup>

Retina ():10.1097/IAE.000000000004500, May 06, 2025. | DOI: 10.1097/IAE.00000000004500

## Purpose:

To report efficacy on the use of neodymium yag laser in fragmentating dexamethasone intravitreal implant (Ozurdex, Allergan, Inc, Irvine, CA) migrated in the anterior chamber (AC).

#### Methods:

Multicenter, retrospective, interventional case series of 10 patients treated with Nd:Yag laser following spontaneous migration of dexamethasone implant into the AC.

#### **Results:**

The Nd:yag laser successfully fragmented the migrated implants in all cases without severe complications. No patient exhibited corneal edema at 4 months post-treatment. Visual acuity remained stable or improved in four patients, while one patient had minimal transient visual deterioration due to pre-existing retinal conditions. In all patients resolution of previous macular edema was detected.

## **Conclusions:**

Spontaneous migration of the dexamethasone intravitreal implant into the anterior chamber can occur in patients with aphakia, prior pars plana vitrectomy, or compromised capsular support. Timely intervention using Nd:yag laser can effectively fragment the dexamethasone implant, mitigating the risk of corneal endothelial damage and preserving visual function. In this cohort Nd:yag laser appeared a safe and effective treatment option for managing anterior chamber migration of the dexamethasone intravitreal implant, avoiding the need for more invasive surgical techniques or temporary non-invasive techniques.