Vogt-Koyanagi-Harada Disease in Thai Patients

Nattaporn Tesavibul MD*,
Wiwon Sansanayuth MD**

** Department of Ophthalmology, Faculty of Medicine Siriraj Hospital, Mahidol University,*
***Department of Ophthalmology, Pramongkutklao Hospital, Bangkok, Thailand*

Objectives: *To study the demographic, clinical manifestations, treatment and visual outcome of Vogt-Koyanagi-Harada disease (VKH) in a group of Thai patients.*
Design: *Retrospective case series.*
Material and Method: *Patients with VKH disease in Pramongkutklao Hospital from January 1998 to December 2002 were identified. Demographic data, clinical manifestations, treatment, and outcome were analyzed.*
Results: *Among the 33 patients, there were 12 males and 21 females with a mean age of onset of 35 $\pm$ 13.4 year-old (range 17-67). Serous retinal detachment was detected in 48%. Transient hearing loss, vitiligo, poliosis and alopecia occurred in 18%, 24%, 15% and 33% respectively. Forty two percent of the patients were treated with systemic corticosteroids alone and 58% with a combination of steroids and immunosuppressive drugs. At the end of the follow-up, visual acuity (VA) improved in 55%, remained unchanged in 36% and worsened in 9% of the eyes. Final VA of equal or better than 20/40 was obtained in 76%. The mean follow-up time was 21.6 $\pm$ 14.9 months (range 2-64).*
Conclusion: *Demographic data, clinical manifestations, and treatment outcome of this group of Thai patients are comparable with studies from other countries.*

Keywords: *Vogt-Koyanagi-Harada, VKH, Serous retinal detachment, Poliosis, Vitiligo*

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Vogt-Koyanagi-Harada disease (VKH) or uveomeningoencephalitis is one of the common identifiable causes of uveitis in Thailand which include HLA B-27 associated uveitis, VKH disease and Behcet's disease. It is a systemic disorder involving many organ systems including the eye, skin, auditory and nervous system. This disease has been described since the beginning of the 20th century by Alfred Vogt followed by Koyanagi and Harada[1,2]. Although the disease has been reported worldwide, it was known to have a predilection for pigmented races such as Asian, Hispanic and Native American[2].

Patients may present with classic clinical manifestations such as exudative retinal detachment associated with cerebrospinal fluid pleocytosis or chronic iridocyclitis associated with various degrees of skin, hair and auditory problems. However, there are some variations in patients' demographics and clinical manifestations reported among each race. Thus, it is interesting to study the demographic, clinical manifestations and treatment outcome of a group of Thai patients and compare them with other reports from different ethnic groups.

Correspondence to : Tesavibul N, Department of Ophthalmology, Siriraj Hospital, Mahidol University, Bangkok 10700, Thailand. Phone: 0-2411-2006, 0-1634-4366, Fax: 0-2411-1096, E-mail: nattaporn.tesa@gmail.com

Material and Method

Patients' uveitis charts in the Department of Ophthalmology, Pramongkutklao Hospital were reviewed from January 1998 to December 2002. According to the revised diagnostic criteria for VKH disease from the international committee on nomenclature[3], 33 cases were identified. Demographic data, presenting visual acuity (VA), clinical manifestation, treatment, treatment outcome and final VA were recorded and analyzed. Improvement of VA was defined as gaining at least 2 Snellen lines of vision while worsening meant loss of 2 lines or more.

Results

There were 12 males and 21 females with 1:1.75 male to female ratio. Fifty two percent of the patients were in the third to fourth decades of life at the onset of the disease with a mean age of 35 year-old (range 17-67). The presenting VA in the present report were equal or better than 20/40 in 42% of the eyes (28/66), less than 20/40 to equal or better than 20/200 in 29% (19/66), less than 20/200 to light perception in 26% (17/66) and no light perception (NLP) in 3% (2/66) as demonstrated in Fig. 1. Serous retinal detachment was detected in 48% (16/33) of the cases at initial presentation or during the recurrent phase. Audiogram revealed transient hearing loss in 18% (6/33). Integumentary system abnormalities such as vitiligo, poliosis and alopecia presented in 24%, 15% and 33% of the cases respectively.

Forty two percent of the cases (14/33) were treated with corticosteroid alone and 58% (19/33) with combined corticosteroid and immunosuppressive drugs. Among these 19 cases, 7 patients required more than one regimen of combined immunosuppressive medication and steroid to control inflammation. Combined steroid and azathioprine was the most commonly used regimen in the present report (14/19 cases) followed by cyclosporine (8/19), methotrexate (2/19) and chlorambucil (2/19) respectively. There was no serious side effect of immunosuppressive drug in the presented group of patients during the treatment. Elevated liver enzyme was detected in one case, which returned to normal after cessation of the drug. The mean follow up period was 21.6 months with a range of 2-64 months.

At the last visit, visual acuity improved (gain 2 Snellen lines or more) in 55% (35/64) of eyes, remained unchanged in 36% (23/64) and worsened (loss 2 Snellen lines or more) in 9% (6/64) (2 eyes with initial visual acuity of NLP were not included). Causes of decreased vision included cataract and macular scar (3 eyes each). Final visual acuity was equal or better than 20/40 in 75.8% of the eyes (50/66), between 20/40 and 20/200 in 10.6% (7/66), less than 20/200 to light perception in 10.6% (7/66) and no light perception in 3% (2/66) as demonstrated in Fig. 1.

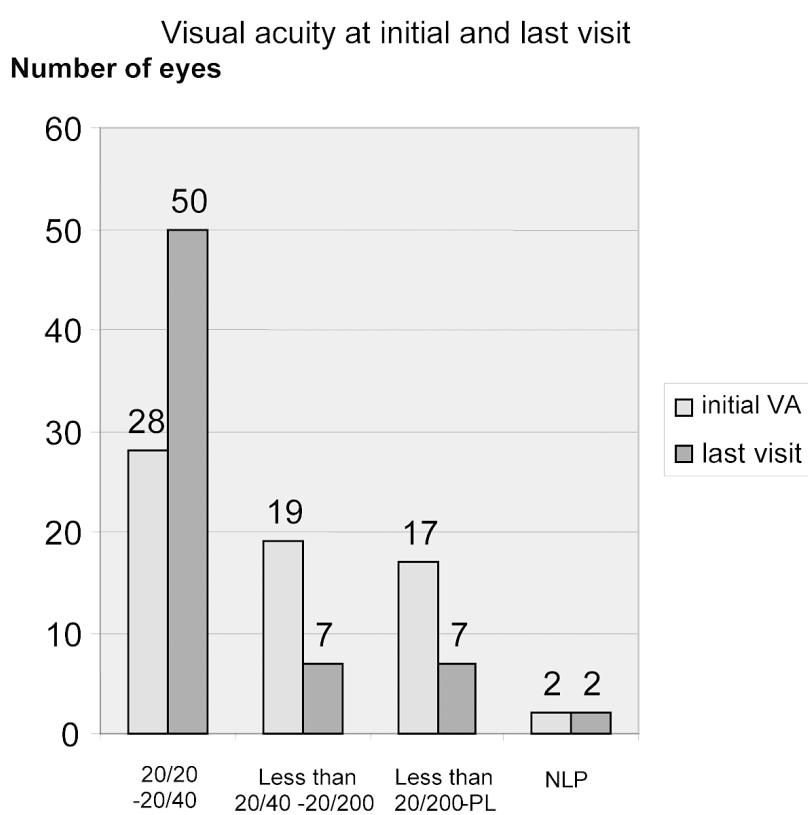

Fig. 1 Visual acuity at initial visit and last follow-up (mean 21 months)

Discussion

Vogt-Koyanagi-Harada disease has been reported throughout the world with a predilection for pigmented races. Although the disease has been reported in a patient as young as 4 years-old[4], most patients are in the second to fifth decades of life at the onset of the disease[5-8] which corresponds with the present report.

There appears to be some variation in gender predilection of these patients, but most studies suggest that women are affected more frequently than men[5-10]. In the present study, the authors also found a female preponderance (1.75:1 female to male) in this group of Thai patients.

The clinical manifestations and course of the disease has been divided into four distinct phases[2] which will not be described here. Severe bilateral panuveitis associated with exudative retinal detachment is the hallmark of ocular disease. Almost half of the presented patients (48%) had serous retinal detachment at their first presentation or during their recurrent phase. The rest demonstrated other signs of recurrent anterior uveitis and chorioretinal changes which corresponded with the diagnostic criteria of VKH disease[3].

The disease is a systemic disorder involving multiple organ systems. However, the incidence of extraocular manifestations varies markedly in different reports. Auditory problems were reported in 75% of the patients and often concomitant with active ocular disease[11,12]. However, in the present study, only 18% (6/33) of the presented patients revealed high tone hearing loss as detected by audiogram. This finding could be explained that most of our patients were referral cases with a chronic recurrent phase in nature, thus demonstrated fewer auditory problems compared with patients in the prodromal or acute phase.

Integumentary system involvement can be seen at various stages of the disease with varying incidence between reposts. In this group of Thai patients, skin abnormalities such as vitiligo, poliosis and alopecia were detected in 24%, 15% and 33% of the cases respectively. However, these findings may vary greatly between ethnic groups as suggested by Beniz et al[7]. For example, vitiligo and alopecia can be detected from 10-63%[7,11] and 13-73%[7,11] respectively with Asians being affected more than Hispanics.

Systemic steroids are the mainstay treatment for VKH disease. However, for patients who are refractory to corticosteroid or developed unacceptable side effects, immunosuppressive agents can be prescribed. Their use may provide steroid-sparing effect whereby steroid dosage can be reduced or discontinued. In the present study, 42% of the cases (14/33) were treated with corticosteroid alone and 58% (19/33) with combined corticosteroid and immunosuppressive drugs. Among these 19 cases, 7 patients required more than one regimen of combined immunosuppressive medication and steroids to control inflammation. This may be a result of bias selection when severe cases of VKH were referred to this institute which is a referral center for uveitis. Several immunosuppressive or cytotoxic agents have been recommended in the treatment of VKH disease with a positive response[13-20]. However, combined steroid and azathioprine was the most commonly used regimen in the present report (14/19 cases).

The use of corticosteroids and immunosuppressive agents has greatly improved the visual outcome in VKH patients. Overall prognosis of VKH is fair. Moorthy et al. reported that 53% of 130 eyes had visual acuity of 20/30 or better after treatment for a mean period of 5.6 months[13]. In the present report, 76% of 66 studied eyes had a final visual acuity of 20/40 or better after treatment (mean follow up 21.6 months) which was comparable with a study done by Rubsamen and Gass, in which 66% of the 44 eyes had final visual acuity of 20/30 or better with a mean follow up time of 53 months[8]. Six eyes (11%) in the present report, had a visual acuity of less than 20/200 to light perception at the end of the study (2 eyes with initial visual acuity of NLP were not included) compared with 7% in Rubsamen's study (visual acuity less than 20/400).

Conclusion

VKH disease is a systemic disorder with an unknown etiology. Autoimmunity to melanocytes is believed to be the pathogenesis. Due to the increased prevalence of this disease in certain ethnic groups, genetics might play a role in the pathogenesis of this disorder. The present study reports a demographic study and clinical manifestations of a group of Thai patients which are not different from previous studies from other countries (different ethnics). The present treatment regimens and visual outcome are also quite satisfactory and are comparable with other studies. However, the authors are aware that the number of cases in this study is small and most are referral cases which may not represent all Thai patients. A multicenter national survey is awaited to study the clinical course, therapy and long-term outcome of this disease in the Thai population.

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โรค Vogt-Koyanagi-Harada (VKH) ในผู้ป่วยไทย

ณัฐพร เทศะวิบุล, วิวรรณ ศันสนยุทธ์

วัตถุประสงค์: *เพื่อศึกษาลักษณะของผู้ป่วย อาการแสดงทางคลินิก วิธีรักษาและผลการรักษาโรค Vogt-Koyanagi-Harada ในผู้ป่วยไทย*

วิธีการศึกษา: *การศึกษาแบบย้อนหลัง*

วัสดุและวิธีการ: *ศึกษาอายุ เพศ ลักษณะและอาการแสดงทางคลินิก การรักษาและผลการรักษาของผู้ป่วยโรค VKH ในโรงพยาบาลพระมงกุฎเกล้า ตั้งแต่เดือนมกราคม พ.ศ. 2541 ถึง ธันวาคม พ.ศ. 2545*

ผลการศึกษา: *พบผู้ป่วย 33 ราย เป็นเพศชาย 12 ราย เพศหญิง 21 ราย อายุเฉลี่ยขณะเกิดโรค 35 $\pm$ 13.4 ปี (17-67 ปี) อาการแสดงของโรค พบจอประสาทตาลอก 48% สูญเสียการได้ยินชั่วคราว ผิวหนังด่างขาว ขนหรือผมหงอก และผมร่วง 18%, 24%, 15%, และ 33% ตามลำดับ ผู้ป่วยได้รับการรักษาด้วยสเตอรอยด์เพียงอย่างเดียว (รับประทานหรือฉีด) 42% และสเตอรอยด์ร่วมกับยากดภูมิคุ้มกัน 58% หลังการรักษาระดับสายตาดีขึ้น 55% เท่าเดิม 36% ต่ำลง 9%, 76% มีระดับสายตาเท่ากับหรือดีกว่า 20/40 ระยะติดตามผลเฉลี่ย 21.6 $\pm$ 14.9 เดือน (2-64 เดือน)*

สรุป: *ลักษณะของผู้ป่วย อาการแสดงทางคลินิก และผลของการรักษาของโรค VKH ในผู้ป่วยไทยกลุ่มนี้ มีลักษณะใกล้เคียงกันกับผลการศึกษาโรคนี้ในเชื้อชาติอื่น ๆ*