NON NECROTOZING RETINITIS FOLLOWING VIRAL FEVER: A CASE SERIES

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Viral retinitis is considered as an important sight-threatening infectious disease of the retina which can occur in both immunocompetent and immunocompromized individuals.[1] Viral retinopathies can be necrotizing/non-necrotizing. Viral retinopathies include acute retinal necrosis syndrome, progressive outer retinal necrosis syndrome & CMV retinitis. Non-necrotizing retinopathies/NNHR has been reported after Chikungunya[2] & herpes infection[3,4]. Steroids and antivirals can be used for treatment of Viral retinitis. But role of Antiviral is uncertain[2]. In an effort to treat cases of non-necrotizing retinitis with suspected viral etiology, we tried the use of Steroids with or without antivirals & assess the improvement in terms of resolution of retinitis & visual recovery.

Aim

To report 6 cases of suspected Viral Retinitis presented at a Tertiary eye care centre.

Study Design

New cases & records of Retinitis cases treated at the Retina Clinic were reviewed. 10 eyes of 6 patients of non necrotizing Retinitis with the history of suspected viral fever were studied. All patients were either treated for viral fever or gave history suggestive of viral fever. History of occupation, complaints, any trauma/ infection, any treatment, any systemic disorder were noted from records. CBC, serum creatinine and blood urea, Mantoux test, chest x-ray and VDRL tests were done & findings are recorded along with detailed slit lamp examination & indirect ophthalmoscopy. Findings of Fundus Fluorescein Angiography and Optical Coherence Tomography were also recorded. Diagnosis of Viral Retinitis was made on the basis of history & clinical features. 2 cases were given Acyclovir along with Steroid & other cases were received only Steroid in tapering doses.

Results

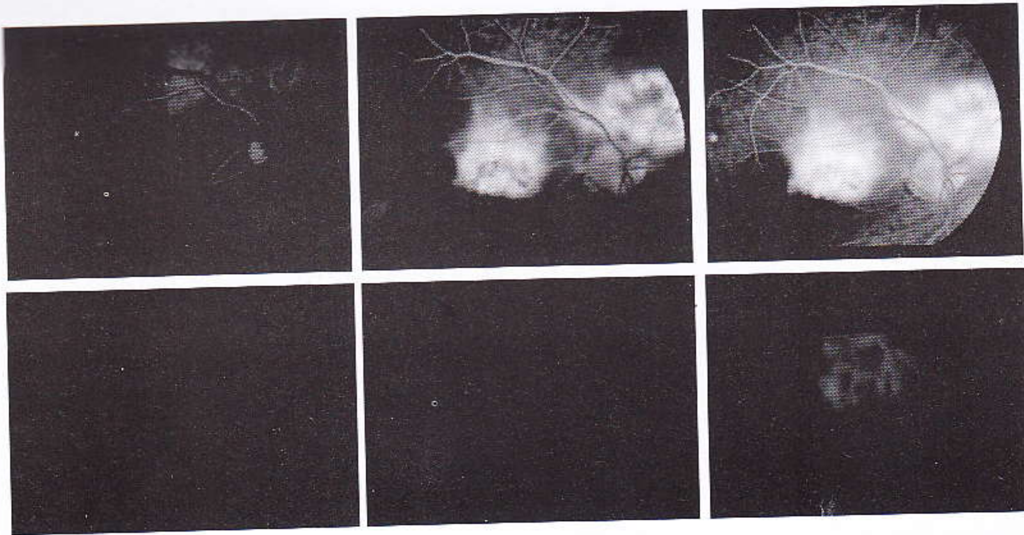
- Females patients: 2
- Male patients: 4
- Age range of patients: 14 - 45 years
- Retinitis: Bilateral in 4 cases (case 2,3,5,6) & Unilateral in 2 cases (case 1,4).

Fundus examination – On fundus exam following main features were found-

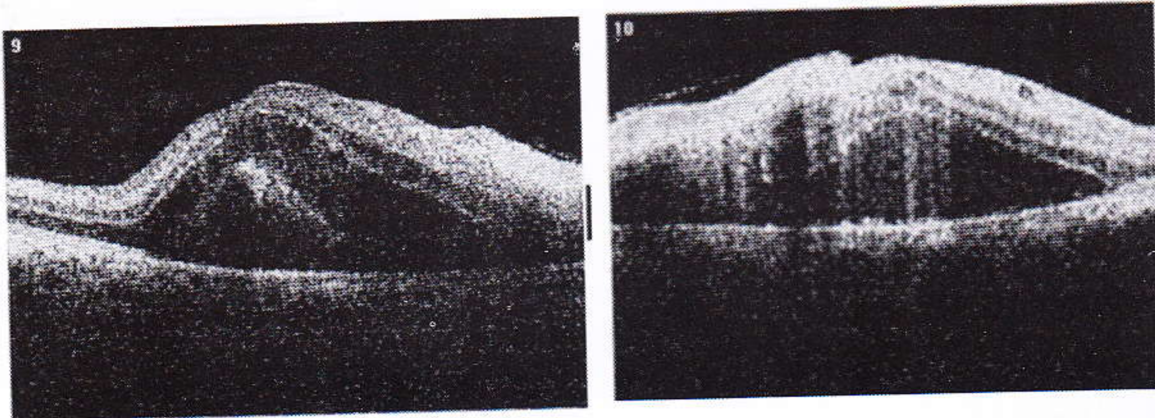
- AC cells, Vitritis
- Area of confluent retinal opacity suggestive of retinitis
- Hard Exudates (H. Ex), Cotton Wool Spots (CWS)
- Hemorrhages
- Exudative mac. detachment (EMD)
- Macular Oedema

FFA - early hypofluorescence and late hyperfluorescence seen.

Consultant - Vitreo Retina, ROP,& Uveitis, Contacare Eye Hospital, Kanpur.



- *OCT* - Increased reflectivity in the nerve fiber layer zone corresponding to the areas of retinitis with aftershadowing was observed.
- Fluid-filled spaces in the outer retina (case 3,4,5) with subfoveal serous detachment (case 1,2,3,4,5) also present.



- Four out of six patients- received only systemic Steroids (cases 1,5,6 initially started with megadose). Two cases (case 2,3) - received a combination of systemic Acyclovir and oral Steroids. All patients had improvement in visual acuity as well as resolution of retinitis with treatment. Two Pts are still under F/U with improvement.

<u>*Results – Case 1*</u> -

Age - 45y,F

Duration – 1 mth

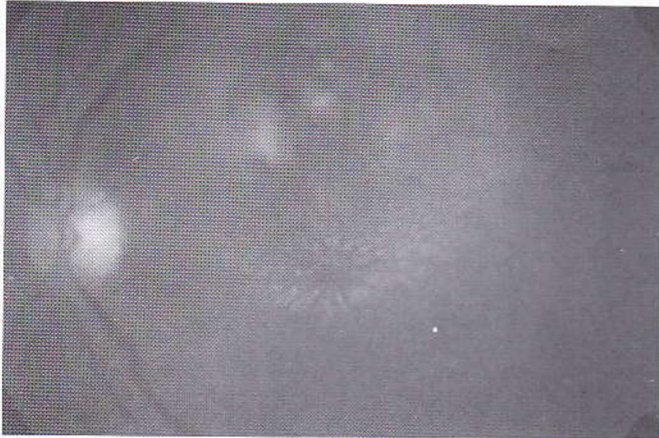
Involved eye - LE

Initial VA – 2 FFC

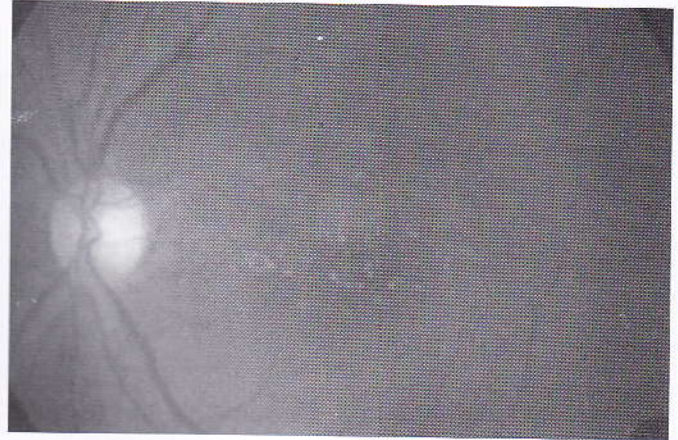
Final VA – 6/6 P

Reaction – Vit. +

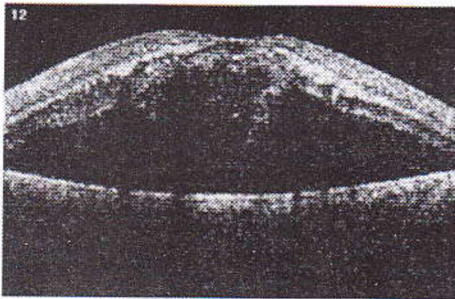
H/O fever



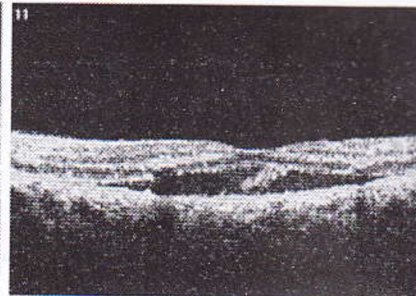
Initial – Pre Tt



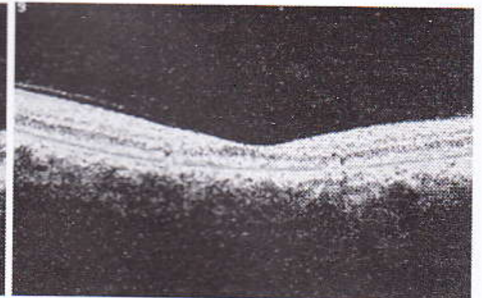
After 1& ½ mth – **Post Tt**



Initial – Pre Tt



After 2 mths



After 2 &1/2 mths– Post Tt

Results – Case 5 -

Age - 14 y, M

Duration – 17 days

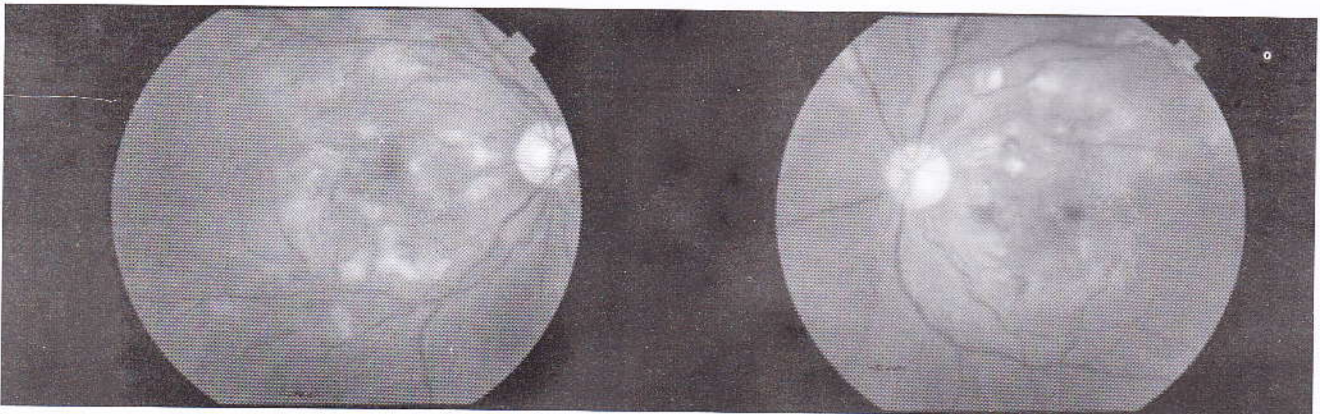
Involved eye - BE

Initial VA – 2 FFC,2 FFC

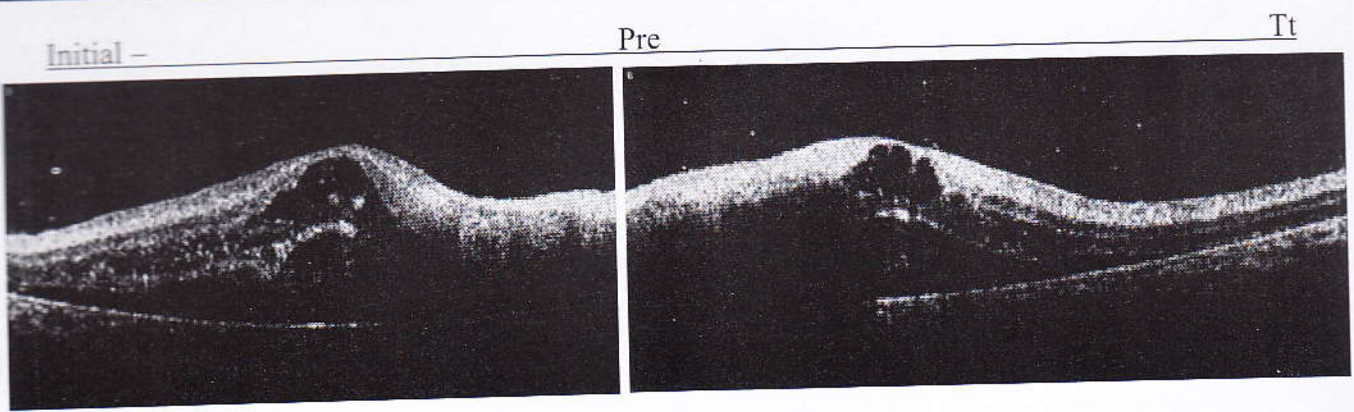
Final VA – 6/24, 6/12

H/O fever

Initial – Pre Tt



After 1 & ½ mth - Post Tt



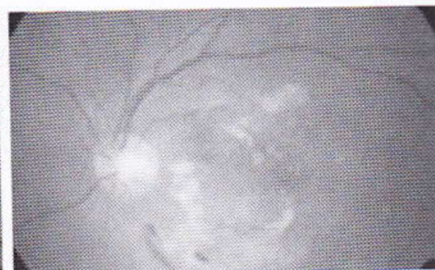
Case Report – Summary

Case	Age(Yr)/Sex	Complaints	History & Systemic Symptoms	Interval between Fever and Eye Symptoms	Vn RE	Vn LE	Ocular Findings	Clinical Diagnosis	Tt & Follow-up	Final Vn RE	Final Vn LE	Final Result
1	45y, F	DOV LE 2 wk,	Fever and skin rash 1& 1/2mth back, Tt for viral fever	1 mth	6/6	2 FFC	Cells occ, Vit+, CWS, H Ex, Retinitis,ME, EMD	LE Viral Retinitis	**IV Dexa** 100 mg in 150 ml of 5% dextrose x 3 d(Mega dose),F/B oral steroids (tapering dose over 3 mth),1 wk F/U	6/6	6/6 P	Resolved
2	45y, M	DOV BE 25 days	Fever 3 mth back,jt pain. Tt for viral fever	2 mth 5 days	5/60	4/60	C+,Vit+,CWS, H Ex, Hgs, Retinitis,EMD	BE Viral Retinitis	**T. Acyclovir** 800 mg 5t/d x 1wk then tapering doses, oral steroids (tapering dose over 2 mth), 1-2 wk F/U	6/6	6/9	Resolved

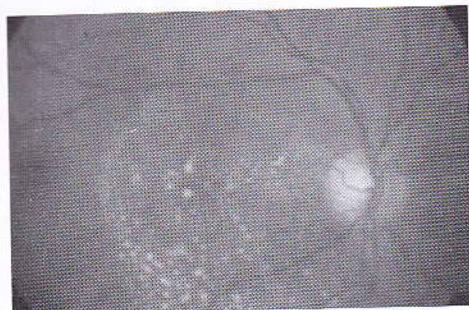
3	38y, M	DOV BE 17days	Fever 1 mth & 25 days Back, jt pain, skin lesions	1 mth & 8 days	4/60	1/60	Vit+, CWS, H Ex,Retinitis, EMD, ME	BE Viral Retinitis	**T. Acyclovir** 800 mg 5t/d x 1wk then tapering doses, oral steroids (tapering dose over 2 mth), 1 -2 wk F/U	6/6 P	6/12	Resolved
4	45y, M	DOV RE 1 mth	Fever 2 mth Back, skin rash, jt pain	1 mth	1/60	6/6	C1/2+, CWS, H Ex,Retinitis, EMD, ME ,Hgs	RE Viral Retinitis	oral steroids (tapering dose over 2 mths), 1 wk F/U	6/60 after 1 wk	6/6	Resolving
5	14 y, M	DOV **BE** 9 days	Fever 26 days Back,skin lesions	17 days	2 FFC	2 FFC	Vitritis 2+, CWsS, Hgs, HEx, Retinitis, PSC	BE Viral Retinitis	**IV Dexa** 100 mg in 150 ml of 5% dextrose x 3 d,F/B oral steroids (tapering dose over 3 mth),1-3 wk F/U	6/24 (RPE changes)	6/12	Resolved
6	25y, F	DOV **BE** 17 days	Fever 1& 1/2mth back, Tt for viral fever	28 days	6/36	2 FFC	Vitritis 1+, CWS, Hgs, Hex,	BE Viral Retinitis	**IV Dexa** 150 mg in 150 ml of 5% dextrose x 3 d,F/B oral steroids (tapering dose over 3 mth),1-3 wk F/U.	6/24 after 2 wk	4/60	Resolving

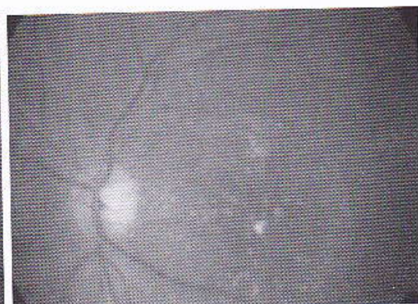
Case - 1

Case - 2

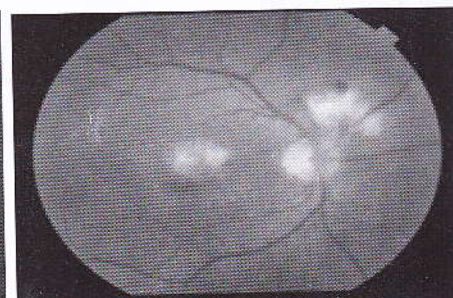


Case – 3

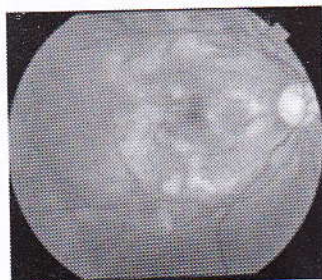


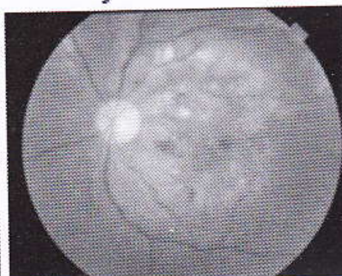


Case - 4

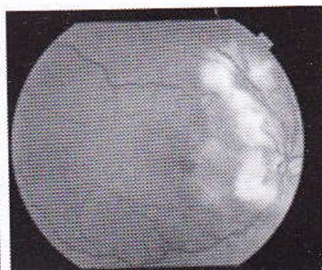


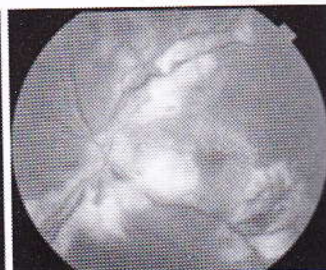
Case - 5





Case - 6





Discussion –

All patients had clinical features of Viral fever - with headache, nausea, vomiting, occasional rigors with chills, joint pains and maculopapular skin rashes in few cases. Patients presented at a range of 17 days-9 wks intervals after onset of fever. History, Associated systemic manifestations & ocular changes were favourable to make a diagnosis of viral fever associated retinitis in our cases. Retinitis responded well with both systemic acyclovir and corticosteroids with gradual resolution over 6 to 8 weeks period.

Not enough evidence in the literature to support the use & duration [3] of antiviral in non necrotizing viral retinitis cases, we used it in our 2 initial cases presented with posterior pole involvement in both eyes affecting vision. In a study by P Mahendradas et al [2] they reported similar kind of retinitis in chikungunya pts & treated successfully with systemic acyclovir and steroids.

Bodaghi B et al [3] also reported Nonnecrotizing retinopathies in herpetic patients & successfully treated with systemic acyclovir and steroids.

Although all cases showed resolution of retinitis with preservation of Vision, role of antiviral is still not clear, we feel that further studies are required to confirm the importance of antiviral in cases of non necrotizing viral retinitis.

Conclusion -

Visual recovery in this series of patients with suspected viral aetiology non necrotizing retinitis was good. The outcome did not differ whether patients were treated with or without Acyclovir. Nonnecrotizing retinitis is uncommon & relatively newer therefore Ophthalmologists need to be aware of these features.

References

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2. Padmamalini Mahendradas et al. Ocular Manifestations Associated with Chikungunya. Ophthalmology 2008;115:287–291
3. Bodaghi B, Rozenberg F, Cassoux N, Fardeau C, LeHoang P.Nonnecrotizing herpetic retinopathies masquerading as severe posterior uveitis.Ophthalmology. 2003 Sep; 110(9):1737-43.
4. Guex-Crosier Y, Rochat C, Herbort CP. Necrotizing herpetic retinopathies. A spectrum of herpes virus-induced diseases determined by the immune state of the host. Ocul Immunol Inflamm 1997;5:259–65.