



RESEARCH ARTICLE

STUDY OF RISK FACTORS IN RETINAL VENOUS OCCLUSION

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Abstract

Aims and objectives: To study the demographic profile of patients with retinal vein occlusions

To determine the risk factors in retinal vein occlusions

Materials and Methods: This is a hospital based observational study conducted on 50 patients attended to attending to retina clinic OPD of Ophthalmology department, Dr. R.S.P.R Government regional eye hospital, Andhra medical college, Visakhapatnam from April 2022 to June 2022. Relevant detailed history and complete ocular examination was done.

Results: Out of 50 cases, 16(32%) were CRVO, 4(8%) were HRVO and 30(60%) were BRVO. Majority were in the age group of 61-70 years i.e., 48% and least number are <40 years age. Out of 50, 30% were males and 18% are females. Major risk factor is hypertension 20(40%), Diabetes alone is a risk factor in 14% followed by Dyslipidemia, CAD and CVA.

Conclusion: The incidence of RVO is more in the age group of 61-70 yrs (48%). Study shows male preponderance (64%) and females (36%). Incidence of CRVO 32%, HRVO 8%, BRVO 60%. Greater risk factor association is with HTN, DM, Hyperlipidemia and glaucoma. Age is an independent risk factor.

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Introduction:-

Visual impairment brought on by retinal vascular disorders frequently results from retinal vein occlusions. After diabetic retinopathy, it is the second most prevalent retinal vascular disease.

According to the location of the venous occlusion, venous occlusions are divided into three categories: CRVO, HRVO, and BRVO. The other is classified as ischemia or non-ischemic depending on the degree of capillary perfusion. Age, hypertension, diabetes mellitus, arteriosclerosis, hyperlipidemia, atherosclerotic cardiovascular illnesses, hyperhomocystinemia, and other conditions are some of the common risk factors for these multifactorial disorders.

Aim And Objectives:-

1. To study the demographic profile of patients with retinal vein occlusions
2. To determine the risk factors in retinal vein occlusions

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Materials And Methods:-

This is a hospital based observational study conducted on 50 patients attended to retina clinic, GREH, Visakhapatnam.

Inclusion Criteria:

Patients attended to the retina clinic who were diagnosed to have retinal vein occlusions

Exclusion Criteria:

Hazy media due to corneal opacity, significant cataract

Methodology:-

1. A detailed history was taken about the patients chief complaints, past history and associated systemic diseases
2. Visual acuity was recorded with snellens chart
3. Slit lamp anterior segment examination was done
4. Fundus examination was done with +78D and indirect ophthalmoscopy.
5. IOP was recorded with Goldmann Applanation Tonometry
6. Gonioscopy was done to assess the angle

Systemic evaluation includes:

-Blood Pressure: Systolic BP of >140mmHg, Diastolic BP of >90 was considered
 -Blood Sugar: FBS >110 mg/dl, PPBS >140 mg/dl
 -Lipid profile: Serum cholesterol >200mg/dl, serum triglycerides >180mg/dl, HDL <50mg/dl, LDL >190mg/dl
 -Complete hemogram was done
 Cardiac evaluation-2D echo
 Other necessary investigations were done based on case profile

Results:-

The present study conducted at GREH includes 50 patients with retinal vein occlusions, Out of which 16(32%) were CRVO, 4(8%) were HRVO and 30(60%) were BRVO.

Table 1:- Types of RVO.

Type of RVO	Number	Percentage
CRVO	16	32%
HRVO	4	8%
BRVO	30	60%
Total	50	100%

Table 2:- Age distribution Majority were in the age group of 61-70 years i.e., 48% and least number are <40 years age i.e., 6%.

Age	Number	Percentage
<40	3	6%
41-50	7	14%
51-60	12	24%
61-70	24	48%
71-80	4	8%
Total	50	100%

Table 3:- Gender Distribution: Out of 50, 30% were males and 18% are females.

Gender	Number	Percentage
Males	32	64%
Females	18	36%

Table 4:- Risk Factors.

Risk factors	Number	Percentage
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DM	7	14
HTN	20	40
DM & HTN	11	22
Dyslipidemia,CAD,CVA	18	36
Glaucoma	5	10
Homocystinemia	2	4
No comorbidities	8	16

Discussion:-

In this study, the incidence of BRVO was 60%, HRVO was 8%, and CRVO was 32%. The Blue Australian study by Mitchell et al. (BRVO-69.5%,HRVO-5.1%,CRVO-25%) is consistent with these findings. Hayreh claims that BRVO are three times more prevalent than CRVO.

- The majority of instances were seen in people between the ages of 61 and 70, demonstrating that age is a separate risk factor.
- According to Shaban, there are more men (64%) in this survey than women. a Mehany research in which men make up 66.66% and women make up 33.33%. Males' higher hematocrits are a contributing element in the rise in blood viscosity and development of RVO.
- Out of 50 patients, 22% had DM and HTN, 14% had only DM, and 40% had just HTN. These are the RVO-related comorbidities that are most common.
- 36% of RVO have dyslipidemia, CVA, or CAD. According to Dodson et al, 54% of people have hyperlipidemia. This study's 10% relationship with glaucoma is comparable to the study by Hirota et al., which found that 18% of glaucoma patients also had RVO. 4% of people had elevated homocysteine levels. The absence of comorbidities in 16% suggests that ageing is a separate risk factor.

Conclusions:-

The present study conducted at REH, Visakhapatnam to conclude:

- The incidence of RVO is more in the age group of 61-70years(48%)
- study shows male preponderance(64%)and females(36%)
- Incidence of CRVO 32%,HRVO 8%,BRVO 60%
- Greater risk factor association is with HTN,DM,Hyperlipidemia and glaucoma.
- Age is an independent risk factor

Figures-

Figure 1:- Types of RVO.

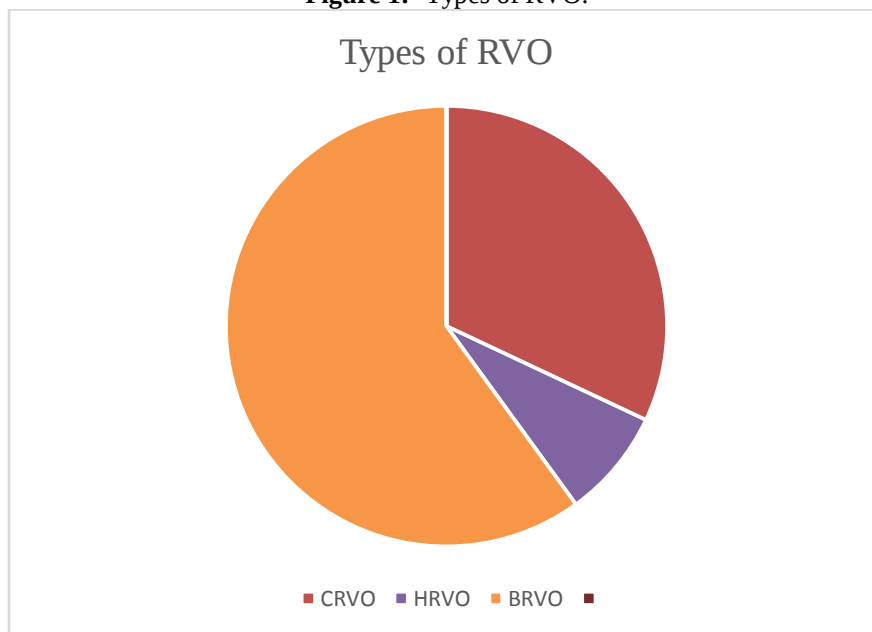


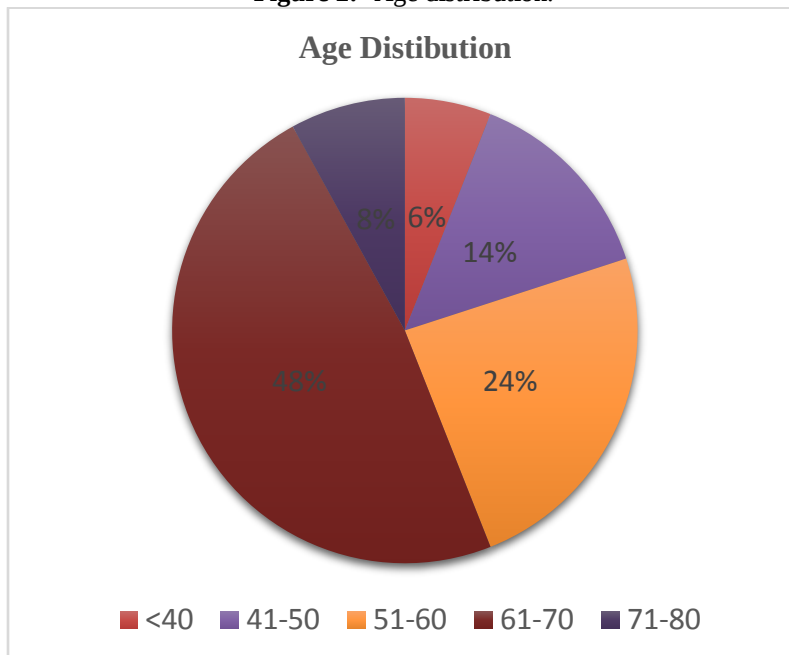
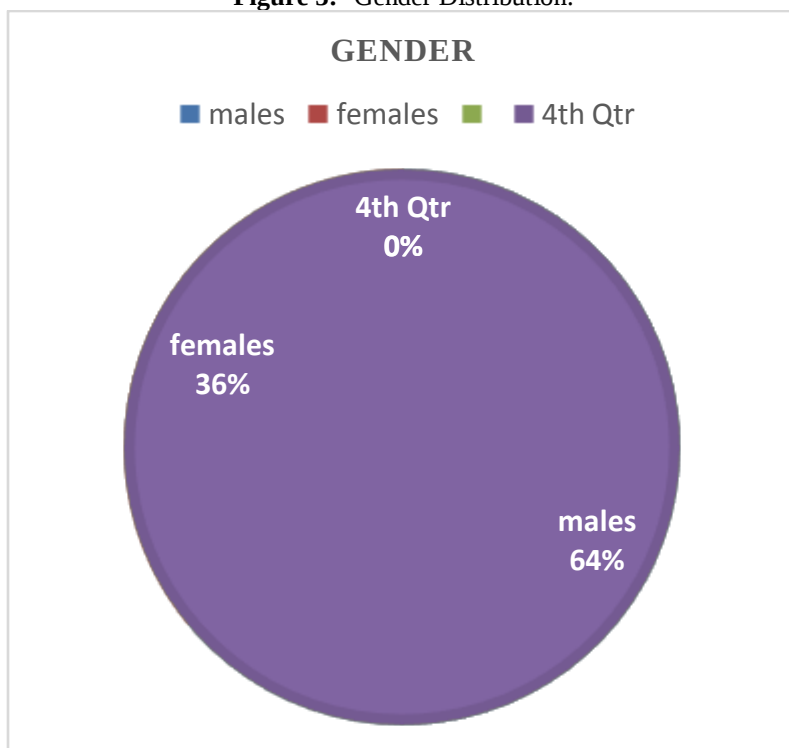
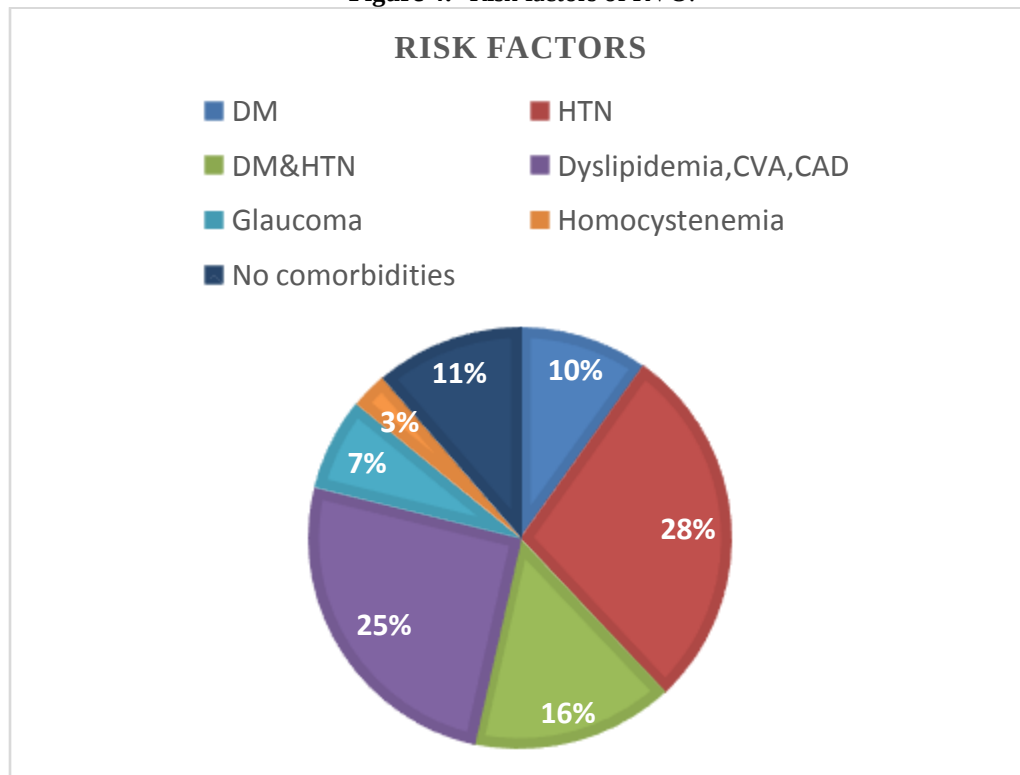
Figure 2:- Age distribution.**Figure 3:-** Gender Distribution.

Figure 4:- Risk factors of RVO.**References:-**

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