

Comparison of Yatabe-Guilford Personality Test Results in Retinitis Pigmentosa and Glaucoma Patients

Yoshinori Igarashi, Eiju Sato, Akira Ito, Osamu Miyauchi,
Mitsuya Ikejiri, Tadao Hanawa, Yoshihiko Tsuyama,
Atsushi Mizota, Naoya Fujimoto and Emiko Adachi-Usami

*Department of Ophthalmology and Visual Science,
Graduate School of Medicine, Chiba University, Chiba, Japan*

Purpose: To determine the psychological state and personality traits of patients with retinitis pigmentosa (RP) or glaucoma so that a closer and better relationship can be developed with the patients.

Methods: The Yatabe-Guilford personality test was administered to 75 RP patients and 42 glaucoma patients. The latter group included 29 cases of primary open-angle glaucoma, 6 of primary angle-closure glaucoma, and 7 of normal-tension glaucoma. The patients were being treated at the Department of Ophthalmology, Chiba University Hospital. As controls, 47 age-matched volunteers were tested.

Results: A comparison of these three groups showed that the proportions of patients with cyclic tendency, rhythmia, and lack of cooperativeness traits were significantly higher in the RP group than in the glaucoma group. The lack of cooperativeness value was especially higher in the RP than in the glaucoma group and the control group (Fisher exact test, $P < .05$). On the other hand, the nervousness value was significantly higher in the glaucoma group than in the RP group and than in controls (Fisher exact test, $P < .05$). Factors of sex, age, type of disease, corrected visual acuity, and central visual fields did not influence the profiles of the RP and glaucoma groups.

Conclusion: RP patients had relatively well-stabilized personalities and were optimistic, while glaucoma patients tended toward nervousness in comparison with RP patients and controls. **Jpn J Ophthalmol 2003;47:1-5** © 2003 Japanese Ophthalmological Society

Key Words: Glaucoma, questionnaire, retinitis pigmentosa, Yatabe-Guilford personality test.

Introduction

Retinitis pigmentosa (RP) is a family of hereditary diseases characterized by progressive visual field loss, decrease of visual acuity, night blindness, and abnormal electroretinograms. The sensitivity of medical personnel in dealing with RP patients should be improved, especially because there is no known effective therapy for RP. As stated by Bernard Berman, President of the RP Foundation Fight-

ing Blindness (Baltimore, MD, USA), "Ophthalmologists and researchers should be more sensitive to the fact that they are working with people, not just a disease, and much will be gained."

The counseling that an RP patient receives is a major factor in the overall treatment of RP patients, but effective counseling requires some knowledge of the patient's personality. However, to the best of our knowledge, information on a personality pattern common to RP patients is not available. This is important because knowledge of the personality pattern will influence how we communicate with patients.

We have studied the psychological state and personality traits of patients with retinitis pigmentosa and compared them with those of patients with glau-

Received: April 5, 2002

Correspondence and reprint requests to: Emiko ADACHI-USAMI, MD, Department of Ophthalmology and Visual Science, Graduate School of Medicine, Chiba University, Inohana 1-8-1, Chuo-ku, Chiba 260-8670, Japan

coma. In both groups, the visual functions deteriorate slowly and progressively, but there are distinct differences in the treatment of these two diseases.

Materials and Methods

We administered the Yatabe-Guilford personality test,^{1,2} consisting of a 120-item forced-choice questionnaire, to 75 RP patients (38 men and 37 women; ages 27 to 76 years; mean, 52.3 ± 10.8 years), and 42 glaucoma patients (23 men and 19 women; ages 19 to 71 years; mean, 54.0 ± 14.1 years). The latter group included 29 cases of primary open-angle glaucoma, 6 of primary angle-closure glaucoma, and 7 of normal-tension glaucoma. The patients were being followed up at the Department of Ophthalmology, Chiba University Hospital. Informed consent was obtained from all patients. Exclusion criteria were known psychiatric disorders, diabetes mellitus, and treatment with steroids or systemic medications. For patients who had difficulty in reading the 120 questions, one of the authors or a family member read the questions to them.

As controls, 47 age-matched volunteers were tested (23 men and 24 women; ages 30 to 70 years; mean, 49.2 ± 14.7 years).

Before analyzing the personality test for the 164 subjects, we confirmed that the differences in sex and age were not statistically significant for the three groups.

Two types of tests were used: questions to determine personality traits and questions to determine profile distribution. The former consisted of 12 factors: depression, cyclic tendency, inferiority feelings, nervousness, lack of objectivity, lack of cooperativeness, lack of agreeableness, general activity, rathymia, thinking extraversion, ascendance, and social extraversion. There were 10 questions on each factor. The patients were asked to mark a "yes" or "no" or "either yes or cannot estimate" as the answer. The resultant scores for the 12 factors were compared between the three groups.

The second part of the Yatabe-Guilford personality test was a profile distribution test that classified the subjects into 5 types: Type A (average type), Type B (unstable and aggressive type-delinquent type), Type C (stable and negative type-composure type), Type D (stable and aggressive type-adaptable type), and Type E (unstable and negative type-neurotic type).

The obtained profiles were compared between the three groups. Then, their profile dependency on five factors: sex, age, corrected visual acuity of the worse eye (less or better than 0.5), type of RP (typical or

atypical), and the presence of the 10° central visual field were studied.

Results

The differences in sex and age between the three groups were not statistically significant (Kruskal-Wallis test, $P > .05$).

Personality Traits

There was no difference in the effect of age or sex on the 12 personality traits. (Spearman rank correlation test and Wilcoxon test, $P > .05$). However, a comparison of the results between the three groups showed significant differences in the traits of cyclic tendency, nervousness, lack of cooperativeness, and rathymia (Kruskal-Wallis test, $P < .05$) (Table 1). A comparison between the RP and glaucoma groups showed that the number of patients with cyclic tendency, rathymia, and lack of cooperativeness traits was significantly higher in the RP group than in the glaucoma group, with the lack of cooperativeness value especially higher in the RP than in the glaucoma and control groups (Fisher exact test, $P = .011$ and $P = .005$, respectively). On the other hand, the nervousness value was significantly higher in the glaucoma group than in the RP group and in the controls (Fisher exact test, $P = .048$ and $P = .014$, respectively).

Profile Distribution

There was no significant difference in the distribution of the five profiles between the three groups (χ^2 test; Figure 1). Even when our data were compared

Table 1. Personality Traits (mean \pm SD)

Personality Trait	Retinitis		
	Normal (n = 47)	Pigmentosa (n = 75)	Glaucoma (n = 42)
Depression	6.1 \pm 5.1	7.1 \pm 5.5	5.6 \pm 4.7
Cyclic tendency*	7.5 \pm 4.6	8.5 \pm 4.6	6.4 \pm 4.2
Inferiority feelings	6.2 \pm 4.2	7.3 \pm 4.8	5.9 \pm 4.3
Nervousness*	6.6 \pm 4.1	7.2 \pm 4.4	8.8 \pm 3.6
Lack of objectivity	5.5 \pm 3.3	6.9 \pm 4.0	6.2 \pm 3.3
Lack of cooperativeness†	5.3 \pm 3.8	7.4 \pm 4.4	5.4 \pm 3.6
Lack of agreeableness	8.8 \pm 4.1	10.3 \pm 4.5	8.6 \pm 4.3
General activity	11.8 \pm 4.3	11.7 \pm 4.3	10.9 \pm 4.7
Rathymia†	9.7 \pm 4.4	10.7 \pm 4.4	7.9 \pm 4.5
Thinking extraversion	10.3 \pm 3.9	11.2 \pm 4.2	11.3 \pm 4.0
Ascendance	10.1 \pm 4.9	9.4 \pm 5.3	8.9 \pm 4.5
Social extraversion	12.6 \pm 4.6	11.5 \pm 5.1	10.8 \pm 5.0

n: number of samples

* $p < .05$

† $p < .01$.

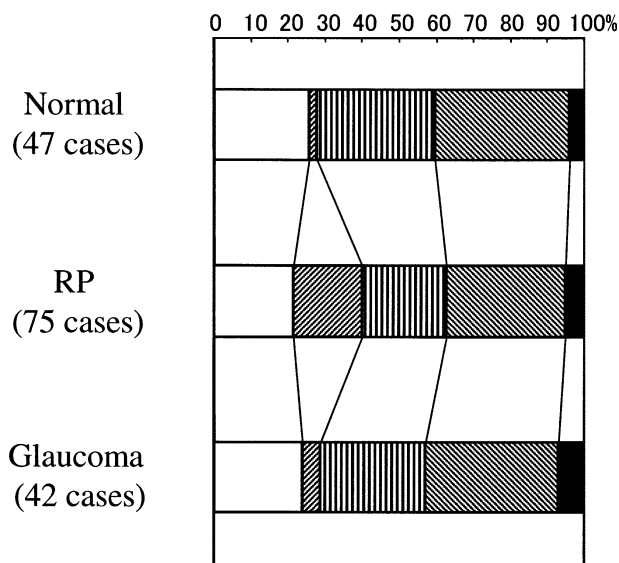


Figure 1. Profile distribution in control group, patients with retinitis pigmentosa (RP) and patients with glaucoma. Type A (average type), Type B (unstable and aggressive type-delinquent type), Type C (stable and negative type-composure type), Type D (stable and aggressive type-adaptable type), and Type E (unstable and negative type-neurotic type). □ Type A, ▨ Type B, ▩ Type C, ▪ Type D, ■ Type E.

with the normative data of 3000 workers by Eguchi,³ no significant difference was found. Of the five profiles, the stable and negative type-composure type and stable and aggressive type-adaptable type were found in more than half of the subjects in each group; the unstable and negative type-neurotic type was slightly higher in the glaucoma group but not statistically significant.

The factors of sex, age, type of disease, corrected visual acuity, and central visual fields did not influence the profiles in the RP and glaucoma groups (χ^2 test; Figures 2 and 3). When the effects of visual acuity and central visual field on the profile distribution were compared between the RP and glaucoma groups, no significant difference was found (χ^2 test; Figures 4 and 5). The percentage of the stable and aggressive type-adaptable type was higher in patients with typical RP, those with better visual acuity, and those with better central visual fields, and in patients with glaucoma whose central visual fields were better.

Discussion

Very little research has been done on the psychological states of patients with ophthalmic disorders.

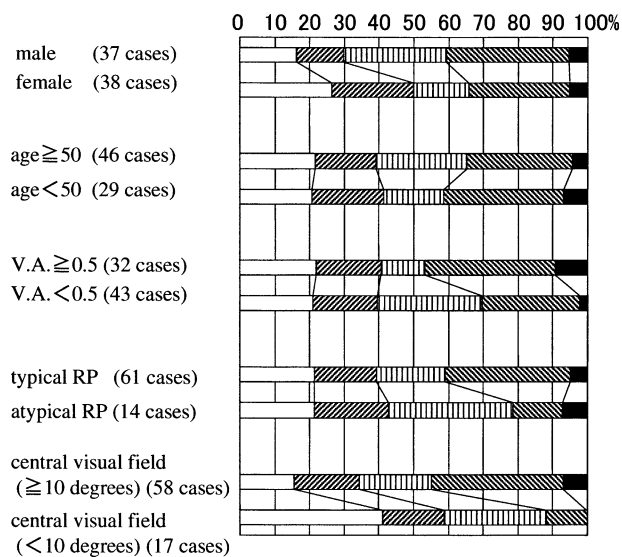


Figure 2. Influence of sex, age, visual acuity (V.A.), type of disease, and central visual field on the profile distribution of patients with retinitis pigmentosa (RP). □ Type A, ▨ Type B, ▩ Type C, ▪ Type D, ■ Type E.

To the best of our knowledge, there has not been a previous study to determine if there is a personality pattern common to RP patients. To obtain this kind of information, we administered the Yatabe-Guilford test.^{1,2} This test, which is related to psychological and emotional disturbances, was modified from the Guilford test⁴ for use on the Japanese population. In 1954, Yatabe⁵ translated all of the items of Guilford's 13 scales into Japanese and selected 240 items, omitting those that were difficult to express in the Japanese language, and also some other questions. Later, 120 items were adopted for routine testing.² This test has been generally employed in Japan with international acceptance. There is no essential difference between the present test and the original one.

Our results demonstrated several characteristic personality traits in patients with RP. On the average, RP patients had significantly higher scores for cyclic tendency, lack of cooperativeness, and rathymia, compared with patients with glaucoma and the controls. A person with cyclic tendency changes his mind and emotions easily, and one who lacks cooperativeness is considered to have unreliable and unsatisfactory feelings about life.

Both RP and glaucoma are chronically progressive diseases. However, there is a significant difference in their treatment and cure. There are therapeutic drugs and surgical treatments available for glaucoma patients, although there are many cases that are re-

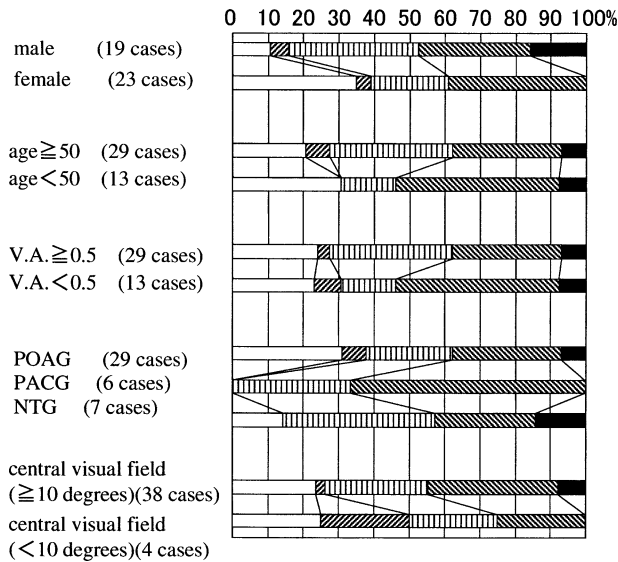


Figure 3. Influence of sex, age, visual acuity (V.A.), type of disease, and central visual field on the profile distribution of patients with glaucoma. □ Type A, ▨ Type B, ▤ Type C, ▩ Type D, ■ Type E.

fractory to such treatment. On the other hand, there is no cure for RP at present. Hereditary transmission is almost certain so that RP patients have no recourse but to wait for the development of future therapy. In this difficult situation, the traits of cyclic tendency and lack of cooperativeness of RP patients are quite understandable. Ophthalmologists should be aware of these traits when counseling RP patients. On the other hand, the RP patients in our study surprisingly also showed a trait of being opti-

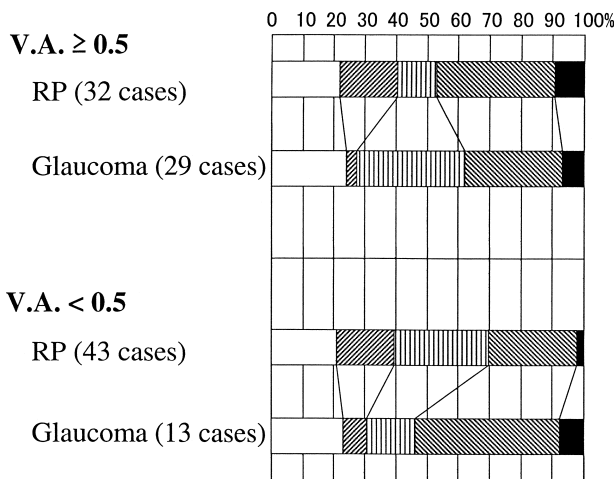


Figure 4. Influence of corrected visual acuity on the profile distribution in patients with retinitis pigmentosa (RP) and those with glaucoma. □ Type A, ▨ Type B, ▤ Type C, ▩ Type D, ■ Type E.

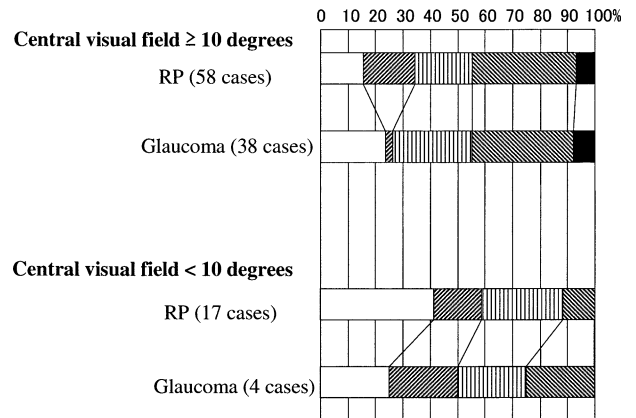


Figure 5. Influence of central visual field on the profile distribution in patients with retinitis pigmentosa (RP) and those with glaucoma. □ Type A, ▨ Type B, ▤ Type C, ▩ Type D, ■ Type E.

mistic and sociable, with no significant inferiority feelings or depression. This can be understood as acceptance of their disease and of not trying to escape from the severity of the disease with the hope of future development of a cure.

In the results of the personality test, glaucoma patients showed a significantly higher score for nervousness. There have been a number of reports that confirm not only this nervousness trait but also the depression trait in treating the psychosomatic complaints of glaucoma patients, including normal-tension glaucoma patients.⁶⁻¹¹ Kato,⁷ using the Yatabe-Guilford test, found that glaucoma patients are, in general, depressive, anxious, meticulous, introverted, submissive, arbitrary, and emotionally unstable. They also tend to be perfectionists, have obsessive ideas, inferiority feelings, difficulty in personal relations, and a tendency to take a subjective view on every matter. Recently, Erb et al¹¹ reported that normal-tension glaucoma patients have a more emotionally unstable personality than the normal control group. The agreement of our findings in the glaucoma group with these earlier findings demonstrated that our tests were conducted by a suitable method.

In the profile distribution, the five factors of sex, age, corrected visual acuity, type of disease, and residual central 10° visual field had no influence on either RP or glaucoma patients. There was, however, the tendency toward a stable personality in both groups, as more than half of each patient group had the stable and negative type-composure type or the stable and aggressive type-adaptable type personality.

We recommend that clinicians be aware of the personality traits of RP patients in order to promote

better communication with RP patients, and thus provide better overall treatment for these patients.

In actuality, the Japanese RP society in combination with a patient group, a scientific group, and a support group, is actively working to develop the best overall treatment for RP patients and is trying to organize internationally. Together, they are determining how to obtain and distribute all of the available therapeutic information. We have agreed that we should consult openly and honestly and respond to their expectations. This should benefit both the RP patient and the ophthalmologist.

The authors are grateful to Duco Hamasaki, PhD, for his editorial assistance. Supported by Grants from the Ministry of Education, Science, Sports, Culture, and Technology, Japan (10357015), and from the Study Group of Chorio-retinal Degeneration of the Ministry of Health, Labor and Welfare, Japan.

References

1. Tsujioka B, Sonohara T, Yatabe T. A factorial study of the temperament of Japanese college male students by the Yatabe-Guilford personality inventory. *Psychologia* 1957;1:110-119.
2. Tsujioka B. New personality test—manual of Yatabe-Guilford personality test. Osaka: Japanese Psychological Test Laboratory, 1982.
3. Eguchi T. Diagnostic manual of personality. Tokyo: Techno Publishing, 1976:103-104.
4. Guilford JP, Martin HG. The Guilford-Martin inventory of factors GAMIN. Beverly Hills, CA: Sheridan Supply, 1943.
5. Yatabe T. Construction of the Yatabe-Guilford Personality Inventory. Research Report of the Faculty of Literature in Kyoto University, 1954:3.
6. Hibbeler HL. Personality patterns of white adults with primary glaucoma. *Am J Ophthalmol* 1947;30:181-186.
7. Kato M. Studies on personality of glaucoma patients, especially on the Yatabe-Guilford personality test and the Rorschach test. *Jpn J Ophthalmol* 1966;10:72-82.
8. Niklewski G. Psychosomatic diseases of the eye—a review. *Z Psychosom Med Psychoanal* 1982;28:300-316.
9. Demailly P, Zoute C, Castro D. Personalities and chronic glaucoma. *J Fr Ophtalmol* 1989;12:595-601.
10. Erb C, Batra A, Bromer A, et al. Psychiatric manifestations in patients with primary open-angle glaucoma. *Der Ophthalmologe* 1993;90:635-639.
11. Erb C, Batra A, Lietz A, et al. Psychological characteristics of patients with normal-tension glaucoma. *Graefes Arch Clin Exp Ophthalmol* 1999;237:753-757.