Central Serous Chorioretinopathy and Ocular Comorbidities

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Background

- Central Serous Chorioretinopathy (CSCR) is a the fourth most common retinopathy after diabetic retinopathy (DR), age-related macular degeneration (AMD) and branch retinal vein occlusion (BRVO). It primarily affects males between the ages of 28 to 68 years.[1,2]
- Risk factors for CSCR include age, sex, pregnancy, antibiotic use, alcohol, hypertension, obstructive sleep apnea, endogenous and exogenous steroids.[3,4]

Methods

- This study was to see the prevalence of ocular comorbidities in eyes with CSCR.
- Retrospective, multicentric cross-sectional observational study at
  - LV Prasad Eye Institute at Hyderabad, Telangana, India
  - Military Medical Academy at St. Petersburgh Russia
  - Narayana Nethralaya Eye Hospital at Bangalore, Karnataka, India
  - Nilima Sinha Medical College & Hospital, Rampur, Madhepura, Bihar, India
  - University of Pittsburgh at Pittsburgh, Pennsylvania, USA
- Data of patients with a diagnosis of CSCR from EMR from 01/2016 to 12/2020.
- Apart from querying the International Classification of Diseases (ICD) 9th revision coding of CSCR, all patient records underwent a thorough keyword search of “CSCR”, “CSR”, “Central serous chorioretinopathy” from the systemic history, retina evaluation, and plan of management notes. Patients were similarly classified as having another ocular comorbidity based on ICD-9 codes.
- Exclusion criteria included patients with missing information about vision, clinical findings, wrong code for CSCR and a final diagnosis that was not CSCR.

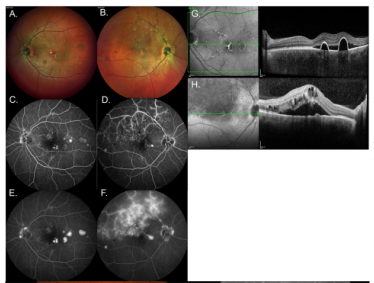

Figure 1: Images of a patient with central serous chorioretinopathy (CSCR) in both eyes and branch retinal vein occlusion in the left eye. Visual acuity of the patient was 0.30 and 0 logMAR in the right and left eye, respectively. A and B shows fundus photography of the right and left eye respectively. A shows pigmentary changes and multiple areas of atrophic change. B has an ischemic superior fundus with cotton-wool spots surrounding the superior arcades. C and D shows arteriovenous phase of fluorescein angiogram (FA) of the right and left eye, respectively. E and F shows late phase of FA of the right and left eye, respectively. C and E shows pooling of the dye in temporal fovea characteristic of CSCR and window defects. D and F shows pooling temporally and leakage from the superior vessels. G and H shows optical coherence tomography of the right and left eye, respectively. G shows sub-retinal fluid and two pigment epithelial detachments (PED). H shows cystoid macular edema and a large PED.

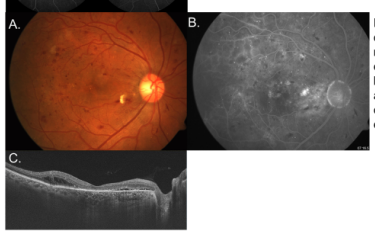

Figure 2: Images of a patient with a central serous chorioretinopathy (CSCR) and diabetic retinopathy (DR) in the right eye. A shows fundus photography with cystoid macular edema temporally, multiple microaneurysms and dot blot hemorrhage in the posterior pole. B shows fluorescein angiogram with focal area of petaloid leakage. C shows optical coherence of the same eye with intraretinal cystoid macular edema and subretinal fluid.

Results

Age (average ± standard deviation)		50.30± 13.09 years
		Number / Percent (%)
Sex	Male	465 / 80.31
	Female	114 / 19.69
Subject Eyes	Right	204 / 35.23
	Left	188 / 32.47
	Both	187 / 32.3
Baseline VA (average ± SD)	Right	0.55 ± 0.31 logMAR
	Left	0.59 ± 0.38 logMAR
	Subject eye	0.49 ± 0.36 logMAR
	Fellow eye	0.84 ± 0.28 logMAR

Medical History	Number	Percentage (%)
Arthritis	6	1.04
Anxiety	6	1.04
Asthma	7	1.21
BPH	1	0.17
Cancer	2	0.35
CAD	11	1.9
CHF	1	0.17
Cerebellar atrophy	1	0.17
Crohn’s Disease	1	0.17
Dyslipidemia	20	3.45
Diabetes Mellitus	202	34.89
Fibroid Uterus	1	0.17
HIV	1	0.17
Hypertension	86	14.85
Insomnia	2	0.35
Hypothyroidism	7	1.21
Multiple Sclerosis	1	0.17
Obesity	5	0.86
Obstructive Sleep Apnea	5	0.86
Osteoporosis	1	0.17
NAFLD	1	0.17
Parkinson Disease	2	0.35
Peptic Ulcer	1	0.17
Psoriasis	1	0.17
Seizure	1	0.17
SLE	8	1.38
Tuberculosis	1	0.17

Table 1: Baseline demographic data. Subject eyes had at least one other additional co-morbidity along with central serous choroidopathy (CSCR). For patients with presentation of CSCR in only one eye, the other eye was recorded as a fellow eye. For patients with presentation of CSCR in both eyes, both eyes were recorded as subject eyes. logMAR: logarithmic minimum angle of resolution; SD: standard deviation; BPH: Benign prostatic hyperplasia; CAD: coronary artery disease; CHF: congestive heart failure; NAFLD: Nonalcoholic fatty liver disease; SLE: systemic lupus erythematous

	Number in subject eyes	Percent of subject eyes	Number in fellow eyes	OR (95% CI)	p-value
Glaucoma					
Angle closure	4	1	0	4.6 (0.25 to 86.3)	0.30
Glaucoma suspect	4	1	1	2.05 (0.23 to 18.43)	0.51
Ocular Hypertension	3	0	1	1.54 (0.16 to 14.83)	0.71
Primary Open Angle Glaucoma	4	0	3	0.68 (0.15 to 3.06)	0.61
Pseudoexfoliation Syndrome	1	0	0	1.5 (0.06 to 37.85)	0.79
Optic Nerve					
Disc Edema - unspecified	3	0	2	0.77 (0.13 to 4.61)	0.77
Non-arteritic Ischemic Optic Neuropathy	7	1	2	1.8 (0.37 to 8.7)	0.46
Neuroretinitis	1	0	0	1.5 (0.06 to 37.85)	0.79
Optic atrophy	19	2	7	1.4 (0.58 to 3.36)	0.45
Optic nerve head drusen	2	0	0	2.6 (0.12 to 53.6)	0.54
Optic neuritis	2	0	0	2.6 (0.12 to 53.6)	0.54
Optic neuropathy – non-specific	1	0	0	1.5 (0.06 to 37.85)	0.79
Optic pallor	2	0	0	2.6 (0.12 to 53.6)	0.54
Optic pit	11	1	10	0.56 (0.23 to 1.32)	0.18
Papillitis	2	0	2	0.51 (0.07 to 3.64)	0.49
Retrobulbar neuritis	3	0	0	3.59 (0.19 to 69.84)	0.39
Findings					
Asteroid Hyalosis	6	1	0	6.71 (0.38 to 119.41)	0.19
CHRPE	5	1	1	2.57 (0.3 to 22.07)	0.37
Choroidal folds*	3	0	1	1.54 (0.16 to 14.83)	0.71
Disseminated choroiditis	3	0	2	0.77 (0.13 to 4.61)	0.77
Epiretinal Membrane*	15	2	11	0.69 (0.31 to 1.52)	0.36
Focal retinitis	1	0	0	1.5 (0.06 to 37.85)	0.79
Lattice degeneration	58	8	27	1.11 (0.69 to 1.78)	0.67
Macular hole*	3	0	0	3.59 (0.19 to 69.84)	0.39
Pseudo macular hole*	1	0	0	1.5 (0.06 to 37.85)	0.79
Nevus	13	2	0	14.06 (0.83 to 237.22)	0.06
Neuroretinitis	1	0	0	1.5 (0.06 to 37.85)	0.79
Pavingstone Degeneration	5	1	2	1.28 (0.25 to 6.63)	0.77
Peripheral Pigmentary changes	26	3	5	2.72 (1.04 to 7.14)	0.03
Peripheral retinal breaks					
Dialysis	1	0	0	1.5 (0.06 to 37.85)	0.79
Holes	4	1	2	1.02 (0.19 to 5.61)	0.98
Tears	4	1	4	0.51 (0.13 to 2.05)	0.33
Retinal perivasculitis	1	0	0	1.5 (0.06 to 37.85)	0.79
Retinoschisis	4	1	1	2.05 (0.23 to 18.43)	0.51
Rhegmatogeous Retinal Detachment	13	2	4	1.67 (0.54 to 5.17)	0.36
Vitreous Hemorrhage	8	1	3	1.37 (0.36 to 5.19)	0.64
Retinal Diseases					
Age related Macular Degeneration*	Exudative	9	1	3 1.54 (0.41 to 5.73)	0.51
	Non-exudative	26	3	12 1.11 (0.56 to 2.23)	0.76
Best’s disease		2	0	0 2.6 (0.12 to 53.6)	0.54
Branch Retinal Artery Occlusion*		1	0	0 1.5 (0.06 to 37.85)	0.79
Branch Retinal Vein Occlusion*		12	2	1 6.22 (0.81 to 48.03)	0.05
Central Areolar Dystrophy*		2	0	0 2.6 (0.12 to 53.6)	0.54
Central Retinal Artery Occlusion*		1	0	0 1.5 (0.06 to 37.85)	0.79
Central Retinal Vein Occlusion *		2	0	0 2.6 (0.12 to 53.6)	0.54
Coat’s disease		1	0	0 1.5 (0.06 to 37.85)	0.79
Cone dystrophy*		3	0	1 1.54 (0.16 to 14.83)	0.71
Diabetic Retinopathy*		139	18	64 1.14 (0.82 to 1.57)	0.44
Disseminated retinitis and retinochoroiditis*		3	0	2 0.77 (0.13 to 4.61)	0.77
Hypertensive Retinopathy*		18	2	8 1.16 (0.5 to 2.68)	0.74
Ischemic Vasculopathy		2	0	0 2.6 (0.12 to 53.6)	0.54
Idiopathic polypoidal choroidal vasculopathy*		10	1	2 2.58 (0.56 to 11.83)	0.21
Macular telangiectasia*		10	1	5 1.02 (0.35 to 3.02)	0.97
Melanoma		1	0	0 1.5 (0.06 to 37.85)	0.79
Multifocal choroiditis*		5	1	1 2.57 (0.3 to 22.07)	0.37
Myopic choroid neovascular membrane*		3	0	0 3.59 (0.19 to 69.84)	0.39
Punctate Inner Choroiditis*		3	0	1 1.54 (0.16 to 14.83)	0.71
Retinitis Pigmentosa*		2	0	2 0.51 (0.07 to 3.64)	0.49
Rod Dystrophy*		1	0	1 0.51 (0.03 to 8.19)	0.63
Serpiginous choroiditis*		2	0	1 1.02 (0.09 to 11.32)	0.98
Stargardt’s disease*		4	1	0 4.6 (0.25 to 86.3)	0.30
Sympathetic Ophthalmoplegia*		1	0	1 0.51 (0.03 to 8.19)	0.63
Toxic Retinopathy *		2	0	2 0.51 (0.07 to 3.64)	0.49
Toxoplasma		1	0	0 1.5 (0.06 to 37.85)	0.79
Tuberculosis granuloma		3	0	0 3.59 (0.19 to 69.84)	0.39
Vasculitis – non-specific		4	1	2 1.02 (0.19 to 5.61)	0.98
Vitelliform macular dystrophy*		10	1	1 5.17 (0.66 to 40.55)	0.08
Vogt-Koyanagi-Harada disease*		12	2	1 6.22 (0.81 to 48.03)	0.05
Other Disease					
Cavernous Fistula		0	0	1 0	0.16
Coloboma*		3	0	2 0.77 (0.13 to 4.61)	0.77
Posterior Scleritis*		1	0	1 0.51 (0.03 to 8.19)	0.63
Uveitis	Anterior	1	0	0 1.5 (0.06 to 37.85)	0.79
	Intermediate	7	1	3 1.2 (0.31 to 4.65)	0.80
	Non-specific	3	1	2 0.77 (0.13 to 4.61)	0.77
	Panuveitis	3	0	3 0.51 (0.1 to 2.54)	0.40

Table 2: Prevalence of ocular comorbidity in eyes. Subject eyes had at least one other additional co-morbidity along with central serous choroidopathy (CSCR). For patients with presentation of CSCR in only one eye, the other eye was recorded as a fellow eye. For patients with presentation of CSCR in both eyes, both eyes were recorded as subject eyes. The asterisk (*) denotes ocular comorbidities that were denoted as macular diseases in this study. An unpaired two-tailed student t-test was used to calculate the p-value of each comorbidity. A value of < 0.05 was considered statistically significant.

- Of 9157 patients, 579 (6.32%) patients and 766 eyes were included.
- Macular ocular comorbidities had average VA of 0.50 logMAR. Most frequent was DR – (18.14%), non-exudative AMD (3.39%) and hypertensive retinopathy (2.35%). Non-macular ocular had an average VA of 0.55 logMAR. Most prevalent was optic atrophy – 2.48%, rhegmatogenous retinal detachment (1.70%) and optic disc pit – (1.44%).
- Regarding odds ratio (OR), peripheral pigmentary changes (OR 2.72; p = 0.03) was significant and there was a trend towards significance for BRVO (OR 2.6; p = 0.05) and Vogt-Koyanagi-Harada disease (OR 6.22; p = 0.05).

Discussion

- Knowing prevalence of comorbid ocular disease in eyes with CSCR can be important in both timely diagnosis appropriate treatment in these patients.

References

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Background & Methods

- Central Serous Chorioretinopathy (CSCR) is a the fourth most common retinopathy and primarily affects males between the ages of 28 to 68 years.[1,2] Risk factors for CSCR include age, sex, pregnancy, antibiotic use, alcohol, hypertension, obstructive sleep apnea, endogenous and exogenous steroids.[3]
- Often CSCR can present with other diseases. One example is seen in Figure 1 below. Large-scale studies that provide at times a mixed picture regarding potential risk factors to CSCR.[4]
- The purpose of this study was to examine the prevalence of other ocular comorbidities in eyes with CSCR.
- Retrospective, multicentric cross-sectional observational study from 5 centers in USA, India and Russia.
- Data of all patients with an ocular diagnosis of CSCR from the electronic medical records from January 2016 to December 2020.
- Exclusion criteria included patients with missing information about vision, clinical findings, wrong code for CSCR and a final diagnosis that was not CSCR.

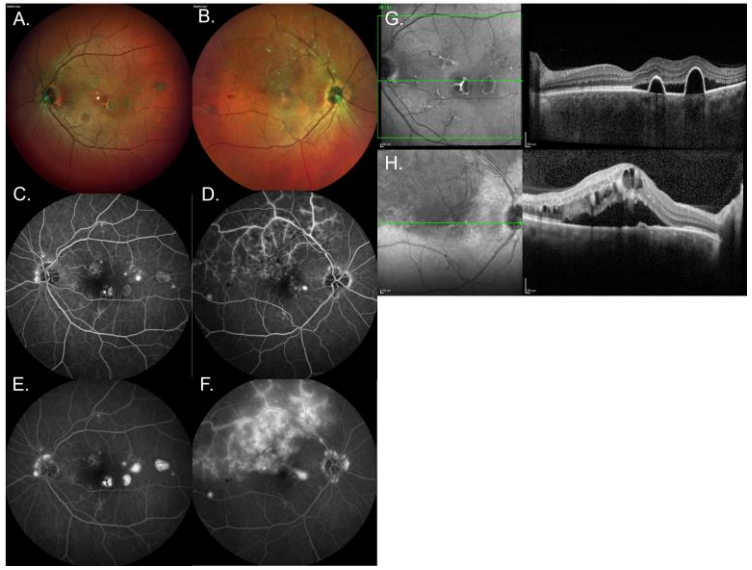

Figure 1: A patient with central serous chorioretinopathy (CSCR) in both eyes and branch retinal vein occlusion in the left eye. A shows pigmentary changes and multiple areas of atrophic change. B has an ischemic superior fundus with cotton-wool spots surrounding the superior arcades. C and D shows arteriovenous phase of fluorescein angiogram (FA) of the right and left eye, respectively. E and F shows late phase of FA of the right and left eye, respectively. C and E shows pooling of the dye in temporal fovea characteristic of CSCR and window defects. D and F shows pooling temporally and leakage from the superior vessels. G and H shows optical coherence tomography of the right and left eye, respectively. G shows sub-retinal fluid and two pigment epithelial detachments (PED). H shows cystoid macular edema and a large PED.

Results: Table 1

Age (average ± standard deviation)		50.30± 13.09 years	
		Number	Percentage (%)
Sex	Male	465	80.31
	Female	114	19.69
Subject Eyes	Right	204	35.23
	Left	188	32.47
	Both	187	32.3
Baseline VA (average ± standard deviation)	Right	0.55 ± 0.31 logMAR	
	Left	0.59 ± 0.38 logMAR	
	Subject eye	0.49 ± 0.36 logMAR	
	Fellow eye	0.84 ± 0.28 logMAR	
Medical History		Number	Percentage (%)
	Arthritis	6	1.04
	Anxiety	6	1.04
	Asthma	7	1.21
	Benign Prostatic Hyperplasia	1	0.17
	Cancer	2	0.35
	Coronary Artery Disease	11	1.9
	Cardiac Heart Failure	1	0.17
	Crohn's Disease	1	0.17
	Diffuse cerebral atrophy	1	0.17
	Dyslipidemia	20	3.45
	Diabetes Mellitus	202	34.89
	Fibroid Uterus	1	0.17
	HIV	1	0.17
	Hypertension	86	14.85
	Insomnia	2	0.35
	Hypothyroidism	7	1.21
	Multiple Sclerosis	1	0.17
	Obesity	5	0.86
	Obstructive Sleep Apnea	5	0.86
	Osteoporosis	1	0.17
	Non-alcohol Fatty Liver Disease	1	0.17
	Parkinson Disease	2	0.35
	Peptic Ulcer	1	0.17
	Psoriasis	1	0.17
	Seizure	1	0.17
	Systemic Lupus Erythematosus	8	1.38
	Tuberculosis	1	0.17

Table 1: baseline demographic data of patients in the study. Subject eyes had at least one other additional co-morbidity along with central serous choroidopathy (CSCR). For patients with presentation of CSCR in only one eye, the other eye was recorded as a fellow eye. For patients with presentation of CSCR in both eyes, both eyes were recorded as subject eyes. logMAR: logarithmic minimum angle of resolution

Results: Table 2

	Number in subject eyes	Percentage in subject eyes	Number in fellow eyes	OR (95% CI)	p-value
Glaucoma					
Angle closure	4	1	0	4.6 (0.25 to 86.3)	0.30
Glaucoma suspect	4	1	1	2.05 (0.23 to 18.43)	0.51
Ocular Hypertension	3	0	1	1.54 (0.16 to 14.83)	0.71
Primary Open Angle Glaucoma	4	0	3	0.68 (0.15 to 3.06)	0.61
Pseudoexfoliation Syndrome	1	0	0	1.5 (0.06 to 37.85)	0.79
Optic Nerve					
Disc Edema - unspecified	3	0	2	0.77 (0.13 to 4.61)	0.77
Non-arteritic Ischemic Optic Neuropathy	7	1	2	1.8 (0.37 to 8.7)	0.46
Neuroretinitis	1	0	0	1.5 (0.06 to 37.85)	0.79
Optic atrophy	19	2	7	1.4 (0.58 to 3.36)	0.45
Optic nerve head drusen	2	0	0	2.6 (0.12 to 53.6)	0.54
Optic neuritis	2	0	0	2.6 (0.12 to 53.6)	0.54
Optic neuropathy – non-specific	1	0	0	1.5 (0.06 to 37.85)	0.79
Optic pallor	2	0	0	2.6 (0.12 to 53.6)	0.54
Optic pit	11	1	10	0.56 (0.23 to 1.32)	0.18
Papillitis	2	0	2	0.51 (0.07 to 3.64)	0.49
Retrobulbar neuritis	3	0	0	3.59 (0.19 to 69.84)	0.39
Findings					
Asteroid Hyalosis	6	1	0	6.71 (0.38 to 119.41)	0.19
CHRPE	5	1	1	2.57 (0.3 to 22.07)	0.37
Choroidal folds*	3	0	1	1.54 (0.16 to 14.83)	0.71
Disseminated choroiditis	3	0	2	0.77 (0.13 to 4.61)	0.77
Epiretinal Membrane*	15	2	11	0.69 (0.31 to 1.52)	0.36
Focal retinitis	1	0	0	1.5 (0.06 to 37.85)	0.79
Lattice degeneration	58	8	27	1.11 (0.69 to 1.78)	0.67
Macular hole*	3	0	0	3.59 (0.19 to 69.84)	0.39
Pseudo macular hole*	1	0	0	1.5 (0.06 to 37.85)	0.79
Nevus	13	2	0	14.06 (0.83 to 237.22)	0.06
Neuroretinitis	1	0	0	1.5 (0.06 to 37.85)	0.79
Pavingstone Degeneration	5	1	2	1.28 (0.25 to 6.63)	0.77
Peripheral Pigmentary changes	26	3	5	**2.72 (1.04 to 7.14)**	**0.03**
Peripheral retinal breaks					
Dialysis	1	0	0	1.5 (0.06 to 37.85)	0.79
Holes	4	1	2	1.02 (0.19 to 5.61)	0.98
Tears	4	1	4	0.51 (0.13 to 2.05)	0.33
Retinal perivasculitis	1	0	0	1.5 (0.06 to 37.85)	0.79
Retinoschisis	4	1	1	2.05 (0.23 to 18.43)	0.51
Rhegmatogeous Retinal Detachment	13	2	4	1.67 (0.54 to 5.17)	0.36
Vitreous Hemorrhage	8	1	3	1.37 (0.36 to 5.19)	0.64
Retinal Diseases					
Age related Macular Degeneration*	Exudative	9	1	3	1.54 (0.41 to 5.73)	0.51
	Non-exudative	26	3	12	1.11 (0.56 to 2.23)	0.76
Best's disease		2	0	0	2.6 (0.12 to 53.6)	0.54
Branch Retinal Artery Occlusion*		1	0	0	1.5 (0.06 to 37.85)	0.79
Branch Retinal Vein Occlusion*		12	2	1	**6.22 (0.81 to 48.03)**	**0.05**

Results: Table 2 continued

Central Areolar Dystrophy*	2	0	0	2.6 (0.12 to 53.6)	0.54
Central Retinal Artery Occlusion*	1	0	0	1.5 (0.06 to 37.85)	0.79
Central Retinal Vein Occlusion *	2	0	0	2.6 (0.12 to 53.6)	0.54
Coat's disease	1	0	0	1.5 (0.06 to 37.85)	0.79
Cone dystrophy*	3	0	1	1.54 (0.16 to 14.83)	0.71
Diabetic Retinopathy*	139	18	64	1.14 (0.82 to 1.57)	0.44
Disseminated retinitis and retinochoroiditis*	3	0	2	0.77 (0.13 to 4.61)	0.77
Hypertensive Retinopathy*	18	2	8	1.16 (0.5 to 2.68)	0.74
Ischemic Vasculopathy	2	0	0	2.6 (0.12 to 53.6)	0.54
Idiopathic polypoidal choroidal vasculopathy*	10	1	2	2.58 (0.56 to 11.83)	0.21
Macular telangiectasia*	10	1	5	1.02 (0.35 to 3.02)	0.97
Melanoma	1	0	0	1.5 (0.06 to 37.85)	0.79
Multifocal choroiditis*	5	1	1	2.57 (0.3 to 22.07)	0.37
Myopic choroid neovascular membrane*	3	0	0	3.59 (0.19 to 69.84)	0.39
Punctate Inner Choroiditis*	3	0	1	1.54 (0.16 to 14.83)	0.71
Retinitis Pigmentosa*	2	0	2	0.51 (0.07 to 3.64)	0.49
Rod Dystrophy*	1	0	1	0.51 (0.03 to 8.19)	0.63
Serpiginous choroiditis*	2	0	1	1.02 (0.09 to 11.32)	0.98
Stargardt's disease*	4	1	0	4.6 (0.25 to 86.3)	0.30
Sympathetic Ophthalmoplegia*	1	0	1	0.51 (0.03 to 8.19)	0.63
Toxic Retinopathy *	2	0	2	0.51 (0.07 to 3.64)	0.49
Toxoplasma	1	0	0	1.5 (0.06 to 37.85)	0.79
Tuberculosis granuloma	3	0	0	3.59 (0.19 to 69.84)	0.39
Vasculitis – non-specific	4	1	2	1.02 (0.19 to 5.61)	0.98
Vitelliform macular dystrophy*	10	1	1	5.17 (0.66 to 40.55)	0.08
Vogt-Koyanagi-Harada disease*	12	2	1	**6.22 (0.81 to 48.03)**	**0.05**
Other Disease					
Cavernous Fistula	0	0	1	0	0.16
Coloboma*	3	0	2	0.77 (0.13 to 4.61)	0.77
Posterior Scleritis*	1	0	1	0.51 (0.03 to 8.19)	0.63
Uveitis – Anterior	1	0	0	1.5 (0.06 to 37.85)	0.79
Uveitis – Intermediate	7	1	3	1.2 (0.31 to 4.65)	0.80
Uveitis – Non-specific	3	1	2	0.77 (0.13 to 4.61)	0.77
Uveitis – Panuveitis	3	0	3	0.51 (0.1 to 2.54)	0.40

Table 2: Prevalence of ocular comorbidity in eyes. Subject eyes had at least one other additional co-morbidity along with central serous choroidopathy (CSCR). For patients with presentation of CSCR in only one eye, the other eye was recorded as a fellow eye. For patients with presentation of CSCR in both eyes, both eyes were recorded as subject eyes. The asterisk (*) denotes ocular comorbidities that were denoted as macular diseases in this study. CHRPE: Congenital hypertrophy of the retinal pigment epithelium

Results & Conclusion

- 9157 patients from five study centers with CSCR
  - 579 (6.32%) patients and 766 eyes were included in the study.
- The average BCVA of eyes in Table 2 with
  - coexisting macular diseases was 0.50 logMAR
  - coexisting peripheral disease was 0.55 logMAR
- The most prevalent coexisting disease that were
  - macular diseases
    - DR - 18.14% (BCVA 0.49 logMAR)
    - non-exudative age-related macular degeneration – 3.39% (BCVA 0.75 logMAR)
    - hypertensive retinopathy – 2.35% (BCVA 0.74 logMAR)
  - non-macular disease was
    - optic atrophy – 2.48% (BCVA 0.30 logMAR)
    - rhegmatogenous retinal detachment – 1.70% (BCVA 0.41 logMAR)
    - optic disc pit – 1.44 (BCVA 0.45 logMAR)
- Regarding odds ratio (OR), there were increased odds of having CSCR and peripheral pigmentary changes (OR 2.72; $p = 0.03$). There was a trend towards significance for branch retinal vein occlusion (OR 2.6; $p = 0.05$) and Vogt-Koyanagi-Harada disease (OR 6.22; $p = 0.05$).
- In conclusion, our large database studies report 6.32% patients having coexistent ocular condition with CSCR, most common being DR. Understanding common ocular association helps clinicians to make treatment strategies and visual prognosis.

Works Cited

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