

Visual outcome of vitrectomy in Seasonal Hyperacute Pan Uveitis

Byanju, RN¹, Pradhan, E², Rai, SC³, Sapkota, YD⁴

¹Vitreoretinal Surgeon Nepal Eye Hospital (NEH), Kathmandu, ²Lecturer, Kathmandu Medical College, Kathmandu
³Ophthalmologist, Mechi Eye Care Centre, Birtamode, ⁴Outreach programme coordinator, HEH.

Abstract

Introduction: Seasonal Hyper Acute Panuveitis (SHAPU) is a sight threatening condition often affecting children. Its management as yet is a challenge in ophthalmic practice. Most of the eyes even after treatment end up in pthisis bulbi. **Materials and methods:** A retrospective hospital based analysis of 18 patients with SHAPU managed with vitrectomy at Himalaya Eye Hospital (HEH) Pokhara over a period of two years was carried out. **Results:** Out of 18 patients 10 were males. Majority of them were bellow the age of 15 years. Best corrected visual acuity (BCVA) at presentation was less then 3/60 in 72% of them. BCVA was better then 6/60 in 7 (50%) out of 14 patients, who underwent vitrectomy. **Conclusion:** Vitrectomy is a useful procedure in management of SHAPU.

Key words: Seasonal Hyper Acute Panuveitis, Visual acuity, Vitrectomy.

Seasonal Hyper Acute Panuveitis (SHAPU) is still a curious entity, first noted by Malla, OK¹ as endophthalmitis probably caused by Tussok Moth in 1978. Later it was studied in detail by Upadhyay MP et al² and the disease was named Seasonal Hyper Acute Panuveitis (SHAPU).

The disease begins very acutely with a red eye and leucocoria, with little pain. There is fibrinoid reaction in anterior chamber and often there is also a hypopyon. This is followed by hypotony and very sudden drop in vision. Examination of the posterior segment is obscured by leucocoria³. Anterior chamber ultimately becomes flat and the eye becomes pthisical.

Therapy to date is often unsuccessful⁵ and experience with early vitrectomy has shown some success in restoring useful vision and preserving globe.

This study aims to find out the visual results of early vitrectomy in clinically confirmed cases of SHAPU.

Materials and methods

The records of all the patients with SHAPU who attended Himalaya Eye Hospital (HEH) Pokhara were analysed. Only the cases with clinical picture of SHAPU were included. All patients underwent History, Visual acuity, Slit-lamp Biomicroscopy,

Indirect Ophthalmoscopy and Digital or Applanation Tonometry.

Three port pars plana vitrectomy was done within 6 hours, in all cases except four patients who refused surgery. Those patients were treated medically with systemic, posterior subtenon and topical steroids along with atropine. Two patients also had lensectomy in addition to vitrectomy because of lens opacification. Subconjunctival Dexamethasone and Gentamycine were given in all cases on conclusion of surgery.

All patients were given topical Dexamethasone and Chloramphenicol hourly in early post operative period and tapered gradually according to response.

Results

Age and sex distribution of patients:

Out of 18 patients 10 were males. Majority of them were bellow the age of 15 years (n=15). 1 patient was aged between 26 and 30 years and the two between 41 and 45 years.

Correspondence

R. N. Byanju,
(Nepal Eye Hospital, Tripureshwor, Kathmandu Nepal.)
E-mail: drbyanju@hotmail.com

Table 1. Age and sex distribution

Age (yrs)	F	M
0 - 5	1	6
6 - 10	2	2
11 - 15	4	0
16 - 20	0	0
21 - 25	0	0
26 - 30	0	1
31 - 35	0	0
36 - 40	0	0
41 - 45	1	1
46 - 50	0	0
Total	8	10

Best Corrected Visual Acuity (BCVA) at presentation:

77.6 % (n=14) of the patients had visual acuity less than 6/60 on presentation. 22 % (n=4) had visual acuity 6/60 or better.

Table 2. Visual acuity at presentation

BCVA at Presentation		%
6/18 or better	2	11
<6/18 - 6/60	2	11
<6/60 - 3/60	1	5.6
<3/60 - 1/60	8	44
HM	2	11
PL	3	17
Total	18	100

Duration of follow up (months).

Majority of patients came for follow up till 7 months (38.9%) (n=7). The minimum follow up period was 2 months and maximum 14 months.

Table 3. Duration of follow up

Duration of Follow up (months)	No	%
3	2	11
4	1	5.6
5	5	27.8
7	7	38.9
14	3	16.7

Mode of management and final visual acuity.

Out of 18 cases 14 (78%) underwent surgical treatment and 4 (22%) were treated medically. Record of final visual acuity of 4 patients who underwent surgical treatment and 1 patient who was treated medically were not available. 50 %

(n=7) of the patients who underwent surgical treatment had visual acuity better than 6/60. 2 patients had vision less than 3/60 and 1 had Hand motion (HM) only. Patients with vision less than 3/60 had epimacular membrane and patient with HM had inferior tractional Retinal Detachment involving macula.

Table 4. Management versus final follow up of visual acuity.

Management	Visual acuity at last follow up						
	6/18 or better	<6/18 - 6/60	<6/60 - 3/60	<3/60 - 1/60	HM	PL	Visual acuity not known
Core Vitrectomy	4	2	0	2	1		3
Lensectomy + Vitrectomy	0	1	0	0	0	0	1
Medical Treatment	2			1			1

Discussion

Malla, OK¹ in Dec. 1978 reported series of 13 cases as epidemic of blinding eye disease “Endophthalmitis probably caused by Tussock Moth in Pokhara for the first time. This had almost taken the form of an epidemic in Pokhara¹. In late monsoon season Aug to Sept of 1977, a sudden increase in severe rapid onset uveitis was noticed coinciding with increase in the population of Tussock moth, far heavier than in other years and in several cases the patients spontaneously suspected these moths. In his series of 13 cases 7 were female and 6 were male age ranging from 3 months to 39 years. In all of them only one eye was involved and all eyes were blind in a week or so in spite of earliest and intensive treatment. Two patients gave definite history of contact with moth and in two others there was a suspicion¹. Upadhyay et al^{3, 4} reported similar condition occurring in two cycles after first being recognized soon after monsoon season and named the disease as Seasonal Hyper Acute Panuveitis (SHAPU) instead of endophthalmitis reported earlier by Malla, OK¹. They also noted several children exposed to the moths, but they were unable to define if antigens from moth induced uveitis. Their histological study of the enucleated eye revealed severe inflammatory response with lymphocytes and plasma cells with retina drawn up into retrolenticular mass.

Our cases were noted during the similar period of the year. First it was noted during 1999 Aug- Sept, no cases were seen during 2000 and again cases were seen during Aug – Sept 2001. The moth population was high during those period and all our patients gave history of being around close to the moth population especially in the evening around tube light.

Although not laboratory proven, in view of the fact that the disease coincides with an increase in moth population and all patients gave history of contact with moths we strongly feel that the

disease has association with moths. Moreover in view of the fact that, there is intense intraocular inflammation leading rapidly to hypotony and pthisis bulbi, we also feel that the disease is more likely endophthalmitis rather than panuveitis.

Contrary to the earlier findings where no eyes could be saved with medical treatment 2 of our patients could retain visual acuity better than 6/18 which is probably due to earlier reporting and prompt treatment and both these patients were aged between 41 and 45 yrs.

As 50 % of our patients who underwent vitrectomy gained vision better than 6/60, we feel that vitrectomy is a useful procedure for treatment of SHAPU. But in view of complexity of the procedure and its possible complications as well as availability of service the mode of therapy for SHAPU has to be further investigated.

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*Vitreoretinal Surgeon Nepal Eye Hospital (NEH), Kathmandu,** Lecturer, Kathmandu Medical College, Kathmandu *** Ophthalmologist, Mechi Eye Care Centre, Birtamode, ****Outreach programme coordinator, HEH.
Correspondence: R. N. Byanju, (NEH)