Characteristics of unclassified uveitis in a tertiary hospital in Japan

Atsuko Katsuyama, Sentaro Kusuhara*, Wataru Matsumiya, Makoto Nakamura
Division of Ophthalmology, Department of Surgery, Kobe University Graduate School of Medicine

Financial interests: Atsuko Katsuyama【N】, Sentaro Kusuhara【P】, Wataru Matsumiya 【N】, Makoto Nakamura 【N】

***E-mail address: kusu@med.kobe-u.ac.jp**

Background:

Finding a specific cause for uveitis is an important step in the management of inflamed eyes because uveitis occasionally cases a vision-threatening condition if not treated appropriately. However, although diagnostic methods have greatly improved over the past decades, there are still 30-40% of unclassified (or idiopathic) uveitis even in tertiary referral centers worldwide [1,2] and little information is available on the management of unclassified uveitis. Accordingly, we aimed to evaluate the characteristics and treatment outcomes of unclassified uveitis in order to provide better practice for patients suffering this unexplained uveitis.

Methods:

We retrospectively reviewed the medical records of 52 eyes of 32 patients (9 males and 23 females) who were diagnosed as unclassified uveitis between January 2014 and March 2015 and were followed up for more than 12 months. The extracted data included age, gender, best corrected visual acuity (BCVA), intraocular pressure (IOP), intraocular inflammation (graded according to the Standardization of Uveitis Nomenclature Working Group criteria [3,4]) type of inflammation (granulomatous or non-granulomatous), treatment contents, and complications. We divided the eyes into three groups based on the type of inflammation: (1) granulomatous (group G), (2) non-granulomatous (group non-G), and undetermined (group UD). First, clinical characteristics were compared among the groups, then changes in BCVA, IOP, and inflammation scores 12 months after treatment from baseline were analyzed in each group. Finally, the causes of poor visual prognosis, defined as BCVA ≤ 20/40 at 12 months, were explored.

Results:

Table 1: Baseline characteristics

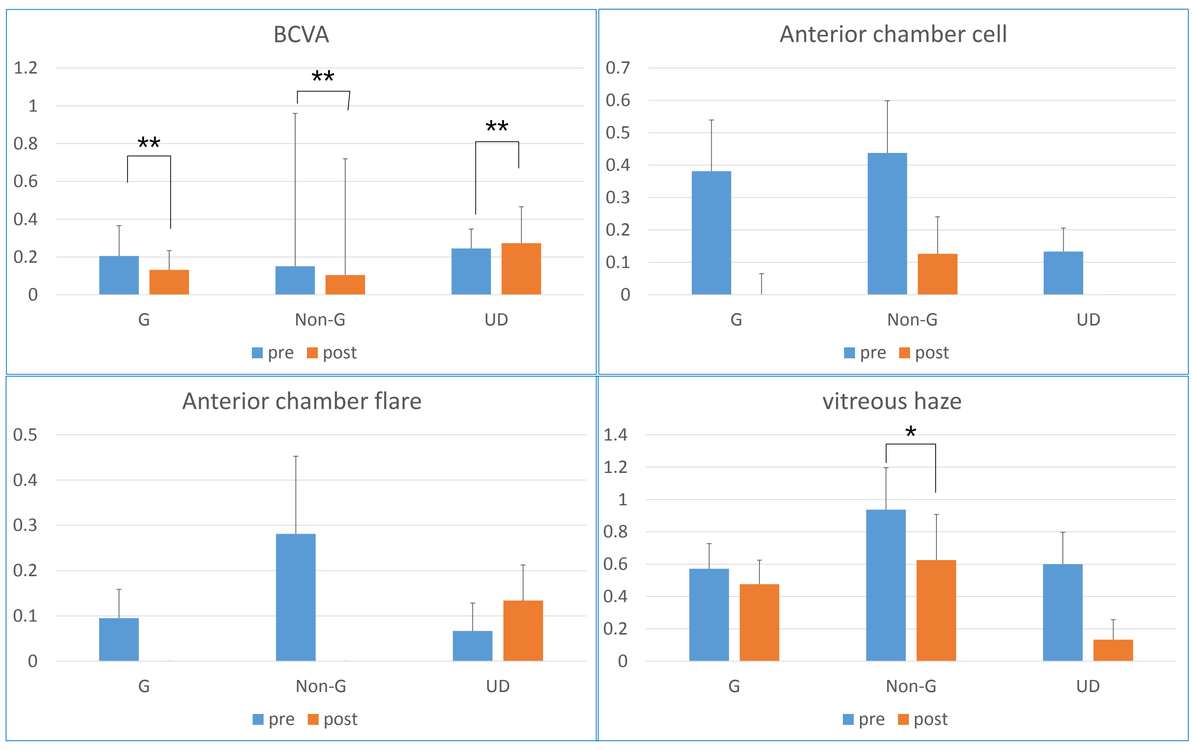
	Total	G	Non-G	UD	*P value*
- Patients -					
Number of patients	32	12 (37.5%)	11 (34.4%)	9	--------
Age (year)	51.5 ± 20.6	55.1 ± 22.1	53.6 ± 21.6	43.3 ± 15.6	*0.227†*
Gender (number of male)	9 (39.1%)	5 (41.7%)	1 (0.09%)	3 (33.3%)	*0.204‡*
- Eyes -					
Number of eyes	52	21 (40.4%)	16 (30.8%)	15 (28.8%)	
BCVA (logMAR)	0.200 ± 0.434	0.205 ± 0.161	0.151 ± 0.809	0.245 ± 0.103	*0.766**
IOP (mmHg)	16.7 ± 8.5	20.0 ± 2.4	15.3 ± 0.6	13.5 ± 0.6	*0.012**
Anterior chamber cell	0.33 ± 0.58	0.38 ± 0.16	0.44 ± 0.16	0.13 ± 0.07	*0.117**
Anterior chamber flare	0.14 ± 0.47	0.10 ± 0.06	0.28 ± 0.17	0.07 ± 0.06	*0.499**
Vitreous haze	0.69 ± 0.70	0.57 ± 0.16	0.94 ± 0.26	0.60 ± 0.20	*0.460**

* Generalized Estimating Equation, † Kruskal-Wallis test, ‡ chai-square test

Table 2: Anatmical types of uveitis
(number of patients)

	G	Non-G	UD
Anterior uveitis	3	1	0
Intermediate uveitis	0	1	1
Posterior uveitis	0	0	4
Pan-uveitis	9	9	4

Figure 1: Changes of parameters



* p<0.01, ** p<0.001 (Generalized Estimating Equation)

Table 3: Treatment (number of eyes, (%))

-Medication- *		**-Surgery-****	
Corticosteroid	44 (84.6%)	PEA +IOL	5 (9.6%)
Mode of administration		Vitrectomy + PEA +IOL	2 (4.5%)
Eyedrops	19 (43.2%)	Vitrectomy	2 (4.5%)
Subtenon TA injection	18 (40.9%)	Vitrectomy + lensectomy	1 (2.2%)
Oral predonisolone	5 (11.4%)	Encircling	1 (2.2%)
Subconjunctival DEC injection	2 (4.5%)	Trabectome	1 (2.2%)
Intravitreal TA injection	1 (2.2%)	Trabeculectomy	1 (2.2%)
Anti-glaucoma eyedrops	16 (30.8%)		

* There were overlapping. **Indications for vitrectomy included biopsy, dense vitreous opacification, rhegmatogeneous retinal detachment, and proliferative vitreoretinopathy. TA = triamcinolone acetonide , DEC = dexamethasone, PEA = phacoemulsification and aspiration, IOL = intraocular lens.

Table 4: Eyes of poor BCVA (≤20/40) at 12M

	G	Non-G	UD	Total
Causes	4	3	4	11
Visual field defect	3	0	2	5 (45.5%)
Serous retinal detachment	0	1	2	3 (27.3%)
Cataract progression	1	1	0	2 (18.2%)
Outer retinal atrophy	0	0	2	2 (18.2%)
Cystoid macular edema	0	1	0	1 (9.1%)

Discussion:

We reviewed the medical of 148 new patients to our uveitis clinic and found that 21.6% of patients had suffered unclassified uveitis. This figure is almost comparable to those in recent papers [1,2,5] and thereby could support the accuracy of our diagnostic methods. The type of inflammation was evenly distributed and there was no characteristic distinctive feature among the groups before treatment except for higher IOP in group G than group non-G and group UC. Regarding the anatomical location of inflammation, it predominantly affected the posterior part of the eye. On the whole, intraocular inflammation was not so severe throughout the follow-up period, and more than 80% of eyes did not need systemic corticosteroid therapy. These results suggest that most of unclassified uveitis have a favorable visual prognosis. However, it should be noted that about 20% of cases failed to maintain BCVA better than 20/40 at 12 months despite the maximum efforts including systemic corticosteroid and ocular surgery. As the causes of poor BCVA included pre-existing secondary glaucoma and uncontrolled inflammation at the macula, early intervention and more potent anti-inflammation therapy are greatly desired.

Conclusions:

Most of unclassified uveitis was not severely inflamed and successfully treated with local corticosteroid administration. A good visual acuity was maintained in such cases without severe ocular complications before treatment.

Referrences:

1. Ohguro N, et al. Jpn J Ophthalmol 2012;56:432-435.
2. Barisani-Asenbauer T, et al. Orphanet J Rare Dis 2012;7:57.
3. Nussenblatt RB, et al. J Ocul Pharmacol 1985;1:369-382.
4. Jabs DA, et al. Am J Ophthalmol 2005;140:509-516.
5. Ishaq M, et al. J Pak Med Assoc 2012;62:92-97.