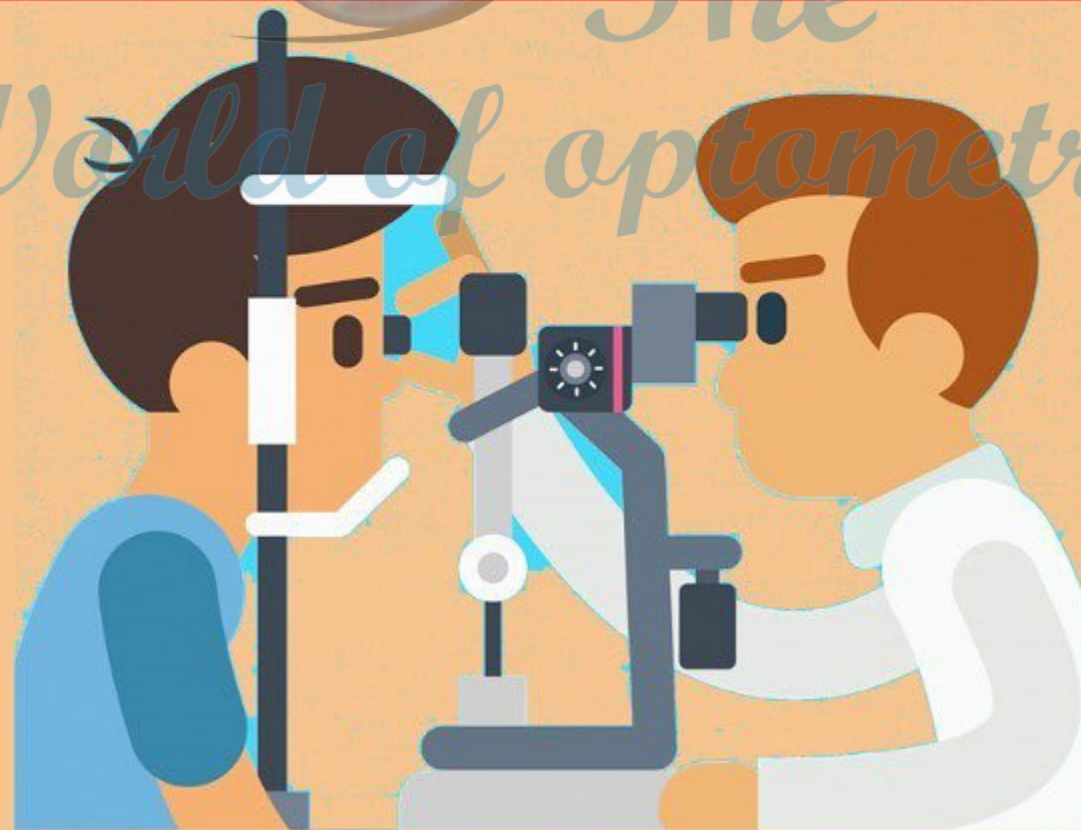




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Twop Case Study

Branch Retinal Vein Occlusion (BRVO)



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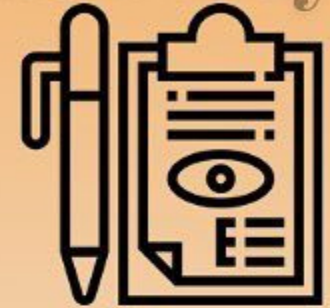
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Patient History

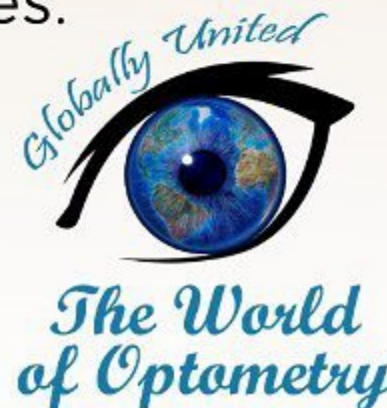


CHIEF COMPLAINTS: 52 years old, Male, c/o LE progressive BOV for both distance & near since 1 month.

OCULAR HISTORY: Does not use any specs/CL, No known h/o ocular diseases/surgery.

PAST MEDICAL HISTORY: HTN since 10 years, on medication: Amlodipine.

FAMILY HISTORY: No known hx of ocular diseases.



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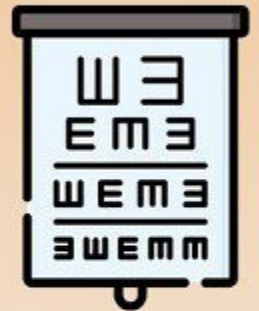
Ocular Examination

Visual Acuity (UNAIDED)

- OD 20/32
- OS 20/300

IOP (GOLDMANN)

- 17mmHg
- 15mmHg



Refractive error

- OD -0.75dsph 20/20
- OE plano 20/300

Pupils: ----RRR-----

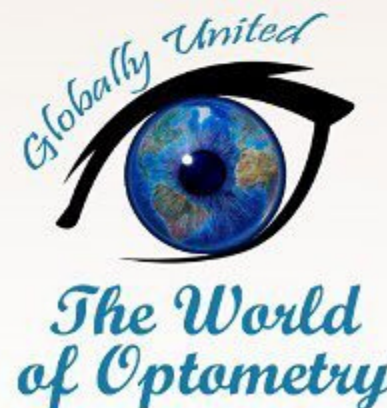
EOM: ----FULL-----



PCT (UNAIDED)

6M: ORTHO

1/3M: ORTHO



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Clinical Findings

Fundus Evaluation

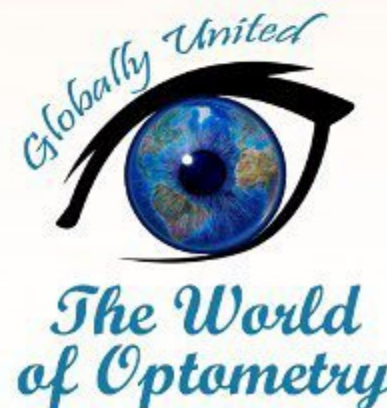
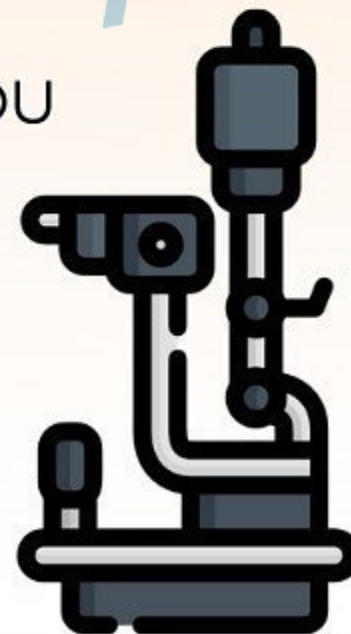
OD: Clear view, CDR 0.3, flat macula with normal foveal light reflexes, normal vessels.

OE: Clear view, CDR 0.3, Macula not seen with presence superficial hemorrhages, CWS, macular edema, a dilated and tortuous retina vein.



Slit Lamp Findings

- Lids/Lashes: Clear OU
- Conjunctiva/Sclera: Normal OU
- Cornea: Clear OU.
- Anterior Chamber: D&Q OU
- Iris: Brown, NAD
- Lens: NS1 OU



DRAG TO THE SIDE
DRAG TO THE SIDE

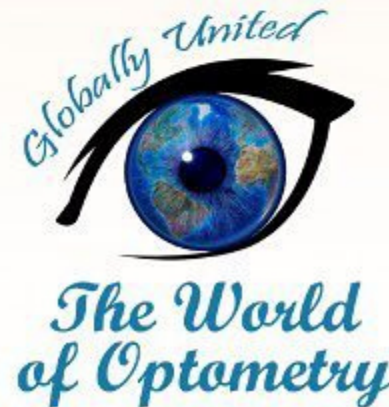
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Diagnosis



Globally United

OS: BRANCH RETINAL VEIN
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OCCLUSION (BRVO)



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Discussion

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What is BRVO? BRVO is Retinal Vascular Disease, a blockage of one or more branches of the Central retinal vein.



Etiology: Disease of the adjacent arterial wall (usually the result of HTN, arteriosclerosis, or diabetes) compresses the venous wall at a crossing point.

Symptoms: Blind spot in the visual field or loss of vision, usually unilateral.

Signs:

- **Critical.** Superficial hemorrhages in a sector of the retina along a retinal vein. The hemorrhages usually do not cross the horizontal raphe (midline).
- **Other** CWSs, retinal edema, a dilated and tortuous retinal vein, narrowing and sheathing of the adjacent artery, retinal neovascularization, VH.



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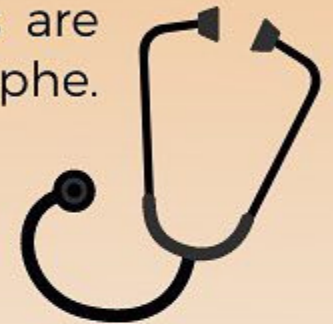


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#TwoCaseStudy Differential Diagnosis

Diabetic retinopathy: Dot-blot hemorrhages and microaneurysms extend across the horizontal raphe. Nearly always bilateral.

Hypertensive retinopathy: Narrowed retinal arterioles. Hemorrhages are not confined to a sector of the retina and usually cross the horizontal raphe. Bilateral in most.



Work-Up 1

1. History Systemic disease, particularly HTN or diabetes?
2. Complete ocular examination, including dilated retinal examination with indirectophthalmoscopy to look for retinal neovascularization, and a macular examination with a slit lamp and a 60- or 90-diopter lens, or fundus contact lens, to detect ME.
3. OCT: Used to help detect presence and extent of macular edema as well as monitor response to therapy.

Work-Up 2

4. Check Blood pressure.
5. Blood tests: Fasting blood sugar and hemoglobin A1c, lipid profile, CBC with differential and platelets, PT/PTT, and ESR. If clinically indicated, consider a more comprehensive work-up
6. Medical examination: Performed by an internist to check for cardiovascular disease.
7. An IVFA is obtained after the hemorrhages clear or sooner if neovascularization is suspected.



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Management & Treatment

1. Retinal neovascularization: Sector PRP to the ischemic area, which corresponds to area of capillary nonperfusion on IVFA.

2. Prompt and appropriate treatment of underlying medical conditions (e.g., HTN).

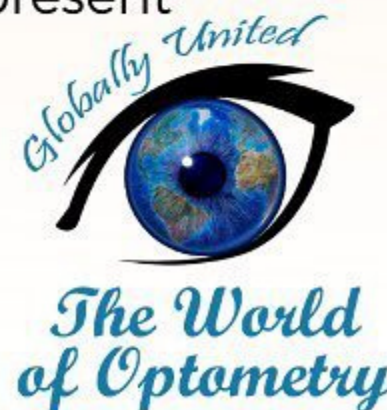
BRVO-Related Macular Edema

1. Anti-VEGF treatment

It is now the gold-standard treatment. Intravitreal ranibizumab 0.5 mg and aflibercept 2 mg are FDA-approved for treating RVO-associated ME. Intravitreal bevacizumab has been used off-label in a similar fashion. Risks of intravitreal injection are low, but include VH and endophthalmitis.

2. Focal retinal laser photocoagulation

It has historically been the gold-standard treatment if edema is present for 3 to 6 months duration, and visual acuity is below 20/40 with macular capillary perfusion. However, anti-VEGF treatment is now largely favored. Limitations of focal laser include length of time before effect (often several months) and the need to wait until retinal hemorrhages clear.



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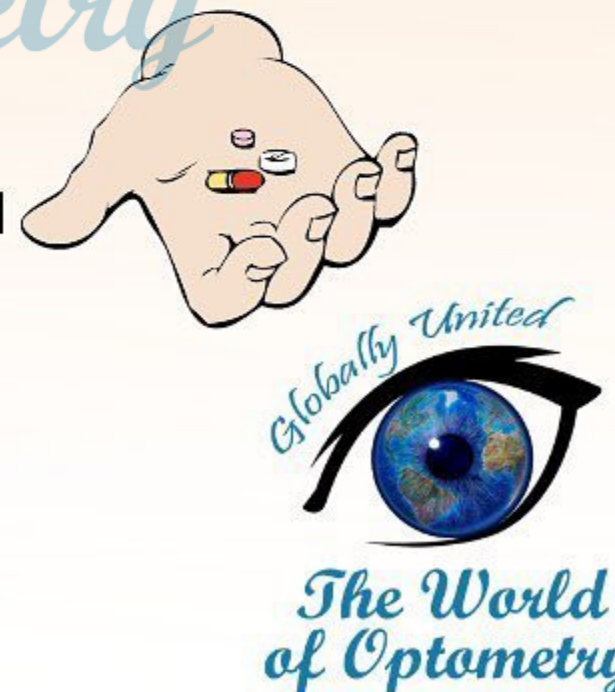
Management & Treatment

3. Ozurdex implant or off-label intravitreal steroid (e.g., triamcinolone 40 mg/mL, inject 1 to 4 mg)

NOTE: There is an evolving trend, particularly in cases of severe edema, to initiate treatment with pharmacologic agents for rapid visual recovery followed by focal laser for better durability of effect. Multiple pharmacologic trials (BRAVO and CRUISE) have validated that early anti-VEGF treatment leads to better visual outcomes.

Follow-Up

In general, every month initially, with gradual interval taper based on vision, presence of macular edema, and response to treatment.





Wow, what a cool content



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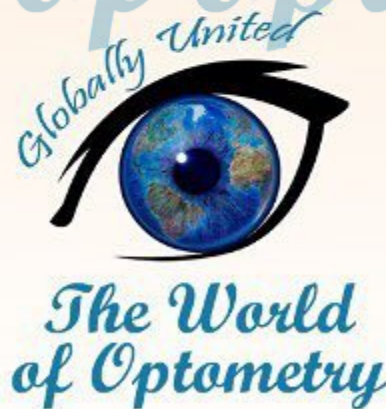


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