

What I have learnt from “Starlight Test”

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Editorial

Now I am 76 years old and retired from work years ago and at present I am forgetting not only English but also Japanese, therefore, I am very much curious and unbelievable why nowadays I receive letters of invitation for writing papers. To those invitations from journals, I have declined the offers because of lack of my ability. However, I have moved the letter from Ms. Patricia David just beginning “start each day with grateful heart”. I am aged therefore; each day is very precious, and I am very much thankful for that I was happened to be born not ant nor cockroach but one of the human beings in this beautiful earth.

My Childhood and Youth

When I was a child I enjoyed watching a group of ants working busily to send food to their small house which was just a hole in my garden. At that time, I thought that I was watching them closely however, they could not recognize me as a whole being. I realized functions of eyes are different among creatures. I heard dogs do not have colour vision. When I graduated from university (it is shameful to tell; I graduated from English Literature Department) in 1966, I found the job offer for orthoptists on the bulletin of my university. At that time, there was no occupation named as “orthoptist” in Japan and in 1972, I got a national licence as a certified orthoptist.

Working Days in Nagoya University

I worked as an orthoptist mainly at the Department Ophthalmology Nagoya University School of Medicine for 25 years. I worked under the late Professor Hiroshi Ichikawa (specialty: colour vision) Professor Shinobu Awaya (specialty: strabismus

and amblyopia) Professor Yozo Miyake, at present the Director of Aichi Medical University, (specialty: retinal diseases and electro retinogram) The all professors were not only splendid scholars but also very impartial and liberal to the all staffs. I worked under Professor Miyake for the longest. He encouraged us to write papers in English and to apply them to western journals.

Measuring Binocular Visual Field of Patients by Handmade Perimeter Named “Starlight Test”

After busy outpatients’ clinic which usually postponed to around 2 o’clock or later, I used to examine visual acuity and visual field of in patients of the Department of Brain Surgery. Measuring their visual field with Goldman or Humphrey perimeter, I was really surprised that patients of complete hemianopia were not conscious of their visual field loss. I have examined plenty of visual fields of patients; not only intracranial diseases but also glaucoma, retinitis pigmentosa, functional visual field loss of children and I have come to have strong wish to know how they were seeing their surroundings [1-6]. This curiosity induced me to make “starlight test (Figure 1). We also examined strabismus patients whose amblyopia and strabismus had been treated yet still have some residual deviation [2]. The visual field of Figure 2 showed discrepancy in among instruments but the result of starlight test which showed the complete bitemporal hemianopia which was coincided with the result of 10-2 of Humphrey [4]. The reason why they show bitemporal hemianopia at fixation point is in binocular condition, patients with lesions of the optic chiasm is caused by the compression of the decussating optic nerve fibers resulting in the loss of overlapping visual field at fixation point.

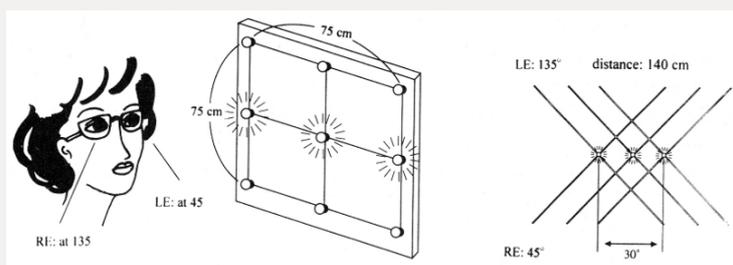


Figure 1: Method and a view of normal subject of the “starlight test”.

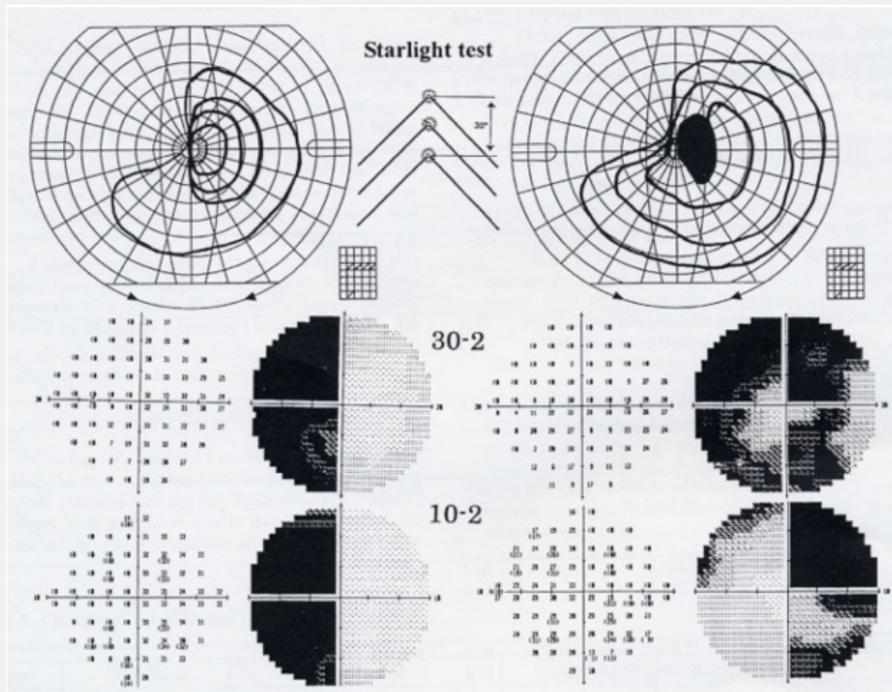


Figure 2: Results of VF tests in case 6 after coil embolization of unruptured internal carotid aneurysm.

Working as a Teacher

After retirement from Nagoya University at age of 60, I was offered from Department of Orthoptics and Vision Science, Aichi Shukutoku University in Nagoya city as a teacher and worked there until 70. As I got research expenditure from the University,

I acquired the copyright for “30 cm Visual Filed Card ”which was supplement of the book entitled “Neurological Ophthalmology for clinical use (309 pages) written by Fujino Tei published by Igaku shoin Tokyo, 2001 and distributed all students and let them examine their visual fields by themselves, I made not only white cards, but also, red, green, yellow, blue cards too (Figure 3).

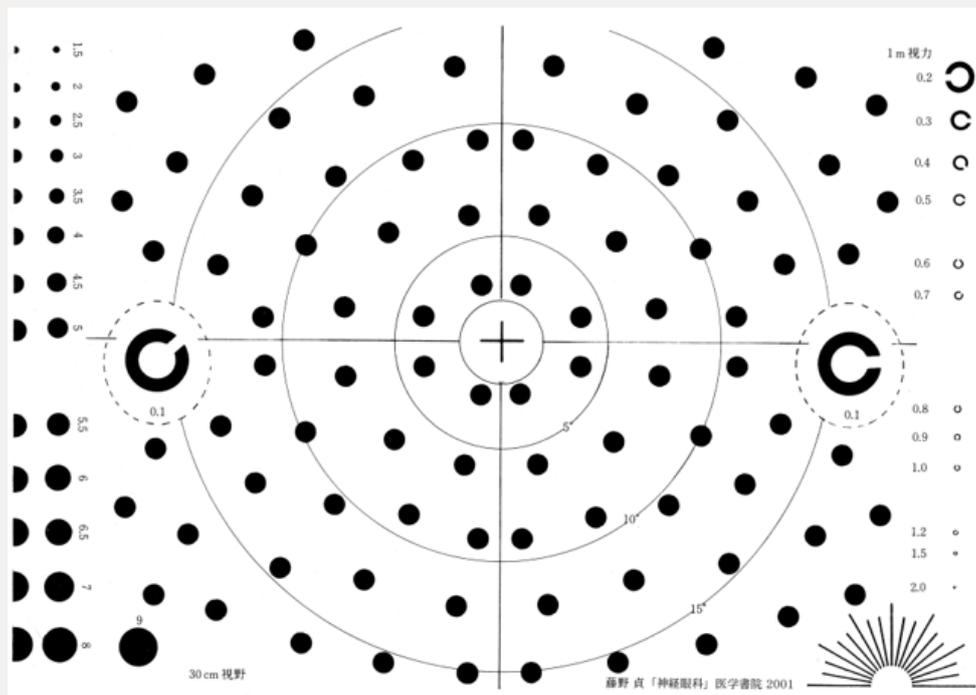


Figure 3: 30° visual field card.

My Message to Readers

VISION 2020 is the worldwide campaign of the WHO started in 1999. The aim of campaign is to eliminate the main causes of all preventable and treatable blindness by the year 2020. For this purpose, I would like to suggest using stereo tests for screening. Stereo tests are easy, cost effective tests which able to examine from 3 years old to the aged. Among the stereo tests I recommend

the Lang stereo test I, or II which need not to use glasses and less of false positive (Figure 4). The tests define the examinees have normal binocular vision or not. In my study [3], in patients from optic chiasmal lesions, before surgery, 3 out of 13 patients (23.0 %) passed the Lang and after surgery, 9 out of 13 (69.2%) patients passed the Lang. I believe simple Lang tests are able to save people not only from blindness but also their lives.

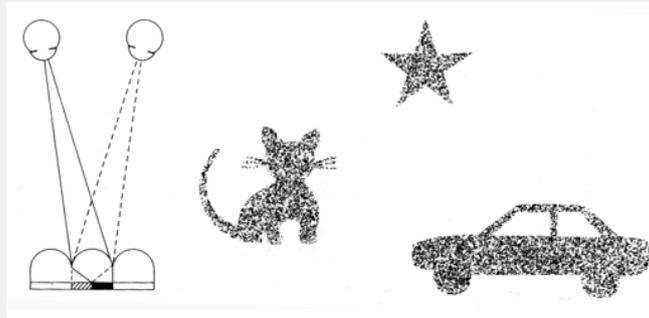


Figure 4: Lang stereo test I.

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